
ICMI Cyanide Code Transportation Detailed Re-Certification Audit Report



**Submitted to:
International Cyanide Management Institute
1400 I Street, NW – Suite 550
Washington, DC 20005
USA**

2019 Audit Cycle



www.mss-team.com

Company Information:

Name of Operation:	Alaska West Express Inc.
Alaska West ICMC Contact Information:	Tyler Bones Director of HSSE tbones@awe.lynden.com (907) 328-4332 office
Terminal Addresses:	Fairbanks Terminal 1095 Sanduri St Fairbanks AK 99701 Tacoma Terminal 2902 Taylor Way Tacoma WA 98421

Location detail and description of operation:

Alaska West Express (AWE) is part of the Lynden family of companies. AWE provides truck transportation throughout the United States and Canada. AWE specializes in providing transportation to and from destinations in Alaska. AWE transports liquid- and dry-bulk products, petroleum, and hazardous and non-hazardous chemicals. AWE has terminals in Anchorage and Fairbanks, Alaska, as well as Tacoma, Washington. The AWE Fairbanks and Tacoma Terminals manage cyanide and were included in this re-certification audit.

AWE has been in operation for over 30 years and has been safely transporting cyanide for over 13 years. AWE has been part of an International Cyanide Management Code (ICMC) certified Supply Chain since 2010.

The Fairbanks Terminal is specialized in transporting commodities and equipment to mining customers in the region. The terminal receives intermodal containers, which are shipped from points in the U.S. to the Port of Whittier, Alaska. The intermodal containers are delivered directly into the AWE Terminal on a rail spur. AWE offloads the intermodal containers, stores them in a secure yard, and transports the containers to customers when requested to do so.

The Tacoma Terminal provides dray services to and from rail yards in Washington to the port in Seattle. There is no storage of any cargo at the Tacoma Terminal.

AWE also transports cargo directly to end-customers, including mining operations. The Health, Safety, Security, and Environmental (HSSE) program and maintenance programs are centrally

managed at AWE. The company maintains extensive procedures, plans, and computerized systems to ensure that operations at all locations conform to the same HSSE and equipment maintenance standards. The HSSE Manager and Maintenance Manager have responsibility, accountability, and authority over all HSSE and equipment maintenance aspects of operations at all AWE locations.

Audit Implementation

The audit was conducted according to the ICMI Cyanide Transportation Protocol. The audit was performed by an independent third-party auditor who was pre-approved by the ICMI as a Lead Auditor for all types of International Cyanide Management Code (ICMC) audits and as a technical expert for ICMC audits of cyanide transportation and production operations.

AWE cyanide transportation management practices were evaluated against the ICMC requirements, as documented in the ICMI Cyanide Transportation Verification Protocol. AWE internal policies, procedures, and practices were reviewed. The audit was conducted through discussions and interviews with AWE personnel at the Fairbanks and Tacoma Terminals.

Auditor's Finding

Alaska West Express cyanide transportation operations based in the terminals in Fairbanks, Alaska and Tacoma, Washington were found to be in FULL COMPLIANCE with the International Cyanide Management Code.

Confirmation was made that the operations have not experienced any cyanide spills or exposure incidents.

Audit Company:	MSS Code Certification Service www.mss-team.com
Lead / Technical Auditor:	Nicole Jurczyk E-mail: njurczyk@mss-team.com
Dates of Audit:	June 17-19, 2019

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 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 Verification Protocol for Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.

Alaska West Express		September 1, 2019
Name of Facility	Signature of Lead Auditor	Date

Cyanide Transportation Detailed Audit Results

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.

1.1.1. Does the transporter implement a process or procedure for selecting transport routes that minimizes the potential for accidents and releases or the potential impacts of accidents and releases? If so, does the process or procedure consider:

- a) Population density*
- b) Infrastructure (roadway, rail, port, runway, helipad) construction and condition*
- c) Pitch and grade*
- d) Prevalence and proximity of water bodies and fog*

Alaska West Express (AWE) maintains a documented procedure for the evaluation of routes used to transport cyanide. The procedure is entitled “Procedure for Establishing a New Route for Sodium Cyanide”. The procedure applies to the route planning at both the Fairbanks and Tacoma Terminals. The Director HSSE performs the route planning and leads the evaluation of risk process to minimize the potential for and potential impacts of accidents and releases. Periodic reviews of the route plans are performed as the drivers give feedback about route conditions to the dispatcher.

At Tacoma the auditor reviewed the route planning for the one cyanide route from the Union Pacific (UP) rail head to the Sea Pac storage facility. The Tacoma plan was prepared and approved by the Director HSSE and was last updated and revised on May 22, 2019. At Fairbanks route evaluations were available for all routes. The Fairbanks plan was prepared and approved by the Director HSSE and was last updated and revised on June 10, 2019. Detailed route planning information was reviewed for the AWE Fairbanks terminal to mine sites and was found to be compliant with ICMI requirements.

AWE maintains the procedure CR-P-02 *Journey Management Plan* to manage the transport in route which includes communications frequency, emergency contact numbers, communications coverage, and influence areas for communications with the mines.

The procedure calls for the evaluation of the route for all ICMC-required considerations, the driving of the route, and the development of special route-specific delivery instructions, as necessary. The procedure also calls for a review with the driver who tested the route and a re-review of the route at least every three years, or as necessary. The procedure and the resulting

risk evaluation records for both terminals were evaluated during the audit and were found to be acceptable.

According to interviews and review of route evaluation records, all cyanide delivery routes for both terminals have been evaluated or re-evaluated during the re-certification period to determine if comparable routes would be available that would reduce the risks associated with proximity to high population densities, poor road infrastructure (sharp turns), pitch & grade, alternative roads, proximity to water bodies, and prevalence and likelihood of poor weather and resulting poor driving conditions. Routing considerations were found to be consistent with those required by the Code.

1.1.2. Does the transporter implement a procedure to evaluate the risks of selected cyanide transport routes and take the measures necessary to manage these risks?

The risks associated with each of the routes (grade, traffic patterns, proximity to water, etc.) were evaluated and are detailed in the “*Procedure for Establishing a New Route for Sodium Cyanide*” where there is a section entitled Special Considerations to include alternate routes. The necessary risk mitigation measures for each route are also detailed in the procedure. The *Journey Management Plan (JMP)* incorporates the necessary control measures to mitigate risks identified.

Risks that were evaluated for Fairbanks included the risk of road closures, the Chena River bridge crossing, the need to have communication equipment, slippery conditions in winter, steep grade near the mine, and extreme cold conditions. The trip is 48 minutes in length to Fort Knox. The 1 hour and 20-minute route to Pogo has similar risks and countermeasures identified.

There were no special considerations identified on the Tacoma route. The route is 2.5 miles across town.

1.1.3. Does the transporter implement a process or procedure to periodically reevaluate routes used for cyanide deliveries or does the transporter have a process for getting feedback on route condition from the transporter’s operators?

Section 4 of the “*Procedure for Establishing a New Route for Sodium Cyanide*” calls for a review to be held between the dispatcher and drivers who are returning from a cyanide delivery. The procedure also calls for each route to be re-evaluated at least every three years.

Drivers indicated that they report any problems with the routes, such as road construction, to their dispatcher. The routes currently in use call for a dray move in Tacoma that is less than 10 miles, a mine delivery that is 24 miles away from the Fairbanks Terminal, and an approximately 140-mile move to another mine outside of Fairbanks. There have been no significant changes in the routes for either of the terminals during the recertification period.

The route planning procedure and the need for driver feedback was well understood by drivers at both terminals, the dispatchers, and the Director HSSE. AWE also has a documented process

for holding regularly scheduled safety meetings each week at which drivers are invited to share safety-related feedback regarding operations and the routes.

1.1.4. Does the transporter document the measures taken to address risks identified with the selected routes?

The risks associated with each of the routes (grade, traffic patterns, proximity to water, etc.) and all special considerations for a specific route are detailed in the individual route plans that are established for each route. The necessary risk mitigation measures for each route are also detailed in these route plans. All drivers are trained on the procedure. Risk mitigation measures such as special training, call-in procedures every 5 miles to the mine security team, and specific poor-weather emergency equipment are detailed in the mine and AWE procedures for this route.

Tacoma - Route plans and risk evaluations were available for the Seattle UP rail head to Seattle Port routes. The primary risk is highly populated and congested areas. There is also one bridge crossing that cannot be avoided. Drivers are trained in defensive driving skills; deliveries are made during daylight hours (the hours of operation at the port) using roadways that are approved by the U.S. Government for the transportation of hazardous materials.

1.1.5. Does the transporter seek input from communities, other stakeholders and applicable governmental agencies as necessary in the selection of routes and development of risk management measures?

AWE seeks input from the community through their involvement in local emergency response organizations. For Fairbanks, local emergency response agencies are invited to all training provided by AWE throughout the state of Alaska. AWE Director HSSE is a member of several emergency response organizations including the Fairbanks Local Emergency Planning Committee and the Borough-wide HazMat Response Team. For Tacoma, there are no restrictions in the port area where the routes are located. Lynden Corporate Safety Director participates in emergency response planning for the Port of Seattle and would inform AWE in the event there are any community concerns.

1.1.6 Where routes present special safety or security concerns, does the transporter use convoys, escorts or other additional safety or security measures to address the concern?

There were no special safety concerns identified in the routes that require convoys, escorts or other additional safety or security measures.

1.1.7. Has the transporter advised external responders, medical facilities and communities of their roles and/or mutual aid during an emergency response?

For Fairbanks, local emergency response agencies are invited to all training provided by AWE throughout the state of Alaska. AWE Director HSSE is a member of several emergency response organizations including the Fairbanks Local Emergency Planning Committee and the Borough-wide HazMat Response Team.

For Tacoma, there are no restrictions in the port area where the routes are located. Lynden Corporate Safety Director participates in emergency response planning for the Port of Seattle and would inform AWE in the event there are any community concerns.

AWE has advised all emergency responders of their roles in the event of an emergency. NRC external responders are utilized for emergency response in Tacoma. The Local Fire Department would also respond to transportation emergencies in the area. Communities are informed and engaged through the Local Emergency Planning Committees (LEPC) near each Terminal (Fairbanks and King County LEPC).

1.1.8. If the transport company subcontracts any of the cyanide handling or transport, does the transport company implement a procedure to ensure its subcontractors meet elements 1, thru 7 of this Transport Practice 1.1?

AWE does not subcontract any part of its operations.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.1?

Full Compliance **Substantial Compliance** **Non-Compliance**

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.

1.2.1. Does the transport company use only trained, qualified and licensed (where required) operators to operate its transport vehicles?

The AWE Industrial Health and Safety Manual, Section 2.7 “Driver Qualifications” details that all drivers must have commercial driver’s licenses with hazmat endorsements. Records and licenses were checked during the audit at both terminals and confirmation was made that all drivers have the necessary credentials, endorsements, and qualifications. The HR policies, procedures, and computer tracking program used to maintain training and driving credential records are centralized at AWE. A recall system is used to ensure that drivers who are due for training or license renewal are notified of the need for action. The system emails a notification nightly about upcoming expiration dates and expired license and/or hazmat endorsements. An Alaska driver’s license is valid for eight years, a Washington license is valid for five years, and the hazardous materials endorsement expires after five years in both states. Testing and fingerprinting are required every five years and a physical exam is conducted at least every two years. Medical cards were on file and records and qualification documentation for the re-certification period were well organized and readily retrievable in a scanned in format via a centralized computer network system used by both terminals.

AWE requires all drivers to have training in HazMat, Defensive driving, Safety Requirements and On Duty Time. AWE has a Fit for Work policy, driver's handbooks, performs random drug tests to drivers. AWE use JJ Keller Log Checker software which allows to track hours of service compliance, to perform instant audits and identify potential compliance gaps, receive email notifications when compliance areas require attention and provides vehicle insurance information, among others. Records were reviewed and found to be complete.

1.2.2. Have all personnel operating cyanide handling and transport equipment been trained to perform their jobs in a manner that minimizes the potential for cyanide releases and exposures?

Instructor led and online training is given on a regular basis. Instructor Led Training for cyanide is refreshed at least once every three years and includes emergency response. New hire training is done with the Cyanco video. New hires also receive the wallet card and the poster with emergency response steps. Instructor also talks about the hazards, transportation expectations, paperwork, routes, SDS review. The Spill Contingency Plan is kept in each truck, insurance and permits are maintained in a book and updated every 6 months. Drivers also receive the Hazmat HM-126 training and the Security Awareness Training HM-232 every 3 years. Load securement training is also given upon hire. Training records were reviewed and were complete. Interviews showed good awareness.

1.2.3. If the transport company subcontracts any of the cyanide handling or transport, does the transport company have a procedure to ensure its subcontractors meet elements 1, 2 and 3 of this Transport Practice 1.2?

AWE does not subcontract any part of its operations.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.2?

Full Compliance Substantial Compliance Non-Compliance

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

1.3.1. Does the transport company only use equipment designed and maintained to operate within the loads it will be handling?

AWE maintains a documented and very well-organized computer-based Equipment Maintenance Program that is administered from Fairbanks and applied to all AWE transportation and handling equipment at each Terminal. Equipment specifications and the design of the tractors, flatbed trailers, and chasses versus the weight of the loaded sea containers were confirmed at both locations.

Fairbanks: Confirmation was made that equipment has loading capacities that greatly exceed the weight of the cyanide shipments. The chassis can carry 100,000 pounds and the sea containers generally weigh less than 50,000 pounds when fully loaded.

Tacoma: The chassis data plates were checked and indicated a capacity up to 80,000 lbs. The loads transported are standard loads that don't exceed approx. 47,500 lbs. loaded. The Tacoma terminal uses tractors and triple-axle and spread-axle chasses are used for cyanide shipments at this location. Of the six trucks at the terminal, two are used to haul cyanide and each of those is dedicated to one of the two drivers.

1.3.2. Are there procedures to verify the adequacy of the equipment for the load it must bear?

AWE transports sea containers that are consistently packed with the same amount of cyanide each time. The equipment at each terminal is inspected prior to each delivery to ensure that it can safely transport the load. Trailers and chassis are inspected every 1200 miles. In addition, if a deficiency is found in a pre or post-trip inspection, the trailer or chassis undergoes the same checklist inspection at that time. Tractors are inspected pre and post trip in addition to the DOT required annual inspection. If any deficiencies are found, the equipment is repaired prior to transport. Maintenance and pre-/post-trip inspection records at each location were reviewed and were found to be acceptable.

The AWE *Industrial Health and Safety Manual* describes the loading tolerances for equipment in Sections 2.13 Heavy Equipment and 2.57 Material Handling. The Fairbanks terminal has one forklift for 36 t and the other for 80 t, both allows to handle the 20 ft intermodal containers to transport cyanide.

At Fairbanks, the straps and chains used to secure the sea container to the flat bed trailers (headed to Pogo) are marked with their working load capacity. Instructions for the securement of loads are taken from the JJ Keller "Cargo Securement Handbook". Drivers ensure that the working load capacity of the straps and chains is at least 50% of the load, as required by DOT regulations.

At Tacoma, the weight capacity of the equipment is significantly higher than the loading.

1.3.3. Are there procedures in place to prevent overloading of the transport vehicle being used for handling cyanide (i.e., overloading a truck, ferry, barge, etc.)?

AWE transports sea containers that are consistently packed with the same amount of cyanide each time. AWE does not open the intermodal containers. Shipping papers are checked for weights and the equipment is inspected prior to each delivery to ensure that it can safely transport the load. Trucks are driven over a scale upon exiting the yard in Fairbanks and when exiting the rail yards in Tacoma. Drivers confirm that axle weights are appropriate at that time.

1.3.4. If the transport company subcontracts any of the cyanide handling or transport, does the transport company have a procedure to ensure its subcontractors meet elements 1, 2 and 3 of this Transport Practice 1.3?

AWE does not subcontract any part of its operations for cyanide deliveries.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.3?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

1.4.1. Are there procedures to ensure that the cyanide is transported in a manner that maintains the integrity of the producer's packaging?

AWE does not open the intermodal containers. Upon arrival at the AWE Fairbanks storage yard, containers are secured with an additional lock and they are stored with doors facing each other to prevent tampering. Product is loaded on a flatbed trailer just prior to shipment, cargo is secured with chains to the trailers and is delivered directly to the customer. The procedure "Cargo Securement Via Highway" Chapter 2.14, describes the procedures for ensuring that the cyanide is transported in a safety manner. Drivers receive the training "Loads and Cargo Securement". AWE maintains a documented procedure for cargo load securement: *Industrial Health and Safety procedure number 2.14*. According to the procedure, the load must be secured according to the North American Load Securement Standard 49 CFR part 393.126 subpart i.; cargo is chained and strapping is done every 10-feet. This type of trailer is used to accommodate the delivery situation at the mine sites. The mine sites do not have the lifting equipment necessary for picking the intermodal containers off of a chassis. The cyanide is therefore being unloaded from the intermodal containers by mine personnel immediately upon delivery to the mine sites.

The Tacoma Terminal uses triple-axle and spread-axle chassis with locking pin mechanisms used to secure the loads. The intermodal containers are packed by the shipper and are not opened and remain locked during transportation activities in Tacoma. There is no storage activity at this location.

1.4.2. Are placards or other signage used to identify the shipment as cyanide, as required by local regulations or international standards?

Appropriate placards are displayed on all four sides of the transport vehicles. Drivers visually inspect containers prior to each delivery. This practice was confirmed through driver interview at Tacoma and observation of placards on sea containers at Fairbanks. A check of proper placarding (all four sides with UN number and 2 sides with Marine Pollutant) is also called for by the pre-trip inspection process.

1.4.3. Does the transporter implement a safety program for cyanide transport that includes (where appropriate or applicable):

a) Vehicle inspections prior to each departure/shipment?

Records for the re-certification period showing that pre-trip inspections are conducted on a regular basis were used to confirm that pre-trip inspections are conducted prior to each departure. The *AWE Industrial Health and Safety Manual, section 2.10 (Commercial Motor Vehicle and Equipment Maintenance Program)* addresses this requirement. Fairbanks records the pre-trip inspections on paper. Tacoma maintains electronic logs via ELD for pre- and post-trip inspections. Records were sampled at both locations and were found to be acceptable.

b) A preventive maintenance program?

AWE uses the TransMan Maintenance PM software for all equipment at both locations. Maintenance frequencies in use include oil changes (level C service) every 750 hours, brake check every 1,000 miles, spill kits checked every oil change (750 miles). Retread tires are used in all positions other than the steer tires. Tread depth is monitored and maintained above DOT minimums. Fairbanks and Tacoma preventive maintenance records were available for review in Fairbanks.

c) Limitations on operator or drivers' hours?

Driver hours are limited in the *AWE Industrial Health and Safety Manual* to meet U.S. Federal Motor Carrier Safety Regulations (FMCSR) at each location. AWE does not have any extended routes; drivers are typically making multiple shorter trips in a single day with little to no opportunity to exceed Federal and State driver hour limitations. Drivers are informed of legal requirements and are encouraged to stop driving if they become too tired (empowerment). By means of the JJ Keller software, drivers log their hours.

d) Procedures to prevent loads from shifting?

Cyanide sea containers are packaged by the shipper. AWE drivers confirm that the load has been properly secured after the cargo has been lifted onto the flatbed trailer or chassis. Chains are used for securement to flatbed trailers and the sea containers are attached to a chassis with lock pins.

AWE maintains a documented procedure for cargo load securement: *Industrial Health and Safety procedure number 2.14*. In Alaska the cargo is transported on a flatbed trailer. According to the procedure, the load must be secured according to the North American Load Securement Standard 49 CFR part 393.126 subpart i.; cargo is chained and strapping is done every 10-feet. This type of trailer is used to accommodate the delivery situation at the mine sites. The mine sites do not have the lifting equipment necessary for picking the intermodal containers off of a chassis. The cyanide is therefore being unloaded from the intermodal containers by mine personnel immediately upon delivery to the mine sites.

The Tacoma Terminal uses triple axle and spread-axle chassis with locking pin mechanisms used to secure the loads. The intermodal containers are packed by the shipper and are not opened and remain locked during transportation activities in Tacoma. There is no storage activity at this location.

e) Procedures by which transportation can be modified or suspended if conditions such as severe weather or civil unrest are encountered?

AWE carefully monitors driving conditions and is linked into several alert systems that would be used to inform AWE if driving conditions are unsafe. Drivers and dispatchers were very aware of procedures for suspending deliveries if conditions such as severe weather or civil unrest are encountered. The *AWE Industrial Health and Safety Manual* states that drivers are empowered to stop if they feel fatigued. Drivers are also empowered to stop a shipment and/or change routing if conditions are unsafe. Acceptable alternative routes are listed in the Route Plans.

f) A drug abuse prevention program?

A drug abuse prevention program has been implemented at both locations and was reviewed in the *AWE Industrial Health and Safety Manual*, last updated August 17, 2018 - chapter 2.6 - Fit for Work Section. Every employee is tested upon hire and randomly thereafter as regulated by DOT and for reasonable suspicion and post-accident situations. AWE has a zero-tolerance policy for drugs and alcohol.

g) Retention of records documenting that the above activities have been conducted?

Records for the re-certification period were available to demonstrate that the requirements of each of the abovementioned sections (1.4.3 a) through f)) had been fulfilled during the re-certification period.

1.4.4. If the transport company subcontracts any of the cyanide handling or transport, does the transport company have a procedure to ensure its subcontractors meet elements 1, 2 and 3 of this Transport Practice 1.4?

AWE does not subcontract any part of its operations.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.4?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

1.5.1. Are shipments of cyanide by sea transported in compliance with the Dangerous Goods Code of the International Maritime Organization?

AWE does not transport containers by sea or by air. This section of the ICMC does not apply to the operation.

1.5.2. Are shipments of cyanide by air transported in compliance with the Technical Instructions for the Transport of Dangerous Goods by Air of the International Civil Aviation Organization?

AWE does not ship cyanide by air. This section of the ICMC does not apply to the operation.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.5?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

1.6.1. Do transport vehicles have means to communicate with the transport company, the mining operation, the cyanide producer or distributor and/or emergency responders?

Each route plan for cyanide routes requires that drivers have communication equipment in the truck at all times. The specific route plan for deliveries to Pogo Mine require that a radio be available as the mine requires the driver to check in every 5 miles. Pogo is the only blind communications zone. No other blackouts exist for cyanide transport. All other routes are covered by satellite and cell phones. Tacoma drivers must always have cell phones with them during all deliveries. Interviews confirmed this practice.

AWE trucks are equipped with GPS and use the Shaw Tracking's Mobile Computing Platform system allowing satellite tracking. Drivers use PeopleNet which utilizes the Internet to provide additional means of communications between trucks.

1.6.2. Is the communication equipment (GPS, mobile phone, radio, pager, etc.) periodically tested to ensure it functions properly?

The satellite tracking systems and the radios in the trucks at each location are part of the regularly scheduled preventive maintenance program. Interviews with the Maintenance Manager and a review of maintenance records for the re-certification period confirmed this

practice. Additionally, drivers at both locations reported that they confirm the proper functioning of their communications equipment as part of the pre-trip inspection process.

1.6.3. Have communication blackout areas along transport routes been identified? Are special procedures implemented for the blackout areas?

AWE transports many commodities to the mines and dispatches multiple trucks to each mine each day and they remain in close contact with trucks throughout each day. Although blackout areas exist for cell phones on some parts of the mine roads, there are no blackout areas for the satellite tracking systems. The only Fairbanks route that has a blackout section is the Pogo mine road from Fairbanks. AWE radios are programmed to communicate with Mine Security. Drivers need to check in with security (call in location) every 5 miles and monitor progress and speed carefully.

For Tacoma there are no blackout areas on the routes traveled. Big Road is available (GPS and texting option). Cell phone is the normal method of communication as routes are all in the city area. Tacoma drivers contact Sea Pac to notify of estimated arrival time upon leaving the UP Railhead.

1.6.4. Are there systems or procedures to track the progress of cyanide shipments?

AWE transports many commodities to the mines and dispatches multiple trucks to each mine each day and they remain in close contact with trucks throughout each day. Route Plans for each cyanide route require drivers to communicate with the dispatcher upon delivery of the cyanide. Interviews with drivers and dispatchers at both locations confirmed that Dispatch tracks each load until it is delivered. Procedures for both terminals indicate to contact the Dispatcher when loading and unloading the truck.

GPS was installed on all company tractors in 2017. Only company vehicles are used for the transport of cyanide. Shipments can be tracked through online system called SmartDrive (with GPS). They also have Omnitrac (used to be Shaw/Qualcomm) GPS tracking which has two-way text messaging and a panic button in the event of an emergency. Fleet Complete software platform is used for electronic logging.

Recently cameras were installed in all trucks and the SmartDrive online system is used to advise AWE of high speed and hard braking.

1.6.5. Does the transporter implement inventory controls and/or chain of custody documentation to prevent loss of cyanide during shipment?

When AWE receives the intermodal containers from the rail they are sealed. AWE secures the containers with additional locks. In Fairbanks during interim storage, containers are stored with doors facing each other to prevent tampering. AWE maintains inventory controls on all containers stored in the yard. AWE does not open the containers. Customers sign the shipping papers upon delivery of the cyanide. Records of this process were available for

review and were found to be complete. Tacoma does not provide interim storage services.

Shipping records were sampled from the re-certification period (2016-2019). The shipping papers show all necessary information including: U.N. 1689 designation, shipper, shipping destination, emergency contact telephone numbers, quantity, receipt information, driver name, trailer number, tractor number. Information was found to be complete.

AWE's DOT Hazardous Materials Security Plan is addressed in the *Industrial Health and Safety Manual* Section 6.1.16 In-Route Security.

1.6.6. Are shipping records indicating the amount of cyanide in transit and Material Safety Data Sheets available during transport?

Shipping records for the re-certification period (2016-2019) were sampled and were found to be complete at both terminals. The amount of cyanide is noted on the paperwork. The Safety Data Sheet (SDS) is attached to the shipping paperwork upon dispatch of the load. This practice was confirmed at each location.

1.6.7. If the transport company subcontracts any of the cyanide handling or transport, does the transport company have a procedure to ensure its subcontractors meet elements 1 thru 6 of this Transport Practice 1.6?

AWE does not subcontract any part of its operations.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 1.6?

Full Compliance **Substantial Compliance** **Non-Compliance**

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.

2.1.1. Are warning signs posted alerting workers 1) that cyanide is present; 2) that smoking, open flames, eating and drinking are not allowed and 3) what personal protective equipment must be worn?

This part of the ICMC is only applicable to the Fairbanks Terminal. Intermodal containers are stored in an open, but secure storage yard at the Fairfax AWE Terminal. The intermodal containers have DOT placards affixed. Due to security concerns, there are no signs (beyond placarding of the intermodal containers) indicating that cyanide is stored in the area. The *Industrial Health and Safety Manual*, Chapter 2.51 "Terminal Property", Item A prohibits eating, drinking, smoking, open flames within 30 feet of the cyanide storage area. Personal protective equipment includes a hard hat, safety vest, and eye protection. All employees who have contact with containers are cyanide trained. The intermodal containers are never opened while at AWE. AWE's approach to the storage of the intermodal containers was found to be acceptable.

2.1.2. Are there security measures in place to prevent unauthorized access to cyanide, such as lockouts on valves and fenced and locked storage of solids?

The cyanide is protected against unauthorized access. The storage area is fenced and manned at all times and the gates are locked at night. Keys are removed from forklifts with the capacity to move the cyanide containers when operators are not on site. Padlocks are maintained on the intermodal containers, bottom row containers are stored door-to-door, and security cameras with direct line-of-sight to the cyanide storage area are installed and monitored.

2.1.3. Is cyanide separated from incompatible materials such as acids, strong oxidizers and explosives with berms, bunds, walls or other appropriate barriers to prevent mixing?

The *Industrial Health and Safety Manual*, Chapter 2.51 "Terminal Property", item G states that the cyanide is to be stored away from acids, oxidizers, and explosives. Sodium cyanide is always kept in the shipping containers and no incompatible materials are stored in close proximity to the cyanide.

2.1.4. Is cyanide stored in a manner designed to minimize the potential for contact of solid cyanide with water (e.g., under a roof, off the ground, or in specially designed containers)?

The cyanide is stored in the same containers it is shipped, which provides protection from the rain and harsh weather conditions. The area where the containers are stored is not susceptible to flooding or water gathering.

2.1.5. *Is cyanide stored with adequate ventilation to prevent build-up of hydrogen cyanide gas?*

N/A – The intermodal containers are stored outside and they are not opened by AWE.

2.1.6. *Are there systems in place with the capacity to contain any spilled cyanide materials and minimize the extent of a release?*

The only material temporarily stored at the truck yard is solid cyanide briquettes in multiple layers of packaging within sealed intermodal containers. This requirement was not deemed to be applicable to this operation.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 2.1?

Full Compliance

Substantial Compliance

Non-Compliance

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.

3.1.1. *Does the transporter have an Emergency Response Plan?*

AWE has two primary emergency response plans: the Emergency Action Plan dated January 22, 2018 and the Spill Contingency Plan dated November 2018. These plans are updated annually.

Tacoma maintains emergency procedures in the Route Plan, including alternate routes. The Spill Contingency Plan is in the trucks at all times and the November 2018 copy of this document is on file in the office.

3.1.2. *Is the plan appropriate for the selected transportation route or interim storage facility?*

The AWE Spill Contingency Plan applies to all emergencies. Chapter 4.2 of the Emergency Action Plan is specific to the Fairbanks Terminal and is appropriate for the facility and transportation routes. For Tacoma, the Route Plan with Emergency Procedures combined with the Spill Contingency Plan are also appropriate.

3.1.3. Does the plan consider the physical and chemical form of the cyanide?

The Contingency Plan is not product specific - it is appropriate for all materials transported by AWE. The Route Plan is included in the dispatch packet and there is a section on Emergency Procedures in this document that is appropriate for solid cyanide. The sodium cyanide SDS is kept with the shipping papers in the truck. The Chemours and Cyanco SDSs were available for review.

3.1.4. Does the plan consider the method of transport (e.g., rail, truck) or storage?

The Spill Contingency Plan is maintained in the trucks and it is specific to the trucking that is done at the terminals.

3.1.5. Does the plan consider all aspects of the transport infrastructure (e.g., condition of the road, railway, port)?

AWE has a general plan for trucking and interim storage aspects but it appears to be appropriate for the operations.

3.1.6. Does the plan consider the design of the transport vehicle (e.g., single or double walled, top or bottom unloading) or storage facility?

The product is stored and transported in standard design 20 ft intermodal containers that are either strapped and chained to flatbed trailers (Fairbanks) or mounted on chassis (Tacoma). The plan adequately addresses the emergency planning needs associated with an incident from the use of this type of equipment.

3.1.7. Does the plan include descriptions of response actions, as appropriate for the anticipated emergency situation?

The Spill Contingency Plan includes general response actions that would be necessary for emergency situations. Detailed actions that are specific to cyanide are covered in the AWE Technical "PUSH" bulletin, the MSDS and in AWE training.

3.1.8. Does the plan identify the roles of outside responders, medical facilities or communities in emergency response procedures?

The Spill Contingency Plan, the Route Plan for Cyanide and also the Core Plan -Section 1.3, give contact information for external response organizations in the Fairbanks and Tacoma areas and details the roles of others outside of AWE, including the roles of remediation response companies. The AWE Director Health, Safety, Security, and Environmental is also the Chief of the Fairbanks North Star Borough Hazmat Team, the entity that would respond to any incident. AWE has robust emergency response capabilities and in many situations, AWE may be the only responder. AWE personnel are also very involved with the Local Emergency Planning Committee (LEPC) (meet quarterly) and the roles and responsibilities have been

clarified during those meetings as well as during actual emergency response incidents. None of the incidents involved cyanide deliveries. AWE has also been in contact with Tacoma-based Fire Department and has contact with LEPC personnel to discuss emergency planning.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.1?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

3.2.1. Does the transporter provide emergency response training of appropriate personnel?

AWE Fairbanks Terminal personnel are given full hazardous materials responder training in accordance with U.S. Regulations – 29 CFR (HAZWOPER Training). Emergency 40-hour initial training and refresher training is done. AWE provides the emergency response training to its own personnel and also external responders who may participate in the response effort. Training records for the re-certification period were checked and were found to be complete.

Tacoma personnel do not respond to spills.

3.2.2. Are there descriptions of the specific emergency response duties and responsibilities of personnel?

The roles and responsibilities of relevant internal and external personnel are clearly described in the Spill Contingency Plan, dated November 2018 for both terminals.

3.2.3. Is there a list of all emergency response equipment that should be available during transport or along the transportation route?

Fairbanks: There is a list of emergency response equipment in the Emergency Action Plan (EAP) that is to be maintained in the truck and another list of emergency response equipment that is to be maintained at the terminal (in the truck-mounted spill kit). Inspections of the emergency response equipment are conducted periodically.

Tacoma: PPE that is available in the truck includes a fire extinguisher, warning triangles, hard hat, gloves, safety glasses, safety shoes, and safety vest.

3.2.4. Does the transporter have available the necessary emergency response and health and safety equipment, including personal protective equipment during transport?

Confirmation of emergency response equipment availability on the trucks is part of the pre-trip inspection process. Maintenance lubrication PM includes a verifies of the contents of the spill kit.

3.2.5. Do transport vehicle operators receive initial and periodic refresher training in emergency response procedures including implementation of the Emergency Response Plan?

Fairbanks: Annual Hazmat Awareness and/or First Responder training is provided to Fairbanks personnel. The Director HSSE maintains trained and certified Hazmat Technician and Incident Commander status.

Tacoma: The Emergency Response Awareness training is done every 3 years as part of the refresher process associated with maintaining the hazmat endorsement. The Spill Contingency Plan is in the trucks at all times. The November 2018 copy of this document is also on file in the office.

3.2.6. Are there procedures to inspect emergency response equipment and assure its availability when required?

Emergency response equipment on the trucks is checked as a regularly scheduled preventive maintenance tasks and as a pre-trip check. The *Industrial Health & Safety Manual*, Section 1.6 Inspections addresses inspections of the emergency response equipment. Records of the quarterly inspection of the emergency response van were reviewed. Records were complete.

3.2.7. If the transport company subcontracts any of the cyanide handling or transport, has the transporter clearly delineated its roles and the responsibilities of the subcontractor during an emergency response?

AWE does not subcontract any part of its operations.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.2?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

3.3.1. Are there procedures and current contact information for notifying the shipper, the receiver/consignee, regulatory agencies, outside response providers, medical facilities and potentially affected communities of an emergency?

The Spill Contingency Plan, last updated in 2018, is maintained in the trucks and it is specific to the trucking that is done at AWE.

The AWE Emergency Action Plan was reviewed. This document was last updated on January 22, 2018. Section 4.1 of the EAP has telephone numbers of responders, hospitals, police, fire, Coast Guard, Government agencies in for Fairbanks and Tacoma in the event of an emergency.

3.3.2. Are systems in place to ensure that internal and external emergency notification and reporting procedures are kept current?

The telephone numbers are updated with changes and phone numbers are confirmed annually. The Spill Contingency Plan is re-issued in its entirety every year.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.3?

Full Compliance **Substantial Compliance** **Non-Compliance**

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

3.4.1. Are there procedures for remediation, such as recovery or neutralization of solutions or solids, decontamination of soils or other contaminated media and management and/or disposal of spill clean-up debris?

AWE's environmental consulting firm, Restoration Science and Engineering based in Anchorage, Alaska will manage any remediation project as required by regulatory agencies in consultation with AWE as necessary. Driver responsibility for incidents is defined in the Spill Plan for drivers (Core Plan). Section 1.4. of the plan does not permit drivers to remediate a spill on their own. Drivers are cyanide trained and are only permitted to do containment until emergency response and remediation experts arrive. This consulting firm would be involved in coordinating the response to accidents in Alaska and in Washington. The roles and responsibilities of the consulting / remediation firm are defined in the plan.

3.4.2. *Does the procedure prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water?*

These chemicals are not readily available for the driver. The use of chemicals such as those listed is prohibited in the Emergency Procedures. The Route Plan for each route also prohibits the use of sodium hypochlorite, ferrous sulfate and hydrogen peroxide. Drivers are cyanide trained and are only permitted to do containment until emergency response and remediation experts arrive.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.4?

Full Compliance Substantial Compliance Non-Compliance

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

3.5.1. *Are there provisions for periodically reviewing and evaluating the Plan's adequacy and are they being implemented?*

The EAP is reviewed annually. Emergency Action Plan, Section 4.1.24 Training Item B calls for periodic spill drills to be run. Records of emergency drills for the recertification period were available for review.

3.5.2. *Are there provisions for periodically conducting mock emergency drills and are they being implemented?*

Emergency Action Plan, Section 4.1.24 Training Item B calls for periodic spill drills to be run. These drills simulate both cyanide release and cyanide exposure incidents. Records of emergency drills for the recertification period were available for review.

3.5.3. *Is there a procedure to evaluate the Plan's performance after its implementation and revise it as needed, and have they been implemented?*

Section 2.26. Emergency and Post-Emergency of the *Industrial Health & Safety Manual* addresses the evaluation of the plan's performance after an emergency. Meetings are held after emergencies and/or drills to evaluate what parts of the plans could or should be improved. Evidence was available to show that plans were updated as necessary following emergency response drills.

Finding: Is the transporter in full compliance, substantial compliance, or non-compliance with Transport Practice 3.5?

Full Compliance Substantial Compliance Non-Compliance