INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Cyanide Transportation Summary Audit Report

For the International Cyanide Management Code

Sebang Co., Ltd.

21 February 2019

Name of Cyanide Transportation Facility : Sebang Co. Ltd.
Name of Facility Owner : Sebang Co., Ltd.
Name of Facility Operator : Sebang Co., Ltd.
Name of Responsible Manager : Se-Hoon Lee / Planning Team Leader
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Location detail and description of operation:
The Sebang Co., Ltd. is a logistic company operating transportation business mainly in Korea. The head office is located in Seoul Korea. And several branch offices as Ulsan Local Office and other local offices are operated in Korea.
The Sebang Co., Ltd. as a transportation service provider contracted with sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant" for roadway transportation of sodium cyanide from the plant to Ulsan Rail Center and Busan Port in Korea.
The distance from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center is about 3 Km and to Busan Port is about 60 Km.
The followings show brief transportation routes.
(1) Roadway transportation route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center
Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant -> Ulsan Petrochemical Complex -> Ulsan Rail Center
(2) Roadway transportation route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Busan Port
Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant in Ulsan -> ChingRyung IC of Donghae Express Way -> Haewoondae Tunnel -> JangAn Bridge -> Gwang An Bridge -> Busan Port

The Sebang Co., Ltd. was initially ICMC certified during Feb. 2016 year. Almost 3 years were elapsed since they were initially ICMC certified, so recertification audit was conducted during Jan. 2019 year. There was no severe change since Feb. 2016 year initially ICMC certified.
Recently they have conducted the transportation from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant mainly to Ulsan Rail Terminal and partially to Busan Port.

Auditor's Findings

This operation is

X in full compliance
in substantial compliance
not in compliance

with the International Cyanide Management Code.
This operation has maintained full compliance with the International Cyanide Management Code throughout the previous three-year audit cycle.

Audit Company : 3 Points Co., Ltd.
Audit Team Leader : Mr. Sang-Ho, Ahn
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Dates of Audit : 16, 17 and 23 January 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 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 Verification Protocol for Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.

Sebang Co., Ltd.	S.H Ahn	21 February 2019
Name of Transporter	Lead Auditor Signature	Date

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 **X in full compliance with** / in substantial compliance / not in compliance with **with Transport Practice 1.1**

Summarize the basis for this Finding/Deficiencies Identified:

Since 2015 year, the Sebang Co., Ltd. have conducted the transportation of sodium cyanide from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Terminal and Busan Port in Korea. There was no severe change in the roadway transportation of sodium cyanide since when they started the transportation business. They have conducted the transportation from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant mainly to Ulsan Rail Terminal and partially to Busan Port.
The Sebang Co., Ltd. prepared and revised the Cyanide Transportation Operational Procedure PR-USNTR-A-001 Rev.03 in which the process of route selection for sodium cyanide transportation is clearly defined. According to the procedure, they should survey the possible routes from the sodium cyanide manufacture to their final destination. And then they should select the sodium cyanide transportation routes considering the possibility of potential accident and release including detail check items as population density, infrastructure, pitch, grade, prevalence & proximity of water and fog. The customer requirements and profit were also considered.
The minimization of possibility for potential accidents and release is key item in selection of sodium cyanide transportation route. According to their procedure, they select sodium cyanide transportation routes as below.

1) Transportation cases
   According to contract between Sebang Co., Ltd. and Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant, Sebang Co., Ltd. have conducted the sodium cyanide transportations for two cases.
   (1) Roadway transportation from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center. The distance from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center is about 3 Km.
   (2) Roadway transportation from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Busan Port. The distance from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Busan Port is about 60 Km.
2) Selection of transportation routes
   According to Cyanide Transportation Procedure, Sebang Co., Ltd. evaluated several possible routes and finally selected routes as below.
   (1) Roadway transportation route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center
   Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant -> Ulsan Petrochemical Complex -> Ulsan Rail Center
   (3) Roadway transportation route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Busan Port
   Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant in Ulsan -> ChingRyung IC of Donghae Express Way -> Haewoondae Tunnel -> JangAn Bridge -> Gwang An Bridge -> Busan Port

The Sebang Co., Ltd. prepared, revised and implemented Risk Evaluation and High Risk Control Procedure PR-USNTR-B-001 Rev. 03.

1) Hazard identification
   Survey the detail courses from Taekwang Ind. Co., Ltd. Petrochemical #3 Plant in to Ulsan Rail Center and Busan Port. And issued possible hazards and risks as upset of truck, traffic accident, leakage of sodium cyanide, robbery and taken away by criminal suspect etc.
2) Risk evaluation
   Evaluate the possibility and consequence for the identified hazards.

During October 2018 year, they implemented the hazard identification and risk evaluation for their two road transportation routes. According to risk evaluation results, below were determined as high risks.

1) Route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center
   - Release to road and land by truck capsize during road transportation
2) Route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant in Ulsan to Busan Port
   - Release to road, land and surface water by truck capsize during road transportation
   - Release to sea by truck capsize during Gwang An Bridge transportation

According to Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the Sebang Co., Ltd. should re-evaluate the two transportation routes every year periodically. And for some changes related to route, road, vehicle and legal requirement etc., they should re-evaluate non-periodically. They evaluated their two routes during October 2018 year.
And also they defined the process for getting feedback on route condition from driver, reviewing the information and identification of additional risks. They should prepare additional control measure if any additional risk identified. Until now, there is no information from driver that can influence the identified risks and control measures.

The Sebang Co., Ltd. documented control measure and applied to the identified high risk items as below.

1) Release to road, land and surface water by truck capsize during road transportation
   - Prepare and implement Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03 in which driving speed, prevention of over loading and vehicle inspection etc. were defined.
   - Prepared emergency response plan for release of sodium cyanide to road, land and surface water.
2) Release to sea by truck capsize during Gwang An Bridge transportation
   - Prepare and implement Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03 in which driving speed, prevention of over loading and vehicle inspection etc. were defined.
   - Prepared emergency response plan for release of sodium cyanide to sea water.

And also the procedure and emergency preparedness were communicated and trained to employee and driver.

The Sebang Co., Ltd. received comments from below stakeholders and relevant government bodies as below.

- Sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Petrochemical #3 Plant"
- Sodium cyanide exporter as consigner
- Korea health and safety agency
- Fire fighting agency

They also checked the relevant legal requirements as below.

- Industrial health and safety act
- Chemical control act
- Land contamination prevention act

Sebang Co., Ltd.	S.H.Ahn	21 February 2019
Name of Transporter	Lead Auditor Signature	Date

The comments from stakeholders and legal requirements were reviewed and reflected to route selection and development of control measures for high risk items as below.

1) Comments from Taekwang Ind. Co., Ltd. Petrochemical #3 Plant
   - Property of sodium cyanide, response for release and communication channel for emergency situation
2) Exporter as Samsung C & T Corporation
   - Handling manual and communication channel for emergency situation
3) Korea health and safety
   - Handling & treatment manual, MSDS and communication channel for emergency situation

The Sebang Co., Ltd. reviewed the overall courses for the two road way transportation routes. According to the review results, they decide that convoys, escorts or additional measures are unnecessary as justified below.

1) From sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant" to Ulsan Rail Center
   - Road transportation is about 3 Km
   - Paved road condition is good and no sever curved area
   - Some segments are curved, but the risk can be controlled by drivers.
   - Security condition is good and no social disturbance
2) From sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plat" to Busan Port in Korea
   - Road transportation is about 60 Km
   - Paved road condition is good and no sever curved area
   - As main road is express way, road condition is good
   - Some segments are curved, near the high population density and surface water areas but those risks can be controlled by drivers.
   - Security condition is good and no social disturbance

According to the Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the Sebang Co., Ltd. will use escort or convey for special cases as social disturbance, strike by driver and if requested by government.

The Sebang Co., Ltd. established and maintained emergency response plan for sodium cyanide release and human exposure. In the emergency response plan, role and mutual aid with export consigner, sodium cyanide manufacture, port, rail terminal, safety agency, police, fire fighting agency, hospital etc. were defined. They communicated and advised the emergency response plan to relevant bodies.

The Sebang Co., Ltd. have used subcontractor for the sodium cyanide roadway transportation. The transportation route survey, risk evaluation, high risk control, communication with relevant bodies and emergency response role of relevant bodies were communicated and trained to subcontracted drivers by Sebang Co., Ltd.

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.

The operation is	**X in full compliance with**	**with Transport Practice 1.2**
	in substantial compliance	
	not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

Sebang Co., Ltd.		21 February 2019
Name of Transporter	Lead Auditor Signature	Date

The Sebang Co., Ltd. use only licensed drivers according to "Road traffic safety act". The drivers shall have license admitted the operation and driving for truck and trailer.
According to Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03 and "Industrial Safety and Health Act", the truck and trailer drivers should receive minimum 16 hours training before undertaking the handling and transportation work for dangerous substance as chemicals, gas and radioactive material. So, the Sebang Co., Ltd. have trained their drivers and operators minimum 16 hours for sodium cyanide safety issues as emergency response plan, wearing of personnel protective equipment and Cyanide Transportation Procedure.

The Sebang Co., Ltd. have registered driver and operator names, license numbers, effective dates of license and training results. Then the Sebang Co., Ltd. use the trained and licensed drivers and operators in the register. The Sebang Co., Ltd. also has implemented 6 hours quarterly training to their drivers and operators for safety issues related to transportation and sodium cyanide handling.

The Sebang Co., Ltd. have used subcontractor for the sodium cyanide roadway transportation. According to Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the training, qualification and license control for their subcontracted drivers were conducted by Sebang Co., Ltd.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

The Sebang Co., Ltd. uses trucks and trailers originally designed for road transportation. The maximum load bearing capacity "20 tons" is defined in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03 with the reflection of requirements from "Road traffic safety act".

The Sebang Co., Ltd.. has preventive maintenance schedule for trucks and trailers. The maintenance period, inspection item, last and next inspection dates were defined in maintenance schedule. The maintenance records including inspection results, part and oil exchange results were retained in Ulsan Local Office and in each truck and trailer. During the maintenance, the load bearing capacity and adequacy considering the maximum weight of transportation were checked and repair results were recorded.

The Sebang Co., Ltd. defined the process of verification for transportation equipment in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03. According to the procedure, the adequacy of truck and trailer for the road those must bear can be checked during preventive maintenance implemented every 6 months.
The tire air pressure, tire abrasion, tire exchange date and running kilometer and distortion of frame should be checked to identify sign of stress and overloading. The inspection and maintenance results were recorded in each equipment history card retained in Ulsan Local Office. According to the maintenance records, there is no sign of stress and overloading for their truck and trailer.

According to "Road traffic safety act" and Cyanide Transportation Operational Procedure PR-USNTR-A-001 Rev.03, the maximum weight for road transportation is 20 tons. To comply with

safety act and procedure, the Sebang Co., Ltd. transport only one container in which 18 to 20 tons of sodium cyanide can be fully inserted. And also the sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Petrochemical #3 Plant" ordered only one container transported for each transportation order. So the Sebang Co., Ltd. were prevented automatically the overloading for sodium cyanide transportation.

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

The operation is **X in full compliance with** / in substantial compliance / not in compliance with **with Transport Practice 1.4**

Summarize the basis for this Finding/Deficiencies Identified:

In the Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the Sebang Co., Ltd. defined the handling and inspection method for the container of sodium cyanide. The loading of sodium cyanide to container was controlled and implemented by Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant. After the loading to container, the amount and appearance were checked by Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant and drivers. And the container was locked by drivers. The amount of sodium cyanide and appearance inspection results were recorded in dispatch order sheets communicated from Taekwang Ind. Co., Ltd. Petrochemical #3 Plant to Sebang Co., Ltd. and shipping company by computer network system.

The Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant have used sodium cyanide containers on which the mark of toxic chemical presence was attached and easily identified during transportation. According to "Industrial safety and health act", the marking of toxic chemical presence and maintaining of MSDS were required during transportation.
The Sebang Co., Ltd. have transported the sodium cyanide container marked the toxic chemical presence by Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant and maintained MSDS by drivers. Those marking of toxic chemical presence and maintaining MSDS complied with Korea legal requirement and Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03.

The Sebang Co., Ltd. defined and implemented the safety processes related to sodium cyanide handling and transportation in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03 as below.

1) Truck and trailer inspection prior to departure.
2) Preventive maintenance schedule was prepared for trucks and trailers. The maintenance period and check items were defined and implemented according to schedule.
3) The maximum working time of truck and trailer driver and fork lifter operator is defined as "8 hours" in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03.
4) Process to prevent load from shifting
5) In Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the Sebang Co., Ltd. defined the process of suspension and modification of sodium cyanide transportation.
6) A drug abuse is prevented according to Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03. If drug abuse is found, then the driver will be fired. During health check implemented every year, the drug abuse can be identified. But until now, the drug abuse case was not occurred.
7) The Sebang Co., Ltd. defined the retention period as five years for records originated from inspection, preventive maintenance, transportation log sheet, dispatch order sheet etc.

The Sebang Co., Ltd. have used subcontractor for the sodium cyanide roadway transportation. The ordering of sodium cyanide transportation, development and implementation of safety program, driver control, transportation equipment control and training were totally conducted by Sebang Co., Ltd.

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

The operation is	**X in full compliance with** in substantial compliance not in compliance with	**with Transport Practice 1.5**

Summarize the basis for this Finding/Deficiencies Identified:

The Sebang Co., Ltd. do not operate the sea and air transportation for sodium cyanide. So the transportation practice 1.5 is not applicable.

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

The operation is	**X in full compliance with** in substantial compliance not in compliance with	**with Transport Practice 1.6**

Summarize the basis for this Finding/Deficiencies Identified:

The drivers have mobile phones. So during transportation they can communicate with the Ulsan Local Office of Sebang Co., Ltd. and also they have communication channel sheet in which telephone numbers of Sebang Co., Ltd., safety team of Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant, Industrial safety and health agency, police, hospitals in Ulsan and Busan and fire fighting agency were defined.

The Sebang Co., Ltd. have recorded the mobile phone number and drivers have checked the function and battery charging of mobile phones before departure. The test results were recorded in log sheets. Usually the drivers communicate with Ulsan Local Office during transportation. So actually the function of mobile phone can be tested every transportation. Each driver has mobile phone and the number of mobile phone was registered to emergency communication channel of Sebang Co., Ltd. The mobile phone controlled by driver individually. But, according to Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03, the driver should control the mobile phone properly, so that can be used in emergency situation and transportation.
The Sebang Co., Ltd. surveyed the two roadway main transportation routes for sodium cyanide transportation. They can't find any communication blackout area along the two roadway transportation routes.
The Sebang Co., Ltd. defined the tracking of sodium cyanide transportation in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03. For each transportation by truck and trailer, the progress of transportation can be checked by mobile communication between driver and Ulsan Local Office. The Ulsan Local Office have maintained the transportation log sheets in which the transportation order

number, truck and trailer number, drivers name, departing time and arriving time were recorded. The inventory control was defined in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03. The Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant input the dispatch amount, container number and date for individual transportation order in their computer network system. And also the information was communicated to Sebang Co., Ltd. and shipping company by computer network system. After the loading of sodium cyanide to container, the inspection of lock on door and container appearance were implemented by drivers and Taekwang Ind. Co., Ltd. Petrochemical #3 Plant. The inspection results were recorded in log sheets and maintained by driver and communicated to Ulsan Local Office. And also Ulsan Local Office have maintained the transportation log sheets in which the transportation order number, truck and trailer number, drivers name, departing time and arriving time were recorded.

The dispatch and transportation control were defined in Cyanide Transportation Procedure PR-USNTR-A-001 Rev.03. The Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant input the dispatch amount, container number and date for individual transportation order in their computer network system. The results were communicated to Sebang Co., Ltd. and shipping companies. During the audit, it was found that the amount of sodium cyanide in container and transportation order were recorded in computer network system of Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant and transportation log sheets in Ulsan Local Office of Sebang Co., Ltd. The Material Safety Data Sheet was available during roadway transportation and Ulsan Local Office. The driver, operator and office member maintain Material Safety Data Sheet in truck and Ulsan Local Office.

The Sebang Co., Ltd. have used subcontractor for the sodium cyanide roadway transportation. The ordering of sodium cyanide transportation to subcontracted drivers, the control of subcontracted drivers' communication equipment, tracing of cyanide shipment, MSDS maintenance and training for subcontracted drivers were conducted by Sebang Co., Ltd.

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.

The operation is **X in full compliance with** / in substantial compliance / not in compliance with **with Transport Practice 2.1**

Summarize the basis for this Finding/Deficiencies Identified:

The Sebang Co., Ltd. do not operate the interim storage during the transportation of sodium cyanide from Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant to Ulsan Rail Center and Busan Port. So the transportation practice 2 is not applicable.

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	**X in full compliance with** in substantial compliance not in compliance with	**with Transport Practice 3.1**

Summarize the basis for this Finding/Deficiencies Identified:

The Sebang Co., Ltd. identified possible emergency situations as sodium cyanide release to road, land, surface water, robbery during transportation and taken away by criminal suspect during transportation. The Ulsan Local Office of Sebang Co., Ltd. have prepared and maintained the emergency response plan according to Emergency Response Procedure PR-USNTR-C-001 Rev.03. They defined what they should do, wearing of personnel protective equipment, using of treatment equipment for spilled sodium cyanide, communication channel and relevant external responders such as sodium cyanide manufacture "Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant", shipping companies, export consigner, Korea safety and health agency, police hospitals in Ulsan and Busan.

The emergency response plan prepared and maintained by Ulsan Local Office can be applicable for such cases as sodium cyanide release to road, land, surface water, robbery during transportation and taken away by criminal suspect during transportation. So, the emergency response plan can be applied over all emergency situations.

The emergency response plan considered the solid sodium cyanide packaged in film and box and transported in container. So considering the spillage of solid sodium cyanide, they defined the preparation of treatment equipment, personnel protective equipment and neutralization method in emergency response plan. According to the plan, they will use sawdust, cement powder and sand to collect and neutralize the spilled sodium cyanide.
And also the emergency response plan considered the transportation methods as roadway transportation. They also received comments and information from Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant and Korea industrial safety and health agency and reflected to the emergency response plans.
During the preparation of emergency response plan, they traced two road way transportation routes. They checked the infrastructure of those two road way transportation routes. The check results of road condition, proximity of water, bridge condition and road traffic condition were reflected to the emergency response plan.
The design of the transportation truck and trailer was considered during the preparation of emergency response plan. They only use double walled transportation truck and trailer. So the containers were fixed as designed in double walled transportation truck and trailer. They do not transport tank lorry, so no need to consider the top or bottom unloading.
In the emergency response plan, they defined steps from starting of emergency to finalizing the emergency situation. The detail response actions, responsibility and relevant external responder were defined in each step in emergency response plan.
During the preparation of emergency response plan by Ulsan Local Office, they identified outside responders as below.

(1) Customer and consigner : Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant, SamSung C & T Corporation, Shipping Companies as MSC, Mersk and Safmarine etc.

(2) Government body : Fire fighting agency, Korea Industrial safety and health agency, Local government office as Ulsan city office and Pusan city office and Police
(3) Hospital : Hospital in Ulsan and Busan,

They defined the general roles of above outside responders in the emergency response plan. The detail response actions, responsibility and relevant external responder were defined in each step of the emergency response plan.

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

The operation is **X in full compliance with** / in substantial compliance / not in compliance with **with Transport Practice 3.2**

Summarize the basis for this Finding/Deficiencies Identified:

The Sebang Co., Ltd. prepared safety training plan every year for their drivers and employee and drivers supplied from subcontractor. In the training plan, detail training items were defined for every month. The emergency response training was planned once per 3 months. During the training, they use the emergency response plan as training material. After the training, they recorded the training results and maintained the records for 5 years according to their procedure. During December 2018, the training for emergency plan was implemented according to the safety training plan and also results were recorded. .

The Ulsan Local Office of Sebang Co., Ltd. have prepared and maintained the emergency response plan appropriate to overall emergency situations. The emergency response plan can be applicable for such cases individually as sodium cyanide release to road, land, surface water, robbery during transportation and taken away by criminal suspect during transportation. In the emergency response plan, the roles and responsibilities of driver, Ulsan Local Office team leader, team member, other relevant team and external agency defined.

The Ulsan Local Office of Sebang Co., Ltd. defined the emergency response equipment in their emergency response plan. And they prepared lists of emergency response equipment as personnel protective equipment and treatment equipment for the case of two road way transportation routes. The drivers should maintain the list and emergency response equipment as in list in truck during transportation. During audit, it was found that they maintained personnel protective equipment and treatment equipment as defined in list and emergency response plan.

According to emergency response plan and Emergency Response Procedure PR-USNTR-C-001 Rev.03, Ulsan Local Office member as safety representative should inspect emergency response equipment in driver's truck. The inspection should be implemented once per month and results were recorded. Main inspection items are maintaining of emergency response equipment as in list and effective function of the equipment. During December 2018, they have inspected and results were recorded.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

The Ulsan Local Office of Sebang Co., Ltd. prepared the emergency response plan appropriate to overall emergency situations according to Emergency Response Procedure PR-USNTR-C-001 Rev.03. They identified outside responders as below.

(1) Customer and consigner : Taekwang Ind. Co., Ltd. Petrochemical #3 Plant, Samsung C & T Corporation, Shipping Companies as MSC, Mersk and Safmarine etc.
(2) Government body : Fire fighting agency, Korea industrial safety and health agency, Local government office as Ulsan city office and Pusan city office and Police
(3) Hospital : Hospital in Ulsan and Busan

According to emergency response plan and Emergency Response Procedure PR-USNTR-C-001 Rev.03, during December 2018 year they checked and updated the information of above outsider responders as contact person, name, telephone number, etc.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

The Ulsan Local Office of Sebang Co., Ltd. have prepared and maintained emergency response plan appropriate to overall emergency situations according to Emergency Response Procedure PR-USNTR-C-001 Rev.03. In the emergency plan, the remediation as recovery and protect for released sodium cyanide, decontamination of soil and water, control and disposal of wastes etc. were defined. The Ulsan office of Sebang Co. Ltd. and manufacture Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant are responsible for containing cyanide spills and performing clean-up and remediation of any cyanide contaminated materials.
In the emergency response plan, the prohibit of the use of sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat sodium cyanide that has been released into surface water was defined.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

According to emergency response plan and Emergency Response Procedure PR-USNTR-C-001 Rev.03, the Sebang Co., Ltd. should check the emergency response plan once per year and revise the contact information and detail process with the reflection of changes in two transportation routes. The emergency response plan was checked and updated during December 2018 year. The changed contact information of external responders was reflected to the emergency response plan.

The Sebang Co., Ltd. should do the mock emergency drill once per year according to emergency response plan and Emergency Response Procedure PR-USNTR-C-001 Rev.03, The mock emergency drill was implemented in Ulsan Local Office during December 2018. They checked the overall process and adequacy of emergency response plan and recorded the results.
The contact information of outside responders in emergency response plan were revised during December 2018 year.