

SUMMARY AUDIT REPORT

for the September 2014
International Cyanide Management Code Certification Audit



Prepared for:

Agnico Eagle Mines Limited – Meadowbank Mine

Submitted to:

International Cyanide Management Institute
1400 I Street, NW, Suite 550
Washington, DC 20005, USA

FINAL

15 May 2015



ENVIRON EC (Canada), Inc.

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Name of Transporter: Agnico-Eagle Meadowbank Supply Chain

Name of Owner: Agnico Eagle Mines Limited

Name of Responsible Manager: Jean Beliveau, General Manager

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Location detail and description of operation:

Agnico-Eagle Mining Limited, Meadowbank, purchases sodium cyanide from E.I. DuPont de Nemours and Company, Inc. (DuPont). DuPont is responsible for the transport from their production plant in Memphis, Tennessee via their distribution warehouse in Pointe-Claire, Quebec to the Port of Bécancour.

The Agnico-Eagle Meadowbank Supply Chain (AEMSC) is the consignor for the transport of cyanide between the Port of Bécancour, near Montreal, and the Meadowbank Mine. AEMSC contracts with several companies to undertake the transport. The marine shipping portion of the route between the Port of Bécancour, Quebec, and Baker Lake, Nunavut, is contracted to Nunavut Sealink & Supply Inc. /Désagagnes Transarctik Inc. (NSSI/DTI). Stevedoring services at the Port of Bécancour is contracted to Terminaux Portuaires du Quebec (TPQ). Arctic Fuel Services (AFS) is contracted for road transport between Baker Lake and Meadowbank Mine. Cyanide is shipped once a year during the Arctic summer months when the marine route to Baker Lake is ice free. The route is shown on Figure 1.

The cyanide is shipped and stored in standard 20-foot steel intermodal shipping containers (C-Cans). Within each shipping container the solid cyanide is packaged in 1,000 kg 'bag-in-box' plywood intermediate bulk containers (IBC). The cyanide briquettes in each IBC are packed in nylon supersacks enclosed in plastic (bag in bag). The total weight of each packed C-Can is approximately 24,000 kg.

TPQ unloads the trucks and transfers the C-Cans onto a NSSI/DTI marine vessel. NSSI ships the C-Cans to Hudson Bay where they are transferred onto barges operated by Atlantic Towing Limited (a sub-contractor to NSSI/DTI) and tugged west

along Chesterfield Inlet to Baker Lake. At Baker Lake the barges are unloaded by NSSI/DTI sub-contractor Peters Expediting Ltd (PEL). PEL transfers the C-Cans to a dedicated cyanide layout area at the Baker Lake Marshalling facility, about 100-200m from the barge dock. From here the C-Cans are loaded onto trucks by AFS and trucked to the Meadowbank mine site along a 110 km all weather private access road (AWPR). The road is operated and maintained by Agnico-Eagle Mining Limited Meadowbank (AEM). The road is two lanes wide and has a compacted gravel pavement. The road is maintained and policed by AEM and is controlled by a security gate that is manned by AEM Dispatch.

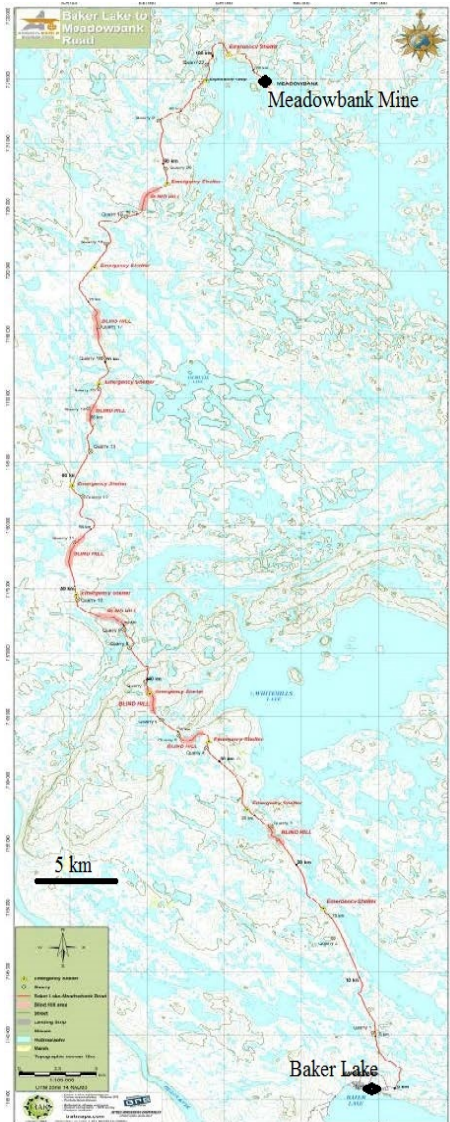


Figure 1: The Meadowbank Supply Chain showing marine barge transport between Port of Bécancour and Baker Lake (above) and road transport route between Baker Lake and the Meadowbank Mine.

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Auditors' Finding

The operation is: in full compliance
 ■ in substantial compliance
 not in compliance

Audit Company: **ENVIRON EC (Canada), Inc.**
 100 Park Royal, Suite 200
 West Vancouver, BC V7T 1A2

Audit Team Leader: Jean-Marc Léger
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Names and Signatures of Other Auditors

John Lambert



Date(s) of Audit: July 30, 2014 and August 26, 2014 – September 3, 2014

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the *International Cyanide Management Institute* for Code Verification Auditors. I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the *International Cyanide Management Code Transportation Verification Protocol* and using standard and accepted practices for health, safety and environmental audits.

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1. **TRANSPORT: Transport cyanide in a manner that minimizes the potential for accidents and releases.**

Transport Practice 1.1: Select cyanide transport routes to minimize the potential for accidents and releases.

The operation is **in full compliance with Transport Practice 1.1**
 in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The Meadowbank mine is located in a remote area of northern Canada where there is no road or rail access to the south. Shipment of cyanide is therefore undertaken by marine passage to Baker Lake followed by truck transport on a 110 km long all weather private access road (AWPR) to the mine. Marine transport routes options were evaluated and the Port of Bécancour was selected as it provided better security than the only alternative.

The AWPR was constructed for the project and provides the only land access to the mine site. The road was designed for use by conventional tractor trailers. Road access is controlled by a security gatehouse. There are 22 stream crossings consisting of bridges or culverts along the route. The road meanders around lakes and around hills to minimize steep gradients. As a result there are few steep sections but a number of blind hills and corners to negotiate that present potential hazards, as well as single lanes at bridge crossings. These hazardous spots have been identified and controls and procedures are in place (speed limits, frequent radio communication notification, road markers) to minimize the hazard. Non-mine users permitted access to the AWPR but must follow set procedures when using the road to minimize risk to themselves and other users.

AEM has a designated road maintenance crew that maintains the road 365 days a year. Road conditions are continuously monitored. Although snow and blizzard conditions contribute to road closures in the winter months, weather conditions during the summer when cyanide is transported are generally good. All drivers using the road are required to report any hazard conditions to Dispatch. The decision on whether to close the road is the responsibility of the Road Supervisor.

AEM has contracted with NSSI/DTI for the marine shipping portion of the AEMSC. NSSI/DTI was selected in part because they are equipped with a fleet of seagoing large capacity cargo ships owned and/or operated by DTI, are experienced with marine shipping in the Canadian Arctic; and comply with the regulatory requirements of

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Transport Canada and International Maritime Dangerous Goods Code (IMDG Code) requirements through their ISO 9001:2000 Quality Management System for shipping operations, safety, security and environmental management.

Terminaux Portuaires du Québec (TPQ) is the sole stevedoring business operating at the Port of Bécancour. The port is secured by fencing and a 24/7 security. The C-Cans are unloaded from tractor-trailers by TPQ personnel and equipment (container stacker) and placed in dedicated areas of the wharf. TPQ loads the NSSI/DTI marine vessel following a loading plan, which meets the International Maritime Dangerous Goods (IMDG) Code

The AWPR conditions are routinely inspected by maintenance crews and continually monitored by drivers for potential hazards and to report any concerns immediately to Dispatch. In addition, periodic operational audits and annual bridge inspections are undertaken. Route conditions are fed back to the mine by users of the road. AFS drivers are required to complete a Work Card each shift that includes procedures to report back on road conditions and wildlife sightings. Drivers also communicate to Dispatch and other road users on hazards observed on the road.

AEM has implemented procedures for users of the AWPR to address risks. These procedures are supplemented by other procedures, vehicle and equipment specifications, and operating and maintenance requirements stipulated in the contract agreement between AEM and AFS. Contractors must follow AEM's safety, security and first aid rules and health and safety requirements. In addition AEM has a no tolerance drug and alcohol policy and there are requirements for AFS to drug test drivers when hired. Drivers work a maximum 12 hour shift with a minimum of an 8 hour rest between shifts.

AEM holds a public meeting with the Hamlet of Baker Lake and Hunters and Trappers Organization (HTO) annually to review the safety rules for the AWPR and discuss other items of importance in regards to the AWPR. AEM, HTO and the Hamlet of Baker Lake jointly educate the community on these safety procedures through community radio and community training sessions. Annual meetings are also held with the community of Chesterfield Inlet to review and discuss the marine transport through Chesterfield Inlet to Baker Lake.

Because the transport corridor is remote and mostly on a private access road, there are currently no security concerns on the road that would warrant the use convoys and security escorts. However, at the time of the audit all emergency response and first aid capability for a cyanide response was being maintained at the Meadowbank mine. Although AEM has had preliminary discussions with the Hamlet of Baker Lake to provide assistance in the event of an emergency their commitment and capacity has not been

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assured. A response to medical emergency on the AWPR close to Baker Lake or at the Baker Lake Marshalling Area may therefore take up to than 2 hrs.

To be fully compliant with this requirement of the Code, AEM must provide evidence that emergency response capability is available to quickly response to a medical emergency involving cyanide along the 106 km of the AWPR and at Baker Lake Marshalling Area. **Please refer to Section 3.1 and Corrective Action Request (CAR) AEMSC-ICMC-CAR-02.** Because cyanide is transported in solid briquette form, packaged as “Bag in Box (1 metric tonne)” (International Bulk Container (IBC) boxes), in locked and sealed shipping containers, the potential for a release in conditions that would result in generation of HCN is considered low. Also, as cyanide transport only occurs in the summer and is only permitted to remain at the marshalling area for a maximum 72 hours, it is the auditors’ judgment that there is currently no substantial or immediate risk to the environment or the health and safety of the workforce, while this procedure is being finalized and implemented before the next cyanide shipping season.

The marine transport operation is not within AEM’s direct control, however, AEM conducted due diligence reviews confirming that TPQ and NSSI/DTI had procedures in place to handle and ship cyanide safely. This confirmation was supported by a confirmation by DuPont that they had evaluated the systems used by Agnico-Eagle and NSSI/DTI and concluded that they met all DuPont standards for safe transportation of cyanide. AEM is responsible for road assessment and management between Baker Lake and the mine site, provision of emergency response, and oversight of AFS’s operations.

Transport Practice 1.2: Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

in full compliance with Transport Practice 1.2

The operation is in substantial compliance with
 not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

AFS drivers and operators are Transport of Dangerous Goods (TDG) and Worker Hazardous Materials Information System (WHMIS) trained and hold Class 1 Licences. Prior to beginning work, new hires must complete AEM induction training that includes safety training, chemical awareness training, emergency response; respirator training and task training related using the AWPR. Refresher training is required every three years. Drivers are also accompanied by an experienced driver for approximately eight trips before using the AWPR alone. Only experienced drivers are assigned to cyanide transport. AFS conducts its own vehicle maintenance and has two fulltime and one part time experienced Red Seal certified heavy duty mechanics.

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AEM has developed an Action Plan for reviewing AFS's contract obligations. This plan sets out a schedule for conducting checks and audits of AFS operations. The plan requires for quarterly audits of AFS's preventative maintenance program; monthly meetings to review safety and other topics and to conduct random audits; and for AFS to provide AEM annually with copies of all driver permits and licences, and lists of vehicles and equipment. AFS training in AEM policies and procedures is tracked by the AEM training department.

Transport Practice 1.3: Ensure that transport equipment is suitable for the cyanide shipment.

The operation is in full compliance with Transport Practice 1.3
in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

Cargo handling at the Port of Bécancour is undertaken by TPQ, an experienced Stevedoring company. TPQ uses two reach stackers, at least four forklifts and other heavy equipment to handle C-Cans. TPQ performs most of its maintenance and maintenance records were on file. AEM has made due-diligence enquires on NSSI/DTI operating practices and is satisfied that they have systems in place to safely transport supplies and dangerous goods to the mine site, including cyanide. Vessels are inspected as per Transport Canada and Classification Society requirements. Detailed instructions relating to inspection and preventative maintenance of machinery and equipment on vessels is managed through a preventative maintenance system for the vessel and is set out in various operating manuals.

AFS owns and maintains a fleet of Kenworth and Western Star tractors and Scona or Peerless flatbed trailers that are used for cyanide transport. AFS's maintenance program is audited by AEM. The trailers are rated to carry 54,000 t. AFS transports two containers on each truck/trailer; one cyanide container, and another containing a compatible material of similar weight (approximate gross weight of 24,000 kg). The trailers therefore have adequate capacity to carry two containers. The loaders used to loading C-Cans onto the trailers at the Baker Lake Marshalling Area and unloading at the mine site are rated to 25 t and 45 t, respectively.

C-Cans used to transport cyanide are owned by AEM. The containers are checked by DuPont to be "Wind and Water Tight" prior to accepting them for stuffing. Nevertheless, inspection of C-Cans used to haul cyanide revealed that the C-Cans were being maintained to meet the International Convention for Safe Containers (CSC), 1972. AEM was requested to review the Canadian and IMO DG requirements with regard to

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maintenance and approval of C-Cans and develop and implement procedures as necessary to comply. Subsequent to the field component of the certification audit AEM developed a written procedure to review C-Cans each year and prior to the stuffing of any container for shipping cyanide to ensure that containers display a current Convention for Safe Containers (CSA) Safety Approval Plate or Approved Continuous Examination Program (ACEP) decal. Any damaged container or container missing a current plate or decal will be inspected and repaired, as necessary, and reapproved.

AFS conducts equipment inspections prior to loading and transport of goods, including cyanide. Drivers and loader operators are required to complete Work Card that includes a detailed inspection checklist before undertaking a loading task or departing Baker Lake with a loaded truck. The Work Card is checked for completeness at the AEM Security Gate before a truck is permitted to use the AWPR. The driver is also required to stop and inspect the truck and load at designated locations along the AWPR.

AFS has a preventative and corrective maintenance program to ensure that equipment continues to operate as designed. The tractors are inspected and serviced on a 300 hour and 600 hour maintenance program. Maintenance is conducted as per manufacturer's recommendations using only approved parts. Trailers are on an annual inspection and maintenance program which is undertaken at the beginning of each trucking season. Inspection and maintenance is recorded on Inspection Reports and Work Orders that are filed and tracked in the General Managers Office. AEM Site Services conducts spot checks on AFS vehicles entering or leaving the mine site and conducts period audits of AFS's maintenance operations.

AEM has a preventative maintenance program for all mobile equipment operated at the mine, including the loaders used for handling cyanide C-Cans at the warehouse. The program is tracked on JD Edwards. The loader used for unloading and moving cyanide containers is on a 500 hour and 1,000 hour inspection and preventative maintenance schedule. In addition, daily equipment inspections are conducted by operators which are recorded in the equipment inspection logbook. ACUREN, a non-destructive testing, inspection and engineering company, is also retained annually to conduct non-destructive testing, inspection and repair of accessible welds on mobile equipment.

Loading of marine vessels and barges is managed by NSSI/DTI using established maritime loading and stowage procedures and requirements to ensure vessel stability and seaworthiness is maintained. Loading is the responsibility of the Master of the vessel.

Road transport vehicle loads are checked against the shipping manifest. General practice is to transport two C-Cans on each tractor/trailer. The C-Can weights for each transport load are recorded on the AFS haulage form and the load is checked by the AEM Baker Lake Warehouse prior to truck departure. Only one cyanide C-Can is

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permitted to be loaded on a trailer. The other C-Can must contain a cyanide compatible material, usually quick lime.

AEM has developed an Action Plan for reviewing AFS's contract obligations and ensuring that it meets the elements of ICMC. This plan sets out a schedule for conducting checks and audits of AFS operations. The plan includes requirements for AFS to provide annually copies of all driver permits and, licences, and lists of vehicles and equipment; undertaking quarterly audits of AFS's preventative maintenance program; and conducting monthly visits to AFS to review safety and other topics and conduct random audits. The Security Gate inspects driver Work Cards prior to allowing AFS vehicles use the AWPR. In addition AEM's Site Services department completes periodic tractor/trailer spot checks when vehicles enter the mine site.

Transport Practice 1.4: Develop and implement a safety program for transport of cyanide.

in full compliance with Transport Practice 1.4

The operation is in substantial compliance with
 not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

AEM ensures that the cyanide is transported in a manner that maintains the integrity of the packaging. Cyanide is received as solid briquettes packed in plywood 1,000 kg Intermediate Bulk Containers (IBCs). These are packed and transported in 20ft long C-Cans; 20 IBC boxes per C-Can. Within each IBC, the briquettes are packed in nylon supersacks enclosed in plastic (bag in bag) to protect against moisture. The C-Cans are loaded and sealed by DuPont and the seal is not broken until the shipped reaches the mine site.

When the C-Cans are being temporarily stored at the interim storage facilities they are monitored by security to ensure there is no unauthorized access. During road transport the C-Cans are secured on flatbed trailers using chain locks. Drivers check the chain locks prior to departure and twice during transport to the mine. At the Baker Lake Marshalling Area and the Meadowbank Warehouse the C-Cans are stored door to door to prevent unauthorized access.

Each IBC is labelled to identify the shipment as sodium cyanide, including the required international UN#, name of goods, production date, batch number, supplier's name, and buyer's name. The content of each C-Can is clearly identified on each side by "Poison" and UN 1689 placards and Marine Pollutant placards.

AEM conducted a due diligence investigation to determine whether NSSI/DTI had procedures in place to ship cyanide safely. The results of the due-diligence review for

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marine transport between Port Bécancour and Baker Lake determined that NSSI/DTI has an inspection and preventative maintenance program for machinery and equipment as determined in a preventative maintenance system and associated manuals for the vessel; crew work hours are regulated by the Marine Personnel Regulations and tracked as per regulation in a log maintained onboard; all vessels follow instructions provided in the Cargo Stowage Manual; vessels follow procedures in the Bridge Inspection Manual; the ship's Master is responsible for monitoring weather conditions and amending a vessel's course and speed as necessary, and suspends work that may be considered dangerous, in the event of adverse weather conditions; and there is a Drug and Alcohol Policy and crew are tested annually. Employees on duty are strictly prohibited to have any alcohol content in the blood. Records are maintained.

Road transportation safety procedures for the AWPR include; vehicle inspections prior to departure; a preventative maintenance program for all tractor trailers and loading equipment; limitations on drivers to 12 hour shifts; use chain locks for securing C-Cans to trailers; requirement for vehicle/load inspections twice during each trip; an ongoing inspection and maintenance program to ensure the road is safe to drive; a procedures for road closure during hazardous situations or inclement weather; and a mandatory drug abuse program for all drivers. Records are maintained.

As discussed in 1.3 above AEM has developed an Action Plan for reviewing AFS's contract obligations and undertakes periodic reviews and audits of AFS operations to ensure they meet the elements of ICMC. AEM has also developed policies and safety procedures that AFS is required to follow when within the mine property and using the AWPR. Training in AEM policies and procedures is tracked by the AEM training department and other training required by AFS to meet Canadian laws and regulations on safety is verified through periodic audits that are part of the Action Plan.

Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.

in full compliance with Transport Practice 1.5

The operation is in substantial compliance with
 not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

Packing of C-Cans is the responsibility of Dupont. Each C-Can is packed with twenty, 1,000 kg IBC plywood boxes of cyanide briquettes. Each IBC box is labelled as required by IMO DG with UN number, Dangerous Goods Class 6 toxic, and Marine Pollutant Mark. Loaded C-Cans are inspected and marked and placarded in accordance with the IMO DG with UN number, Dangerous Goods Class 6 toxic placard and Marine Pollutant Mark displayed on each side of the container.

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DuPont provides TPQ with a manifest for the cyanide transport to the Port of Bécancour. The manifest includes the C-Can container number, DuPont's seal number, Purchase Order number, and weight of the C-Can. TPQ generates an *IMO Dangerous Goods Declaration* document for each cyanide shipping container and an *Inventory of Dangerous Cargo* which includes the NSSI/DTI vessel name and as well as the details presented on the DuPont Manifest. A Bar Code reference is generated for each piece of cargo and this is used to track containers between the Port of Bécancour and the Mine site.

For each shipment a cargo stowage plan is developed for loading a vessel. Stowage and lashing is undertaken to comply with the *Cargo Securing Manual* developed for the vessel. This manual, required by IMO, is approved in accordance with the Safety of Life at Sea (SOLAS) Convention and complies with requirements of the *Rules for Classification and Construction – Stowing and Lashing Container*.

NSSI/DTI is compliant with Transport Canada rules and regulations including having access to material safety data sheets for sodium cyanide. NSSI is certified ISO 9001 and maintains a Quality, Safety, Security and Environmental Management System. NSSI/DTI's QSSEPM Manuals include procedures for Cargo, Ballast and Anchoring Operations and has a *Deck Instruction Manual* which covers instructions related to: deck organization; cargo with special requirements; cargo operation management; vessel to vessel transfer; and inspection of deck, cargo and ballast system. These procedures are established to ensure that NSSI/DTI complies with Transport Canada (and therefore IMO DG) stowage and separation requirements.

Transport Practice 1.6: *Track cyanide shipments to prevent losses during transport.*

The operation is	<input checked="" type="checkbox"/> in full compliance with Transport Practice 1.6 in substantial compliance with not in compliance with
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Summarize the basis for this Findings/Deficiencies Identified:

Systems are in place to track the progress of cyanide shipments. In addition to shipping manifests and haulage forms each shipping container is assigned a Bar Code by TPQ. The shipping inventory information which includes the Bar Code is managed through an on-line computer tracking system that enables NSSI/DTI to locate a specific container loaded on a vessel and AEM warehouse personnel to track the progress of each container being transported.

As discussed in Section 1.5 DuPont provides TPQ with a manifest of the cyanide delivered to the Port of Bécancour and TPQ generates the shipping documents for the

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marine transport. These documents as well as the *Fuel and Freight Haulage* Form used by AFS document the amount of cyanide in transit. NSSI/DTI complies with Transport Canada rules and regulations including having access to material safety data sheets for sodium cyanide. AFS Drivers have a brief of papers they carry with each cyanide transport. These papers include an MSDS for cyanide.

The NSSI/DTI ship and Atlantic Towing tugboats are equipped with VHF radio; MF radio; INMARSAT ship earth station; NAVTEX receiver; EGC receiver; COSPAS-SARSAT as well as radar search and rescue transponder (SART). This radio equipment is required under SOLAS and Canadian marine shipping regulations. Ships navigating in Canadian coastal waters are required by regulation to report any unplanned course change, hazard or emergency to coast guard stations (e.g. ECAREG and NORDREG). In the event of an emergency situation Canadian authorities will coordinate emergency response while the shipping company enacts its emergency response plan. All communications are logged in and audited both internally and externally for compliance to Canadian regulations. According to the interview with NSSI/DTI representative, there are no black out areas along the Port of Bécancour to Baker Lake marine route.

Each truck is equipped with a radio as a requirement for using the AWPR. Radios are in constant use on the road and are tested prior to start of each trip. All vehicles are required to regularly contact AEM Dispatch to report their location and any observed hazards, and listen to radio broadcast from other vehicles using the road. All communication goes through AEM Dispatch in the event of an emergency and emergency response procedures are in place to communicate with responders as required for the type of emergency. A series of radio transmitter/receivers are in place to ensure radio coverage along the whole route. Procedures are in place to change radio channels along route to ensure good coverage and reception. AFS does not currently have GPS in their vehicles but the General Manager indicated that a plan is in place for these to be fitted in each truck.

As discussed in 1.3 AEM has developed an Action Plan for reviewing AFS's contract obligations and undertakes periodic reviews and audits of AFS operations to ensure they meet the elements of ICMC. Warehouse is also reviews AFS haulage documentation prior to each shipment and is able to track the shipment electronically through the bar code logged for each container.

2. INTERIM STORAGE: *Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.*

Transport Practice 2.1: *Store cyanide in a manner that minimizes the potential for accidental releases.*

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in full compliance with Transport Practice 2.1

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not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The cyanide interim storage area at the Baker Lake Marshalling Area is used for a few weeks during the summer to temporarily laydown cyanide C-Cans between unloading from the tug barge and trucking to the mine site. Signage in the storage area was observed to be limited to UN 1689 placarding and marine pollutant marking on the cyanide C-Cans. Subsequent to the field component of the certification audit, AEM constructed mobile signage that will be placed at the interim storage area through the time that cyanide being stored and handled each summer. Photographs showed that the new signage included a cyanide warning, PPE requirements, no eating drinking or smoking, and cyanide symptoms and first aid. The cyanide C-Cans are not stored near incompatible materials.

The storage area is unpaved and located approximately 200 m from the dock. The area was not bermed to contain potential surface run-off if a spill occurred during a wet period in the summer. Subsequent to the field component of the audit AEM provided a commitment to upgrade the storage area to provide containment and allow capture and cleanup if a cyanide spill occurred. The area will be upgraded in the spring, to be ready for the next cyanide shipment season.

To be fully compliant with this requirement of the Code, AEM must provide photos of the upgraded cyanide storage area and a report signed by an appropriately qualified person concluding that the storage area's continued operation within established parameters will protect against cyanide exposures and releases. **Please refer to CAR AEMSC-ICMC-CAR-01.** As no cyanide is currently stored at Baker Lake since the designated area is only used for a short period each summer, and the upgrade will be completed prior to the next cyanide shipment, there is no current substantial or immediate risk to the environment or the health and safety of the workforce.

AEM is not permitted to fence the Baker Lake Marshalling Yard as Nunavuk regulation prohibits the erection of fences. However during the maximum 72 hour period cyanide is stored there, a security guard is posted 24/7. The cyanide laydown area is also monitored by a security camera and C-cans are stored door-to-door to prevent unauthorized access.

At the time of the field component of the audit shipping containers were stored at designated location at the Baker Lake Marshalling area well away from incompatible materials. Cyanide is stored in sealed C-Cans. The containers are not opened during transport and when cyanide needed for the mix process the container ventilated after the

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doors are opened to dissipate any potential hydrogen cyanide gas before removing the cyanide.

3. EMERGENCY RESPONSE: *Protect communities and the environment through the development of emergency response strategies and capabilities*

Transport Practice 3.1: *Prepare detailed emergency response plans for potential cyanide releases.*

The operation is **in full compliance with Transport Practice 3.1**
 in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The stevedoring company in Bécancour has an emergency response procedure. In the case of a cyanide release on the port property, the response is conducted by the nearby Bécancour Industrial Park's Fire Department who can intervene in a matter of minutes. The TPQ staff is trained on International Maritime Dangerous Goods Code as of February 2014. The NSSI/DTI shipping company operates under IMO, Transport Canada and other industry standards. NSSI/DTI implements a Vessel Contingency Plan in case of emergency. Meadowbank developed and implemented a *Site Emergency Response Plan*. The plan covers the mine site as well as the AWPR and the Baker Lake Marshalling Area. Cyanide release emergencies at the Marshalling Area and the AWPR would be responded according to the prescriptions and recommendations of the Meadowbank ERP and supporting documents. AFS operates under the Meadowbank ERP and staff are trained to this effect.

TPQ and NSSI/DTI's emergency response to potential cyanide releases are considered adequate. However, in the case of the Meadowbank ERP and its applicability to the Baker Lake Marshalling Area, the document does not include adequate clarity on the capacity of local authorities, notably the fire department and the police force ability to effectively intervene in light of their delegated responsibilities as specified in the ERP. To be fully compliant with this requirement of the Code, AEM must provide evidence that the Hamlet of Baker Lake has the resources to respond to a cyanide emergency at the Marshalling Area and on the AWPR and have formally committed to provide this service. Alternatively the Meadowbank ERP and supporting documents need to be revised and the resources and training be put in place to effectively respond alone or with minimal outside support to an emergency situations that may occur at these locations. **See Attachment A, CAR AEMSC-ICMC-CAR-02.** Based on review of AEM emergency response plan and given context where cyanide transport only occurs in the summer months and C-Cans are only permitted to remain at the Baker Lake marshalling area for

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a maximum of 72 hours, it is the auditors' judgment that the currently lack of a cyanide emergency response capacity in Baker does not present a substantial or immediate risk to health and safety.

The Meadowbank ERP and supporting documents are aligned with the selected method of transportation of cyanide. The Baker Lake Marshalling Area was an unbermed, unpaved bench uphill and approximately 200 meters from the inlet and there is potential for impacting the environment if a spill occurred. AEM provided a commitment and a preliminary design to construct a cyanide storage pad at Baker Lake to provide containment and allow capture and clean up if cyanide spill occurred.

Transport Practice 3.2: Designate appropriate response personnel and commit necessary resource, for emergency response.

in full compliance with Transport Practice 3.2

The operation is in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The contracted stevedoring and trucking companies' workers as well as Meadowbank's warehouse operators in Baker Lake and Baker Lake Dispatch received emergency response and cyanide awareness training. The specific duties and responsibilities of ERT personnel are adequately captured in the Meadowbank ERP. However, there is no evidence of Baker Lake Fire Department's staff and local police force being trained for cyanide emergency response at the Marshalling Area or on the AWPR at the level of the delegated responsibility set out in Meadowbank's ERP. To be fully compliant with this requirement of the Code, AEM must provide evidence that it has defined emergency response at Baker Lake and on the AWPR. **Please refer to Section 3.1 and CAR AEMSC-ICMC-CAR-02.** The Meadowbank ERP and associated documents list the equipment available to support an accidental cyanide release. Some response equipment is found in the nine (9) emergency containers are strategically placed along the All Weather Private Road. One container is located at the Marshalling Area in Baker Lake. In terms of PPE and respiratory protection, Meadowbank provides AFS truck drivers with emergency kits. The kits are kept in the AFS trucks when cyanide is transported. AEM provided respirator training and fit testing to AFS drivers and equipment operators as well as basic chemical awareness training. The drivers and equipment operators receive refresher training every 36 months.

NSSI/DTI and AEM work under a contractual agreement for the provision of maritime freight transportation services. The contract specifies that NSSI/DTI would use subcontractors for certain equipment and services required in cargo handling during the execution of the mandate. This included TPQ at the Port of Bécancour and Atlantic Towing for barge services in the Chesterfield inlet. The contract states that NSSI/DTI

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solely accountable for the performance of the contract. NSSI also acknowledges all requirements pertaining to safety, security of operations and environmental protection. AFS is contracted by AEM and the agreement clearly defines the roles and responsibilities between AFS and AEM.

Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

The operation is in full compliance with Transport Practice 3.3
in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

Meadowbank complies with Nunavut regulatory obligations by reporting all accidents or incidents leading to worker hospitalization or fatality. Likewise, cyanide spill of 5 liter or 5 kilogram are reportable event under the current legal framework. The need to report a cyanide release is confirmed in the *Spill Contingency Plan*. The ERP as well as the *Spill Contingency Plan* provides the key external agency contact information for emergency response purposes including Baker Lake community stakeholders like the fire department, the police force detachment, the mayor's office etc. The phone numbers of individuals are validated frequently. A cyanide release incident between Bécancour to the Marshalling Area in Baker Lake will be communicated by NSSI/DTI. A Crisis Management Plan provides rational for when to contact media. The plan provides a clear response process in the form of a notification protocol and responsibilities.

Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

The operation is in full compliance with Transport Practice 3.4
in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The *Spill Contingency Plan* contains a dedicated cyanide section in Appendix I. This appendix provides rational on how to address a cyanide release on soil. Likewise, guidance is given to address a cyanide spill near water. The appendix informs on the need and method for neutralization if the spill occurs on soil and the need to place contaminated soil in closed containers. There is explicit reference on the prohibiting use of neutralization chemicals near water or drainage channel.

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A *Cyanide Sampling Plan* has been developed for investigation and remediation of soil and water based cyanide impacts. The Plan provides guidance on how to perform sampling, sampling frequency, sample analysis, clean up and closure criteria, and which laboratories should be contacted for chemical analyses purposes.

Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is **in full compliance with Transport Practice 3.5**
 in substantial compliance with
not in compliance with

Summarize the basis for this Findings/Deficiencies Identified:

The introductory statement in the Meadowbank ERP confirms a review process is undertaken on an annual basis to ensure compliance with applicable regulations, to evaluate its effectiveness and improve its procedures.

With regards to transportation, the ER Counselors plan and implement catastrophic mock drills. The catastrophic mock drills are carried out on a three-year frequency. The intent behind catastrophic mock drills is to measure emergency response between multiple stakeholders both internal and external to the organization. The last catastrophic mock drill occurred in December 2013. For reason of inclement weather, the catastrophic mock drill occurred at the periphery of the mine site. One outcome of the exercise was the identification of 17 shortcomings. The improvement opportunities were recorded on the corporate database and a corrective action plan developed and implemented.

No area specific or catastrophic mock drill has been executed to date at the Marshalling Area involving AFS, the Baker Lake fire department or local police force, although they are listed as having responsibilities at that specific locations where Meadowbank oversees cyanide transport activities in the summer months. The auditors recommended that Meadowbank plan a mock drill at the Baker Lake Marshalling Area or AWPR to test the response for a cyanide medical emergency near Baker Lake. **Please refer to Section 3.1 and AEMSC-ICMC-CAR-02.**

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