### TSC Category
Freight Forwarding

### TSC Description
Perform processes involved in cold chain management which include packaging and material handling equipment for storage and during transportation

### TSC Proficiency Description

<table>
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<th>TSC Proficiency Description</th>
<th>Level 1</th>
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<td>LOG-FFO-1004-1.1</td>
<td>LOG-FFO-2004-1.1</td>
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<td>LOG-FFO-4004-1.1</td>
<td>LOG-FFO-5004-1.1</td>
<td>LOG-FFO-6004-1.1</td>
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<td>Describe cold chain operations administration procedures</td>
<td>Support documentation required for cold chain operations</td>
<td>Implement processes and control points in handling and transporting cold products</td>
<td>Develop procedures to ensure handling and transporting cold products do not affect quality of cold products</td>
<td>Drive operational improvements of handling and transporting cold products through implementation of best practices</td>
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### Knowledge

- Overview of cold chain processes and activities
- Data collection required for cold chain processes and activities
- Cold chain storage documentation guidelines
- Information needed to prepare qualification reports
- Wireless data monitoring systems
- Principles of cold chain management
- Handling and transport of chilled or frozen products
- Principles of cold chain regulations
- Cold chain performance measures
- Principles of Hazard Analysis Critical Control Point (HACCP)
- Cold chain packaging and material handling equipment
- Cold chain management
- Cold chain import and export requirements
- Cold chain regulations such as Singapore Standards
- Recall procedures
- Lead time for food contamination
- Effective methods of cold chain packaging and material handling equipment
- Best practices of cold chain management in food industry including Hazard Analysis and Critical Control Points (HACCP)
- Data analysis
- Temperature management strategies
- Benchmarking of cold chain management
### Abilities

- Identify cold chain storage processes and activities
- Carry out data entry required for cold chain storage activities such as logging temperature data
- Interpret cold chain documentation requirements
- Organise documentation required for qualification reports
- Deploy improvement initiatives on cold chain processes
- Implement control points to monitor temperature and quality of products
- Deploy procedures or guidelines for handling and transporting cold products
- Collaborate with authorities to ensure organisation is in compliance with regulations
- Implement audit checklists using principles of HACCP
- Analyse safety and cost components of packaging and material handling
- Develop recall procedures for potential health risk products
- Review import and export requirements for cold products
- Develop control points and compliance measures in cold chain handling
- Facilitate discussions with authorities to ensure organisation is in compliance
- Review procedures against Hazard Analysis Critical Control Point (HACCP) principles
- Review safety and cost components of packaging and material handling
- Adapt international and local cold chain regulations
- Provide guidance on effectiveness and appropriateness of packaging and material handling selections
- Formulate strategies to monitor and maintain seamless operations through data analysis and best practices
- Devise strategies to enhance temperature management throughout handling processes
- Devise process improvement initiatives by performing benchmarking of cold chain operations