

Bukwang Logistics Co., Ltd.

Cyanide Transportation
Summary Audit Report

***INTERNATIONAL CYANIDE
MANAGEMENT INSTITUTE***

***Cyanide Transportation
Summary Audit Report***

***For the
International Cyanide Management Code***

Bukwang Logistics Co., Ltd.

26 January 2022

Bukwang Logistics Co., Ltd.

Name of Transporter



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Transportation Summary Audit Report

Operation General Information

Name of Transport Operation : Bukwang Logistics Co., Ltd.
Name of Facility Owner : Bukwang Logistics Co., Ltd.
Name of Facility Operator : Bukwang Logistics Co., Ltd.
Name of Responsible Manager : SangHwan Bae / Managing Director
JeongDae Seo / Manager of Ulsan Rail Center
Address : Room 1826, 18th Floor, Suveong-ro 312, Nam-gu
State / Province : Busan
Country : Republic of Korea
Telephone : 82-51-469-8908
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Operation Location Detail and Description

Bukwang Logistics Co., Ltd. established during 2014 is a roadway transportation company operating mainly in Korea. The head office is located in Busan Korea. During October 2021, Bukwang Logistics Co., Ltd. as a roadway transportation service provider contracted with sodium cyanide manufacture Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant for roadway transportation of sodium cyanide from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant to Ulsan Rail Center and Busan Port in Korea. Bukwang Logistics Co., Ltd. started the roadway transportation of sodium cyanide at November 2021. At that time, they are registered as ICMC signatory, established and implemented environment and safety procedures according to ICMC transportation protocol. And also at January 2022, Bukwang Logistics Co., Ltd. started the roadway transportation of sodium cyanide from Tongsoh Petrochemical Co., Ltd. Ulsan Plant to Ulsan Rail Center and Busan Port in Korea.

The distance from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. to Ulsan Rail Center is about 4 Km and Ulsan Rail Center 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 and Tongsoh Petrochemical Co., Ltd Ulsan Plant to Ulsan Rail Center
- Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. Ulsan Plant => Ulsan Petrochemical Complex => Ulsan Rail Center
- (2) Roadway transportation route from Ulsan Rail Center to Busan Port
- Ulsan Rail Center => ChingRyung Interchange => Busan Ulsan Express Way => Haewoondae Interchange => Busan Port

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Auditor's Finding

This operation is

**X in full compliance
in substantial compliance
not in compliance**

with the International Cyanide Management Code.

Auditor Information

Audit Company : 3Points Co., Ltd.
Lead Auditor : Mr. Sang-Ho Ahn
Lead Auditor E-mail : triplepoint@naver.com
Dates of Audit : 17, 18, 25 January 2022

Auditor Attestation

I attest that I meet the criteria for knowledge, experience and conflict of interest for a Cyanide Code Certification Audit Lead Auditor, 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 Certification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the certification audit. I further attest that the certification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Cyanide Transportation Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

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Principles and Standards of Practice

Principle 1 | TRANSPORT

Transport cyanide in a manner that minimizes the potential for accidents and releases.

Standard of Practice 1.1

Select cyanide transport routes to minimize the potential for accidents and releases.

The operation is	X in full compliance with	Standard of Practice 1.1
	in substantial compliance	
	not in compliance with	

Bukwang Logistics Co., Ltd. made contract with Taekwang Ind. Co., Ltd. Ulsan petrochemical #3 Plant for the transportation of sodium cyanide from Ulsan Plant to Ulsan Rail Center and Busan Port in Korea. From November 2021, they started the roadway transportation by truck. And also they started the transportation of sodium cyanide from Tongsoh Petrochemical Co., Ltd. Ulsan Plant at January 2022.

The Bukwang Logistics Co., Ltd. prepared the Cyanide Transportation Route Control Procedure in which the process of route selection for sodium cyanide transportation and control process are defined. According to the procedure, they have checked the possible routes from the sodium cyanide manufactures to their final destination. And then they selected the sodium cyanide transportation routes considering the possibility of potential accident and release including detail check items as population density, infrastructure, pitch, grade, prevalence and 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. During November 2021 and January 2022, they select sodium cyanide transportation routes according to the procedure.

1) Two transportation routes

Bukwang Logistics Co., Ltd. need to transport the sodium cyanide for two cases according to contract between Bukwang Logistics Co., Ltd. and Taekwang Ind. Co., Ltd. Ulsan Petrochemical #3 Plant and Tongsoh Petrochemical Co., Ltd Ulsan Plant.

(1) Roadway transportation from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. Ulsan Plant to Ulsan Rail Center. The distance is about 4 Km.

(2) Roadway transportation from Ulsan Rail Center to Busan Port. The distance is about 60 Km.

2) Selection of transportation routes

According to the requirements of Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant, Tongsoh Petrochemical Co., Ltd. Ulsan Plant and Cyanide Transportation Route Control Procedure, Bukwang Logistics Co., Ltd. evaluated several possible routes and finally selected as below.

(1) Roadway transportation route from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. Ulsan Plant to Ulsan Rail Center - Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. Ulsan Plant => Ulsan Petrochemical Complex => Ulsan Rail Center

(2) Roadway transportation route from Ulsan Rail Center to Busan Port Ulsan Rail Center => ChingRyung Interchange => Busan Ulsan Express Way => Haewoondae Interchange => Busan Port

Bukwang Logistics Co., Ltd. established and implemented Risk Evaluation Procedure.

1) Hazard identification

They have checked the detail courses from Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant

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and Tongsoh Petrochemical Co., Ltd Ulsan Plant in Ulsan to Ulsan Rail Center and Busan Port. And identified possible hazards and risks as leakage of sodium cyanide, contamination for land and water, employee and truck driver exposure, upset of truck, traffic accident, robbery and taken away by criminal suspect etc.

2) Risk evaluation

They evaluated the possibility and consequence for the identified hazards.

During November 2021, 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 and Tongsoh Petrochemical Co., Ltd. Ulsan Plant Ulsan Rail Center

- Release to road and land by truck capsize during roadway transportation

2) Ulsan Rail Center to Busan Port

- Release to road, land and surface water by truck capsize during roadway transportation

- Release to sea by truck capsize during Gwang An Bridge transportation

Bukwang Logistics Co., Ltd. prepared control measure and applied to those high risk items as below.

1) Release to road, land and surface water by truck capsize during road transportation

- Prepare and implement Cyanide Transportation Route Control Procedure in which driving speed, prevention of over loading and vehicle inspection etc. were defined.

- Prepared emergency response plan for the 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 Route Control Procedure 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.

According to Cyanide Transportation Route Control Procedure, Bukwang Logistics 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. As they evaluate two routes during November 2021 and January 2022, they will re-evaluate during next 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.

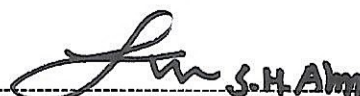
Bukwang Logistics Co., Ltd. documented the control measure in Cyanide Transportation Route Control Procedure and emergency response plan. Truck driving speed, maintenance of package, prevention of over loading and vehicle inspection etc. were defined as control measures in Cyanide Transportation Route Control Procedure. Detail control method for the release to road, land and surface water was defined in emergency response plan. The Cyanide Transportation Route Control Procedure and emergency response plan were communicated and trained to employees and truck drivers.

Bukwang Logistics Co., Ltd. received inputs from stakeholders and relevant government bodies as sodium cyanide manufactures, exporters, Korea health and safety agency, fire fighting agency Ulsan and Busan local government offices.

They also checked the relevant legal requirements as Industrial health and safety act., Chemical control act. and Land contamination prevention act.

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

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- 1) Inputs from manufactures as Taekwang Ind. Co., Ltd. Petrochemical #3 Plant and Tongsoh Petrochemical Co., Ltd.
 - Property of sodium cyanide, response for release and communication channel for emergency situation
- 2) Inputs from sodium cyanide exporters
 - Handling manual and communication channel for emergency situation
- 3) inputs from Korea health and safety agency
 - Handling and treatment manual, MSDS and communication channel for emergency situation

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

- 1) From sodium cyanide manufactures Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant and Tongsoh Petrochemical Co., Ltd. Ulsan Plant to Ulsan Rail Center
 - Road transportation is about 4 Km
 - Paved road condition is good and no severe curved area
 - Some segments are curved, but the risk can be controlled by drivers.
 - Security condition is good and no social disturbance
- 2) From Ulsan Rail Center to Busan Port in Korea
 - Road transportation is about 60 Km
 - Paved road condition is good and no severe curved area
 - As main road is express way and road condition is good
 - Some segments are curved, near the high population density and surface water areas but those risks can be controlled by competent drivers.
 - Security condition is good and no social disturbance

According to the Cyanide Transportation Procedure, Bukwang Logistics Co., Ltd. will use escort or convey for special cases as social disturbance, strike by drivers and if requested by government. From November 2021 when they started the transportation until now, there is no case as need for escort or convey.

Bukwang Logistics Co., Ltd. do not contract other entities for the sodium cyanide roadway transportation. The roadway transportation, loading and unloading works in Ulsan Rail Center were conducted by drivers and employees of Bukwang Logistics 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	Standard of Practice 1.2
	in substantial compliance not in compliance with	

Bukwang Logistics 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 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, Bukwang Logistics 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

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Transportation Control Procedure.

Bukwang Logistics Co., Ltd. have registered driver and operator names, license numbers, effective dates of license and training results. Then Bukwang Logistics Co., Ltd. use the trained and licensed drivers and operators in the register. The Bukwang Logistics Co., Ltd. also has implemented 2 hours monthly training to their drivers and operators for safety issues related to transportation and sodium cyanide handling.

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	Standard of Practice 1.3
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Bukwang Logistics Co., Ltd. have used trucks and trailers originally designed for road transportation. The maximum load bearing capacity as 20 tons is defined in Cyanide Transportation Procedure with the reflection of requirements from road traffic safety act.

Bukwang Logistics Co., Ltd. have 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 Busan Head 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.

Bukwang Logistics Co., Ltd. defined the process of verification in Cyanide Transportation Procedure. 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 month.

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 Busan Head Office. According to the maintenance records, until now there is no special case signing the stress and overloading. The overloading is prohibited in Korea by road traffic safety act. So the truck and trailer can't transport more than 20 ton.

According to road traffic safety act and Cyanide Transportation Procedure, the maximum weight for road transportation is 20 ton. To comply with procedure and safety act, Bukwang Logistics Co., Ltd. transport only one container in which 16 ton of sodium cyanide can be fully inserted. That was defined in procedure. And also the sodium cyanide manufactures ordered only one container transported for each transportation order. So the Bukwang Logistics Co., Ltd. were prevented automatically the overloading for sodium cyanide transportation.

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Transport Practice 1.4

Develop and implement a safety program for transport of cyanide.

The operation is	X in full compliance with	Standard of Practice 1.4
	in substantial compliance not in compliance with	

In the Cyanide Transportation Route Control Procedure, Bukwang Logistics 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 manufactures. After the loading to container, the amount and appearance were checked by manufactures 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 manufactures to Bukwang Logistics Co., Ltd. and shipping company by computer network system.

The manufactures have used sodium cyanide containers on which the mark of toxic chemical presence were 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. Bukwang Logistics Co., Ltd. have transported the sodium cyanide container marked the toxic chemical presence by manufactures and maintained MSDS by drivers. Those marking of toxic chemical presence and maintaining MSDS complied with Korea legal requirement and Cyanide Transportation Procedure.

Bukwang Logistics Co., Ltd. defined and implemented the safety processes related to sodium cyanide handling and transportation in Cyanide Transportation Procedure.

- 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 is defined as 8 hours in Cyanide Transportation Procedure
- 4) Process to prevent load from shifting
- 5) Process to maintain the integrity of manufacture's packaging
- 6) In Cyanide Transportation Procedure, Bukwang Logistics Co., Ltd. defined the process of suspension and modification of sodium cyanide transportation
- 7) A drug abuse is prevented according to Cyanide Transportation Procedure. 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.
- 8) Bukwang Logistics Co., Ltd. defined the retention period as five years for records originated from inspection, preventive maintenance, transportation log sheet, dispatch order sheet etc.

Transport Practice 1.5

Follow international standards for transportation of cyanide by sea.

The operation is	X in full compliance with	Standard of Practice 1.5
	in substantial compliance not in compliance with	

Bukwang Logistics Co., Ltd. do not operate the transportation for sodium cyanide by sea. So the

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transportation practice 1.5 is not actually applicable.

Transport Practice 1.6

Track cyanide shipments to prevent losses during transport.

The operation is	X in full compliance with	
	in substantial compliance	Standard of Practice 1.6
	not in compliance with	

The drivers have pager and mobile phone. So during transportation they can communicate with the Busan Head Office and Ulsan Rail Center of Bukwang Logistics Co., Ltd. and also they have communication channel sheet in which telephone numbers of Bukwang Logistics Co., Ltd., safety teams of manufactures, Industrial safety and health agency, police, hospitals in Ulsan and Busan and fire fighting agency were defined.

Bukwang Logistics Co., Ltd. provided the pagers to each driver, recorded the pager number and tested once per month. The test results were recorded in log sheets. Usually the drivers communicate with Busan Head Office during transportation. Each driver has mobile phone and the number of mobile phone was registered to emergency communication channel of Bukwang Logistics Co., Ltd. The mobile phone controlled by driver individually. But according to Cyanide Transportation Procedure, the driver should control the mobile phone properly, so that can be used in emergency situation and transportation.

Bukwang Logistics Co., Ltd. surveyed the two roadway transportation routes for sodium cyanide transportation. They can't find any communication blackout area along the two roadway transportation routes.

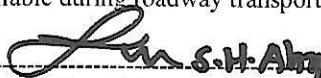
Bukwang Logistics Co., Ltd. defined the tracking of sodium cyanide transportation in Cyanide Transportation Procedure. For each transportation by truck and trailer, the progress of transportation can be checked by mobile communication between driver and Busan Head Office. The Busan Head Office and Ulsan Rail Center 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. The manufactures input the dispatch amount, container number and date for individual transportation order in their computer network system. And also the information was communicated to Bukwang Logistics 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 manufactures. The inspection results were recorded in log sheets and maintained by driver and communicated to Busan Head Office and Ulsan Rail Center. And also Busan Head 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. The manufactures input the dispatch amount, container number and date for individual transportation order in their computer network system. The results were communicated to Bukwang Logistics Co., Ltd. and shipping company. During the audit, it was found that the amount of sodium cyanide in container and transportation order were recorded in computer network system of manufactures and transportation log sheets in Busan Head Office and Ulsan Rail Center of Bukwang Logistics Co., Ltd. The Material Safety Data Sheet was available during roadway transportation, Busan Head Office and Bukwang Logistics Co., Ltd.

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Ulsan Rail Center. The driver, operator and office member maintain Material Safety Data Sheet in truck, Busan Head Office and Ulsan Rail Center.

Principle 2 | INTERIM STORAGE

Design, construct and operate cyanide 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	Standard of Practice 2.1
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Bukwang Logistics Co., Ltd. considered the Ulsan Rail Center as interim storage area. In Ulsan Rail Centre, only the trans-loading works by fork lifters from trucks and trailers to trains was implemented. There was temporary storage area for the sodium cyanide containers in Ulsan Rail Center. So Bukwang Logistics Co., Ltd. has controlled the temporary storage area as interim storage area. They installed the notice panel in which sodium cyanide presence, no smoking and eating and prohibit fire and emergency response plan in which the use of personnel protective equipment, control of spilled sodium cyanide and communication channel defined. They also maintained personnel protective equipment as mask, glove, rubber boot, etc. and equipment as shovel, film bag, sand etc. to control the spilled sodium cyanide.

The Ulsan Rail Center was totally fenced and prevented unauthorized access to the area. Only Ulsan Rail Center members, drivers and members of Korea Railroad Corporation admitted for the entrance. Visitor shall be checked, registered and admitted the entrance.

In Ulsan Rail Center, the sodium cyanide containers were maintained in nominated area. The area was fenced and controlled by Bukwang Logistics Co., Ltd. to prevent the access of foreigner and incompatible chemicals as acid, oxidizer and explosives. The sodium cyanide stored in containers of which the bottom is not directly contact with ground. Therefore, the possibility of mixing with other materials is very low.

The sodium cyanide was initially packaged in polyethylene inner film and then packaged again by drum or polypropylene woven bag & box. The packaging material is waterproof. The drums and box were inserted into container. The sodium cyanide containers were maintained in Ulsan Rail Center to prevent the contact with water as below.

- 1) The sodium cyanide was maintained in container of which the bottom was not directly contact with ground.
 - 2) The sodium cyanide was maintained in container designed and made to protect rain water.
- So, the sodium cyanide stored in the way designed to minimize the potential contact with water. The possibility of water contact in Ulsan Rail Center is very low.

The sodium cyanide containers were maintained in nominated area in Ulsan Rail Center. The interim storage area of sodium cyanide containers in Ulsan Rail Center is located outdoors and open-air environment. So, there is no need for ventilation of hydrogen cyanide gas and cyanide dust.

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In Ulsan Rail Center, the sodium cyanide containers were maintained in nominated interim storage area for which bund was installed around that area. So, the spilled sodium cyanide cannot be released into water or spread to other areas and cause extra contamination. The capacity of interim storage area is enough to contain any spilled sodium cyanide and prevent the extend of release. The sodium cyanide is maintained in container. Therefore, it was expected that the spilled sodium cyanide may not be released out of the containers.

Principle 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	Standard of Practice 3.1
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Bukwang Logistics Co., Ltd. identified possible emergency situations as sodium cyanide release to road, land, surface water, robbery and taken away by criminal suspect during transportation and prepared emergency response plan. 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 manufactures, shipping companies, exporters, Korea safety and health agency, police, hospitals and local government offices in Ulsan and Busan.

The emergency response plan considered transportation from sodium cyanide manufactures to Ulsan Rail Center and to Busan Port.

Bukwang Logistics Co., Ltd. have transported solid sodium cyanide. The 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 preparedness plan. According to the plan, they will use sawdust, cement powder and sand to collect and neutralize the spilled sodium cyanide.

The emergency response plan considered the transportation methods as roadway transportation, loading and unloading in Ulsan Rail Center.

During the preparation of emergency response plan, they traced two road way transportation routes. They checked the infrastructure of the two roadway 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 emergency response plan considered the design of the transportation truck and trailer. They have used double walled transportation truck and trailer. The containers were fixed as designed in doubled walled transportation truck and trailer. The containers were temporary stored in Ulsan rail Center. The storage area was concrete paved. That was also considered and reflected to the emergency response plan.

Bukwang Logistics Co., Ltd. prepared detail emergency response processes in the emergency response plan. They defined steps from starting of emergency to finalizing the emergency situation. The detail response action, responsibility and relevant external responder were defined in each step.

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Bukwang Logistics Co., Ltd. identified outside responders in the emergency response plan as customers, exporters, shipping companies, government bodies as fire fighting agency, Korea Industrial safety and health agency, local government office, polices and hospital in Ulsan and Busan, They have defined the general role and detail response action, responsibility and relevant external responder in the emergency response plan. And Bukwang Logistics Co., Ltd. informed their emergency response plan and MSDS of sodium cyanide and advised their roles to relevant external responders.

Transport Practice 3.2

Designate appropriate response personnel and commit necessary resources for emergency response.

The operation is	X in full compliance with	Standard of Practice 3.2
	in substantial compliance not in compliance with	

Bukwang Logistics Co., Ltd. have established and implemented training procedure. In the procedure, the preparation of annual training plan, initial and refresher training for emergency response related to sodium cyanide transportation were defined.

According to the training procedure, they completed initial training of emergency response for their drivers and employee. And they have prepared safety training plan for 2022 for their drivers and employee. The emergency response training was planned once per 6 month. During the training, they use the emergency response plans as training material. After the training, they recorded the training results and maintained the records for more than 5 years according to training procedure.

Bukwang Logistics Co., Ltd. have prepared the emergency response plan appropriate to overall emergency situations. In the emergency response plan, the roles and responsibilities of drivers, Busan Head Office manager, Ulsan Rail Center manager, team member, other relevant team and external agency were defined.

Bukwang Logistics Co., Ltd. defined the emergency response equipment in emergency response plan. And they prepared lists of emergency response equipment as personnel protective equipment and treatment equipment for the case of two roadway transportation routes. The drivers should maintain the list and emergency response equipment as in list in truck during transportation. They maintained personnel protective equipment and treatment equipment as defined in list and emergency plan.

According to emergency response plan, Ulsan Rail Center manager 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 2021 and January 2022, they have inspected and results were recorded.

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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 **Standard of Practice 3.3**
not in compliance with

Bukwang Logistics Co., Ltd. have prepared the emergency response plan appropriate to overall emergency situations.

In the emergency response plan, they have identified outside responders as below.

- (1) Customer and exporter : Taekwang Ind. Co., Ltd. Ulsan Petrochemical # 3 Plant, Tongsoh Petrochemical Co., Ltd. Ulsan Plant, exporters and Shipping Companies
- (2) Government body : Fire fighting agency, Korea industrial safety and health agency, Local government office as Ulsan city office and Busan city office and Police
- (3) Hospital : Hospital in Ulsan and Busan,

According to emergency response plan, they should check once per year the information of above outsider responders as contact person, name, telephone number, etc. and maintain those information as up to date. Busan Head Office manager as safety representative contacted the relevant person of outside responder and update the contact person and telephone number.

Bukwang Logistics Co., Ltd. established and maintained emergency response procedure including notification of ICMI of any significant cyanide incidents to comply with this requirement. There was no cyanide incident related to cyanide transportation and interim storage area Ulsan Rail Center since November 2021 when they started cyanide transportation.

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 **Standard of Practice 3.4**
not in compliance with

Bukwang Logistics Co., Ltd. prepared the emergency response plan appropriate to overall emergency situations. 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.

Bukwang Logistics Co., Ltd. is responsible for performing the remediation of cyanide spillage including the recovery and neutralization of cyanide, decontamination of contaminated media and management and disposal of spill cleanup debris with the help of manufactures. Since November 2021 when they started the transportation, there was no cyanide spillage incident.

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 in the emergency response plan.

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Transport Practice 3.5

Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is	X in full compliance with	Standard of Practice 3.5
	in substantial compliance not in compliance with	


According to emergency response procedure, Bukwang Logistics 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. As the emergency response plan was prepared during November 2021, the review and evaluation is scheduled during November 2022.

According to emergency response procedure, they should do the mock emergency drill once per year. The mock emergency drill was implemented in Ulsan Rail Center during December 2021. The simulation of cyanide exposure to drivers during transportation and cyanide release to land and surface water was presented and response follow up was conducted during the mock emergency drill. They checked the overall process and adequacy of emergency response plan and recorded the results.

According to emergency response procedure, they should evaluate the emergency response plan once per year. During December 2021, they have checked and evaluated the emergency response plan after the mock drill. Some minor items were revised after the check and mock drill during December 2021.

Bukwang Logistics Co., Ltd.

Name of Transporter


Lead Auditor Signature

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26 January 2022

Date