



NEPTUNE ORIENT LINES LIMITED
SUSTAINABILITY REPORT 2012



LETTER TO OUR STAKEHOLDERS



PURPOSE OF REPORT

This report shares the activities and performance of the NOL Group's environmental, safety, security and social programme with customers, shareholders and communities at large. This is the first sustainability report by the NOL Group and is available online at www.nol.com.sg.

It is a pleasure to present the NOL Group's inaugural Sustainability Report. This non-financial report is an extension of our previous reports on our corporate social responsibility initiatives found in our annual financial reports. This is a natural step in our commitment to sustainable development.

In this report, we seek to share with you how the NOL Group implements high standards of environmental stewardship, improves supply chain security and enhances the lives of communities.

Our carbon reduction strategy was launched in mid-2012, committing NOL's liner business to reduce carbon emissions by 30% by 2015. Since then, APL has made progress in protecting the environment through a wide range of initiatives to reduce our carbon footprint, and I am happy to report that we are on track in realising our goal.

More details of our carbon reduction strategy and other environmental efforts, as well as our community initiatives and

programmes around health, safety, security and business conduct are shared in this report.

In the current climate of macro-economic uncertainty, NOL is committed to maintain its financial resilience. At the same time, we will continue to pursue sound sustainability programmes as a responsible corporate citizen.

I trust the report will give our stakeholders a better appreciation of the Group's efforts to develop more sustainable businesses.

NG YAT CHUNG

Group President and CEO

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NOL Group is a global company with core businesses in container shipping and supply chain management.



Its container transportation arm, APL, provides customers around the world with ocean shipping and container transportation services through a network combining high-quality intermodal operations with the latest information technology. With more than 80 weekly services, APL serves more than 33,000 locations in over 140 countries around the world and offers its customers:

- Shipping services in the world's major trade lanes
- Extensive U.S. intermodal network to facilitate inland reach
- Priority access to APL owned and operated terminals on the U.S. West Coast and strategic terminals in Asia.

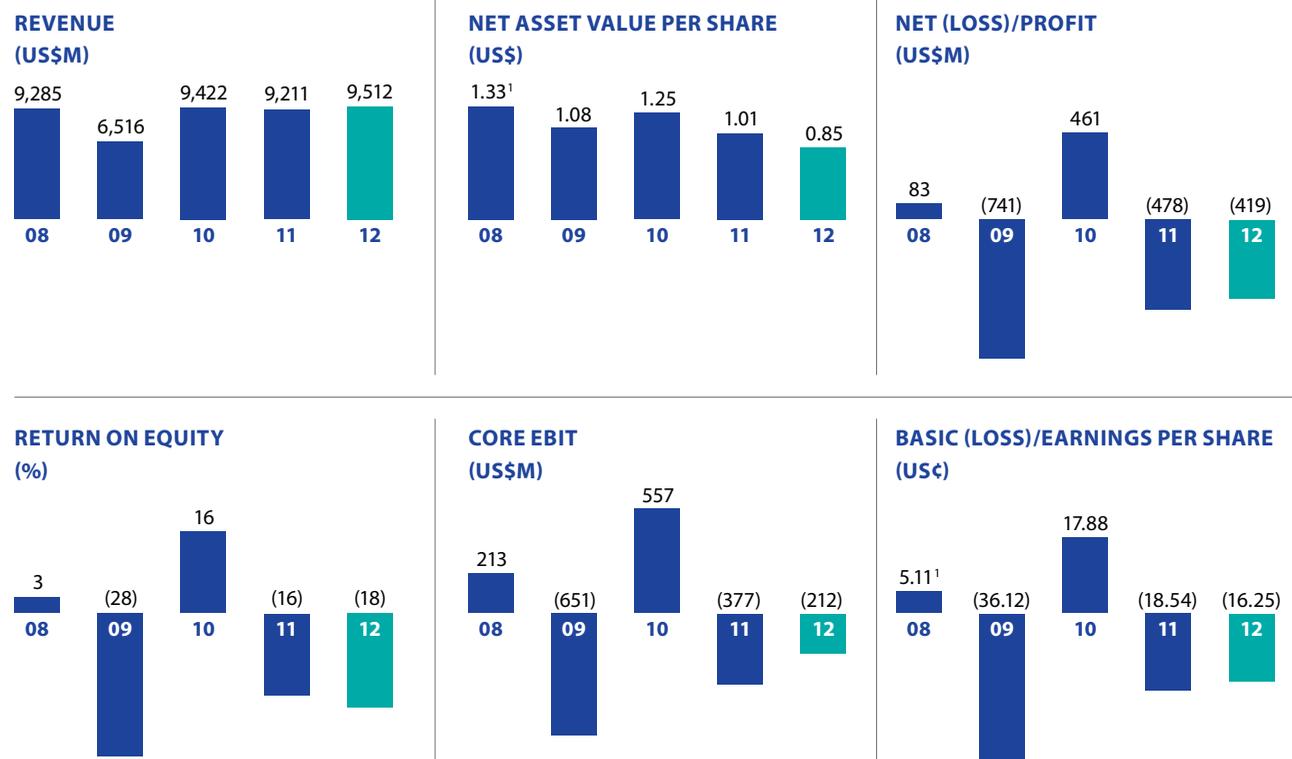


The Group's supply chain business, APL Logistics, is a global leader in the supply chain industry linking more than 70 countries worldwide. APL Logistics offers comprehensive supply chain solutions, using the latest technology for end-to-end visibility. APL Logistics has extensive experience operating within the following key industry sectors: automotive, industrial goods, consumer packaged goods, retail/fashion and electronics/high tech.

QUICK FACTS AS AT 28 JUNE 2013



2012 FINANCIAL PERFORMANCE



¹ Restated for effects of the Rights Issue in 2009.

PROMOTING RESPONSIBLE BUSINESS PRACTICES



The NOL Group is committed to maintaining standards of ethical conduct in all of its activities. Its business success and relationships are built upon a culture of excellence and commitment, which in turn rests on the foundations of integrity, trust and respect for the individual and adherence with the law.

The Group observes standards of conduct and integrity in all its interactions with employees, shareholders, customers, suppliers, business partners and professional advisers.

NOL Group pledges to provide a work environment that is conducive to optimal work performance and good work ethics. All employees and supervisors, regardless of level, contribute towards a safe and healthy workplace.

CODE OF CONDUCT

Employees are expected to conduct business in an ethical manner and in compliance with applicable laws, regulations and NOL Corporate Code of Conduct.

All employees have access to the Code of Conduct. Every year, each employee is required to acknowledge online that they have been in compliance, and will continue to be in compliance, with the NOL Corporate Code of Conduct.

The Code covers three broad areas: property; people and conduct; and finance.

NOL employees who handle personal data of others are required to do so responsibly and act in accordance with applicable

laws and any relevant contractual obligations. Information collected, processed, used or retained must be used for legitimate business purpose. Necessary security measures are taken to prevent unauthorised access.

VENDOR CODE OF CONDUCT

NOL's Vendor Code of Conduct stipulates the Group's expectation of its vendors to share in its commitment to achieving the highest ethical and moral standards in business dealings. Vendors are required to conduct their business activities in full compliance with applicable laws and regulations of their respective countries and operating locations.

ETHICS COMMITTEE

The role of the Ethics Committee is to enhance ethics compliance and provide a framework for the reporting, handling and investigation of ethics incidents. The Committee comprises members from the senior management team of NOL Group.

For greater accessibility and efficiency of the ethics reporting resource, NOL's ethics hotline is hosted by an independent third party provider. Employees can raise or report an ethics concern or incident via this hotline. This reporting resource, available 24/7, is an integral component of the ethics programme and complements other existing channels for the reporting of ethics incidents or concerns.

FOSTERING A SAFE AND HEALTHY WORKPLACE

The NOL Group is committed to fostering a safe and healthy workplace for employees and maintains strict operational standards with the highest priority given to ensuring safety.

APL's approach to safety management is to exceed national and international requirements for vessel compliance in all operations. Through rigorous application of preventative and corrective measures, the carrier has reduced lost work days from injuries sustained on the job.

At APL Logistics, focus on safety is maintained through an underlying philosophy that all employees must be aware and committed to active participation in workplace safety on a daily basis.

This commitment to a safe and healthy workplace is reinforced through employee led training and localised safety teams as well as individual and group key performance indicators.

For example, APL's Kaohsiung terminal's efforts in this area earned the terminal dual certification from Taiwan Occupational Safety & Health Management System and Occupational Health & Safety Assessment System (OHSAS) 18001: 2007.

SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM (SEMS)

Development of SEMS began in 2003 and by late 2004 the formal training program was audited and certified by the American Bureau of Shipping. In 2005, the APL SEMS training manual was produced and distributed, followed by rigorous training. Through training, drills, and response preparation, nearly 8,000 personnel are trained annually.

Training is a continuous evolution and the management system is subject to regular review and improvement. APL's SEMS provides response measures to ensure that our shore based and shipboard personnel can react at any time to hazards, accidents and emergency situations, including those that may impact

the environment. These responses and actions to take are described in contingency plans and checklists in each ship's Vessel Emergency Manual.

BEHAVIOUR BASED SAFETY

APL's SEMS is further enhanced by a Behaviour-Based Safety (BBS) programme for vessels. Through BBS, employees take personal responsibility for safety and provide feedback from workplace observations. A Risk Assessment (RA) methodology is used to implement BBS. RA involves two parameters, probability and consequence, and the process for any work activity begins by first identifying all its hazards and then documenting all existing preventative and hazard control measures. The use of the RA technique gives the ability to categorise risk by level or degree of seriousness and most importantly it provides the tools to separate risk levels. All crew members are involved in the use of BBS techniques and RA as a safety management tool.

BRIDGE TEAM MANAGEMENT

APL focuses on navigational safety and feedback from senior management on board and ashore is obtained for a clear, objective picture of performance in order to identify gaps. The key points that emerge from Best Practices for Navigational Safety are employed in APL's Bridge Team Management (BTM). BTM is an organisational process that ensures that Deck Officers share and perform all essential navigational and administrative tasks, timely and effectively, with a minimum of duplication, allowing the vessel to fulfill its mission expeditiously and safely. It is an essential component of APL's Safety at Sea (SAS) program which establishes sound navigational procedures and policies. In 2012, APL audited 12 US-flagged vessels for readiness within the expectations of the programme.



SAFETY ANALYSIS

Data is used to prioritise and drive safety programmes at APL Logistics. Each month, statistics are drawn analysing frequency and severity by location and cause. Trend analysis is performed and a pareto analysis highlights those locations and causes of loss which would produce the greatest result for the commitment of limited resources.

Once areas of focus are identified, an analysis is done to determine the most effective way to address the underlying cause of incidents. This may take the form of custom training, management intervention, site reviews or work re-engineering. Implementation is then scheduled, drawing on both internal and external resources. Once solutions are implemented, tracking continues in order to determine progress. As areas of concern fall from the pareto analysis, new locations and causes rise to the top. The improvement cycle continues in this manner indefinitely.

SAFETY TRAINING

To ensure the company meets its safety and pollution prevention objectives, APL places strong emphasis on training the crew and shore staff involved in vessel operations.

Each vessel has a Vessel Safety Committee (VSC) chaired by the Chief Engineer who conducts monthly meetings. Each department holds additional safety meetings to educate the crew on APL's safety culture. These daily departmental "tailgate" meetings focus on tactical risk and prevention. Fleet safety updates are circulated to all vessels, the contents of which are discussed during meetings as well as at annual Shipboard Management Reviews. Fire, lifeboat, Ship Oil Pollution Emergency Plan (SOPEP), and man overboard drills are conducted regularly.

DRILLS

Shore-based drills are carried out to ensure that employees are familiar with contingency plans and to test effectiveness of these plans. In particular, oil spill exercises are conducted regularly. The crisis management team, the ship manager, the spill management contractors, and various regulatory bodies are regular participants in APL's oil spill exercises.

PACIFIC COAST MARINE SAFETY CODE

On the U.S. West Coast, the Pacific Maritime Association, of which APL is a member, and the International Longshore and Warehouse Union worked together to create the Pacific Coast Marine Safety Code (PCMSC), which was last revised in 2008 and will be revised again in 2014. The purpose of this code is to provide the minimum requirement for safety of life, limb, and health. The PCMSC covers:

- *Employee and Supervisor Responsibilities*

These state that the employer agrees to ensure that all aspects of the working environment for all operations are safe. The supervisor ensures that all working conditions are safe and all gear used is in safe working condition. Employees will follow all safety procedures set in place, use all safety devices provided, and cooperate in all that makes for safety.

- *Shipboard Safety Rules*

The rules require all safety procedures to be followed while aboard a vessel, including the proper use of slings, cranes, and other cargo-handling equipment. Issues covered include preventive measures to minimise potential dangers.

FOSTERING A SAFE AND HEALTHY WORKPLACE

- General and Marine Rail Safety Rules**

These rules provide longshoremen working with railcars the guidelines needed to ensure a safe working environment. The employer must provide a Rail Safety Plan which includes the names of those responsible for train movement, loading and discharge operations. The safety plan must also include the servicing railroad company and any other companies that may be affected by rail movement.

- Terminal Safety Rules**

Procedures to ensure safety while working in the terminal are also covered in the PCMSC. For example, clearly marked and designated walkways shall be provided and maintained for employees. The terminal shall have, at a minimum, safety gear which includes a high visibility reflective vest and a hard hat.

- Equipment**

All equipment such as haulage, transmission, cranes are to be maintained in a manner so as to prevent malfunction and injury. Equipment must be used in the proper manner for which it was constructed.

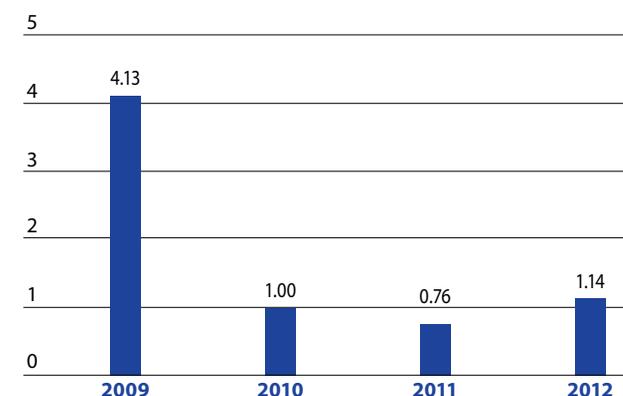
TOPICAL SAFETY MEETINGS

Regular topical safety meetings are delivered by APL Logistics frontline supervisors on a monthly basis. Topics are relevant to the current regulatory environment, general loss trends and considerations, or even seasonal concerns. The delivery by frontline supervisors reinforces that the frontline has ownership of the safety initiative and is responsible for its effectiveness. At times frontline supervisors will start their own safety teams. Such efforts are encouraged and have been very successful. Throughout this process, the APL Logistics Safety department provides monthly updates on how effective each safety program has been. This provides real time feedback on how each business is performing relative to its peers and provides good reinforcement for the programmes.

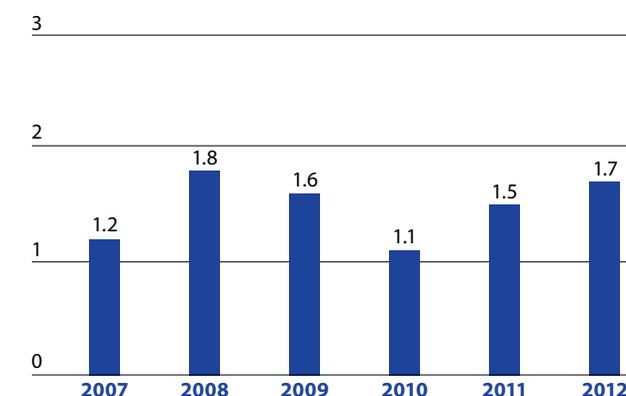
SAFETY PERFORMANCE

APL uses a comprehensive incident reporting system to monitor and measure safety and environmental performance. Incidents and near misses are reported and investigated so that appropriate corrective and preventative actions can be taken. This system enables setting of performance targets that drive continuous improvement. Safety performance is tracked using Key Performance Indicators such as Lost Time Injury (LTI) frequency, incident and near miss

APL LOST TIME INJURY FREQUENCY



APL LOGISTICS' OSHA FREQUENCY (NORTH AMERICA)



reporting, audit findings, inspection deficiencies, and port state interventions. Any lessons to be learned are extracted and fed back to the fleet to drive continuous improvement. In addition, employees adhere to the company's Drug and Alcohol Policy. Illnesses aboard ships are monitored by the fleet's Safety Department.

Analytical tools and safety meetings have been key to maintaining APL Logistics safety record. In North America, APL Logistics had an Occupational Safety & Health Administration (OSHA) frequency rating of 1.7. APL Logistics' OSHA rating is a measure of the ratio of recordable injuries to the number of hours worked and it has consistently been below the national average released by the US Bureau of Labour Statistics. This has made safety a key differentiator for APL Logistics.

By keeping employees in the workplace with fewer disruptions due to injuries, APL Logistics is able to benefit from higher efficiency levels. However the key benefit is successfully returning employees home to their families in the same condition they arrived at work.

HAZARDOUS MATERIALS

APL's Hazardous Materials Response Center (HRC) provides customers with information and ensures compliance to international regulations for the transportation of hazardous materials.

Trained staff stay abreast of international, national, and even local regulations affecting the transportation of hazardous cargo. Customer procedures for the transportation of hazardous materials are available from the HRC. These procedures can help customers understand and comply with the numerous requirements and regulations governing the transport of dangerous and hazardous cargo. The procedures are continually updated as national and international regulations change.

EMPLOYEE HEALTH

Across the Group, employee wellness programmes aim to foster healthier lifestyle choices to reduce health risk factors, improve overall wellness and maintain a productive, active workforce. APL vessels are equipped with WIFI and broadband internet access for crew members to stay in touch with their family members. Equipped with Voice Over Internet Protocol (VOIP) technology, the crew can make phone calls at affordable rates while at sea and when off duty. Recreational facilities are also provided on board APL vessels in support of a healthy work life balance for all crew members.

SECURING SUPPLY CHAINS

The NOL Group is focused on minimising the risk of security incidents at land and at sea.

The Group's businesses, APL and APL Logistics, continuously invest to improve security systems, procedures and processes and participate in a number of initiatives to pioneer new technologies and improve supply chain security.

NOL Group ensures that global security efforts are compliant with or exceed applicable security regulations. The Group plays an active role in various industry groups, supports both corporate and regional efforts to meet security requirements in a cost-effective manner, and communicates the importance of security both internally and externally through education and outreach. Copies of the Group's certification from international agencies are available at <http://www.nol.com.sg/wps/portal/nol/aboutus/corporateresponsibility/security>.

SECURITY COMPLIANCE

APL ships and marine terminals comply with the International Ship and Port Facility Security (ISPS) code. Some of the key security requirements include creating security plans based on threat assessments, appointing Company, Ship and Port Facility Security Officers, implementing appropriate security measures to the security threat level, conducting internal audits, conducting security training, drills and annual security exercises.

GLOBAL SUPPLY CHAIN SECURITY PROGRAMMES

APL and APL Logistics participate in three key global supply chain security programmes. These programmes require participants to prepare a written Security Profile of their security processes and participate in on-site validations to verify that supply chain security pro-

cesses are implemented, maintained and continually improved. Besides securing the supply chain, our participation in these programmes provides trade facilitation benefits to APL and APL Logistics.

(I) Customs-Trade Partnership Against Terrorism

Since 2003, APL and APL Logistics have been members of U.S. Customs and Border Protection's (CBP) security initiative Customs-Trade Partnership Against Terrorism, better known as C-TPAT. Many of the company's security efforts have been recognised as best practices by CBP. APL and APL Logistics participate in their customers' C-TPAT validations providing support in order for the latter to achieve the best results.

(II) Singapore's Secure Trade Partnership

Singapore Customs has developed and implemented the Secure Trade Partnership (STP) Program. An enhanced version of STP requiring companies seeking this certification to meet more robust security criteria was subsequently developed and is called STP Plus. APL is STP Plus certified and APL Logistics is STP certified. Both STP and STP Plus are voluntary programmes.

(III) European Union Authorised Economic Operator

The European Commission (EC) – Authorised Economic Operator (AEO) program was created to ensure a safer and more secure end-to-end supply chain entering or leaving the European Union (EU). Companies that comply with specified criteria and offer a high degree of security, with respect to their role in the supply chain, may be granted EU member country specific AEO status. Although AEO is not mandatory, both APL and APL Logistics participate in these programmes.



ANTI-PIRACY MEASURES

Piracy attacks on shipping represent a serious threat to the safety of seafarers, to the ship, cargo, environment and global trade. APL vessels adopt industry-led Best Management Practices (BMP) against piracy. These include carrying out Risk Assessments, maintaining communication with the naval authorities, hardening of the ship, implementing self-protection measures, training and drills, maintaining a good look-out and increasing vigilance. Additionally, APL regularly reviews and updates these practices to reflect evolving piracy situations.

SECURITY EXERCISES AND TRAINING

APL conducts annual maritime security exercises as part of the Group's continuing efforts to test and improve port and vessel security. A number of law enforcement agencies and first responders participate in this live activity along with APL security personnel. Exercises have been held in Singapore, Seattle, Oakland, Kaohsiung and Yokohama. In 2012, the exercise was held in Los Angeles.

NOL employees play an important role in keeping the business, its people and assets safe and secure. The Group provides general security awareness training to all employees. This mandatory training provides information on basic supply chain security processes and procedures. Training information is updated regularly to keep it relevant to evolving security issues and regulations.

INFORMATION SECURITY

The NOL Group has in place a comprehensive information security program. Our security program is modeled on the ISO 17799 standard. Our philosophy is to protect NOL Group company assets, reputation, people, clients, and vital business information and pro-

cesses. To achieve this, every employee, contractor, agent, or other user of NOL computer systems and facilities must comply with the information security policies. Regular internal audits are conducted to ensure that all employees follow company policies.

INDUSTRY PARTICIPATION

APL participates actively in:

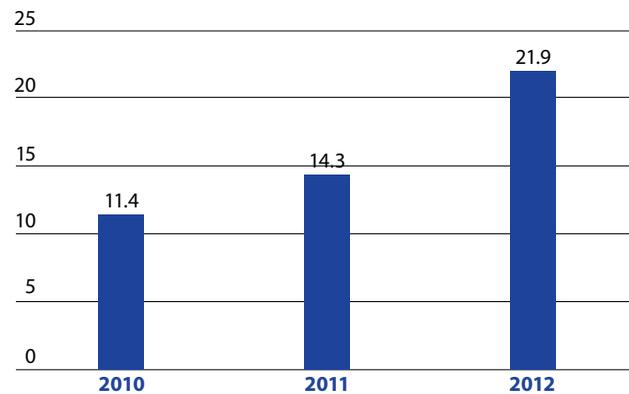
- World Shipping Council's Security Advisory Committee
- BIMCO Maritime Security Committee
- Singapore Shipping Association's Maritime Security Subcommittee
- Retail Industry Leaders Association Supply Chain Security Committee

As a member of these groups, APL provides critical industry feedback on proposed government legislation, initiatives, and issues affecting the maritime transportation industry.

Additionally, APL provides representation on behalf of the industry, as a member of the Advisory Committee on Commercial Operations of Customs and Border Protection (COAC). APL and APL Logistics were also involved in discussions with Customs and Border Protection (CBP) to aid the agency to better understand the role of trade in The Importer Security Filing and Additional Carrier Requirements (10+2).

PROTECTING THE ENVIRONMENT

CO₂ EMISSIONS REDUCTION (%) AGAINST 2009 LEVEL



NOL Group understands the importance of maintaining a high level of environmental responsibility, and adopts practices and cooperative measures that help protect the environment.

NOL GROUP ENVIRONMENT POLICY

NOL Group's environmental policies establish the framework and expectations of how we operate in an environmentally friendly manner. The Group's environmental policy is a company-wide directive.

We operate responsibly and are committed to sound environmental stewardship in our activities. Responsible environmental management is a cornerstone of our worldwide operations. We commit to:

- Identify, assess and manage environmental risks.
- Evaluate operations to mitigate adverse impacts on the environment.
- Implement pollution prevention measures and processes.
- Promote activities to conserve resources and energy and to minimise and recycle waste.
- Strive for environmental excellence through continual improvement.

As a responsible corporate citizen, we will ensure compliance with all applicable environmental regulations and legal requirements. We engage in open dialogue with stakeholders and encourage a shared responsibility for environmental excellence. We will continue to play a prominent role in our industry as it moves forward to address its environmental impact.

ENVIRONMENTAL MANAGEMENT

Adhering to international standards is the cornerstone of our environmental protocols. The Company is committed to managing ships that meet all of the requirements of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) and recognises the environmental impact from vessel operations. The Group assists and liaises with the International Maritime Organisation, Flag States and Port States as required. In addition, APL has developed a five-year Environmental Strategic Plan with specific objectives and targets. The plan is reviewed annually. Included in the plan are 34 environmental initiatives, 30 of which have been achieved, with 23 of these accomplished by 2011. By making these environmentally conscious improvements, APL has reduced emissions and lowered its carbon footprint.

To manage its environmental strategy, APL incorporates international standards such as ISO 14001 into the maintenance of an effective Environmental Management System (EMS). APL's EMS includes a Shipboard Environmental Aspects Matrix, a Shoreside Environmental Aspects Matrix, an Impact Scale to qualify the Aspects of Significance, and an Impact Analysis based on the aforementioned data streams. Through the EMS, APL identifies aspects of its business that impact the environment and understand those environmental laws that are relevant to our situation. Furthermore, the EMS is regularly reviewed which results in areas for improvement and a management programme to achieve them, thereby promoting continuous improvement.



In 2011, APL Logistics launched its environmental sustainability programme, with a focus on developing an environmental strategy specific to the supply chain business and aligned with NOL's overall environmental goals.

APL Logistics' environmental strategy focuses on three primary areas:

- Helping customers green their supply chains
- Greening its own operations
- Engaging in industry dialogue on green issues and opportunities

CARBON FOOTPRINT

In 2010, APL initiated a comprehensive inventory of its corporate-wide fuel consumption from 2009. This review included any fossil fuels directly purchased and consumed by ships, terminal cargo handling equipment, and warehouse material handling equipment. To ensure the accuracy of our calculations, APL's carbon data was independently verified by a third-party class society verifier.

Since the largest source of carbon emissions come from the use of heavy fuel oil (HFO) for vessel propulsion, prioritising efficiencies in HFO therefore makes both environmental and economic sense.

Consequently, the NOL Group:

- has reduced tons per TEU-mile for both CO₂ and CO_{2e};
- is developing specific material handling metrics in our warehouses for electrical consumption to further refine the process of reducing energy consumption in the supply chain;

- is tracking savings realised from on-dock rail usage; and
- is tracking reductions from cargo moved using OceanGuaranteed®, the world's first day-specific service for less-than-container load cargo.

Following an analysis of carbon data and strategy development, APL is on course to reduce carbon emission associated with cargo transportation and handling to 30% below the 2009 emissions levels by 2015.

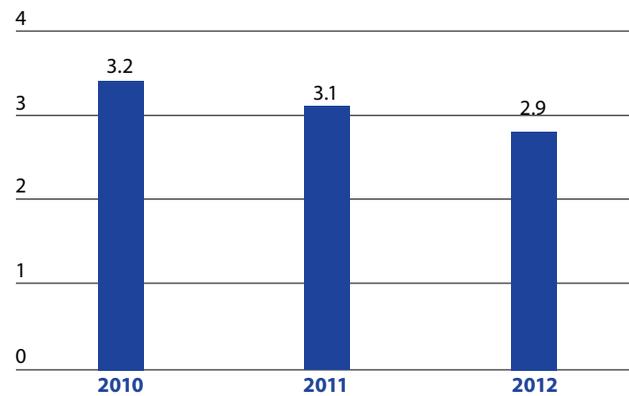
A key component of this strategy is the deployment of new vessels over the next three years. APL's newbuild programme of 34 vessels is designed to optimise the Energy Efficiency Design Index (EEDI), thereby reducing carbon emissions. These energy efficient and cold-iron capable ships will reduce carbon and criteria pollutant emissions. The new vessels exceed the requirements of IMO's EEDI.

In March 2013, NOL took delivery of the APL Temasek the first 14,000-TEU vessel, largest and most environmentally-friendly vessel in its fleet. The APL Temasek comes on the heels of ten new 10,000-TEU ships which joined the fleet by the end of 2012. These newbuildings are part of NOL's fleet renewal programme and replace older, less efficient ships.

The 14,000-TEU series of ships feature several innovations that improve operational efficiency. For example, its S-type long-stroke main engine is equipped with electronic fuel injection which is optimised to operate at various loads efficiently.

PROTECTING THE ENVIRONMENT

GROUP FUEL CONSUMPTION (IN MILLION METRIC TONS)



In addition, its specially designed bow and broader hull form improve operating efficiency at various speeds, especially for slow steaming. NOL estimates that with the new design, it is able to improve fuel efficiency by about 20% to 30% per TEU for a speed range of 15-18 knots, compared to previous designs.

By consuming less fuel, this new series of ships will also reduce carbon emissions. Its fuel efficiency, measured by the EEDI, is certified to be 33% better than guidelines set by the IMO.

APL's efforts in the area of improving its environmental performance was recognised in April, when APL clinched the inaugural Green Ship of the Year award at the 2013 International Maritime Awards organised by the Maritime and Port Authority of Singapore. The APL Yangshan, a 10,700-TEU ship built in 2012 currently plying the Asia-Europe trade, was singled out for its outstanding energy efficiency and performance.

APL Yangshan is part of the Group's fleet renewal programme that aims to inject technologically-advanced, fuel-efficient and environmentally-friendly tonnage into the fleet. The vessel has an EEDI that is 33% better than IMO's reference line for this category of ship.

The superior environmental features of APL Yangshan include an electronically-controlled main engine that has a significant advantage in operating capability. This type of engine consumes less fuel compared to conventional engines for a corresponding load and helps lower emissions. The vessel is cold-iron capable, which allows it to connect to shore power while at berth in order to reduce emissions. It is also equipped with an advanced ballast water treatment system to prevent the spread of aquatic invasive species.

Environmental performance is improved through other meas-

ures such as slow steaming, trim optimisation on all vessels, and the application of environmentally-friendly hull coatings that not only prevent the leaching of toxic substances into the water but lowers emissions by reducing friction.

Ashore, APL is upgrading cargo handling equipment at its terminals to reduce carbon emissions as well as criteria pollutants.

APL Logistics has introduced various products and services to help customers reduce the carbon footprint in their supply chains. In 2006 it introduced OceanGuaranteed®, the industry's first a time-definite less-than-containerload service as an alternative to air-freight for trans-Pacific shipments. In India, APL Logistics launched Indialinx™, the country's first dedicated container freight rail service as an alternative to truck. In 2012, it introduced ShipmentOptimizer™, a shipment planning platform capable of automatically generating the best shipment plan against set objectives.

From 2007 to 2012, APL Logistics successfully reduced approximately two million tons of CO₂ emissions by utilising more environment-friendly modes of transportation.

CARBON FOOTPRINT CALCULATOR

To allow its customers to understand how its carbon reduction strategy is reflected in their cargo shipments, APL uses the Clean Cargo Working Group (CCWG) methodology to calculate CO₂ emissions. Customers may submit requests to determine the carbon emissions for cargo movement over a particular trade lane and, if they are shipper members of the CCWG, they can compare the results with all carrier members of the CCWG.

Customers use these calculations to determine the most environmentally friendly way of moving their shipments. By providing



them with this knowledge, we help them make environmentally conscious choices.

Interest from customers continues to grow. From 2009 to 2012, requests for carbon calculations have grown seven-fold.

Customers are increasingly focusing on corporate sustainability initiatives. As an asset-light third party logistics provider, APL Logistics' primary focus is helping our customer's manage and 'green' their supply chains. APL Logistics has developed various diagnostic tools and approaches to help customers better measure and manage their carbon footprint.

Carbon calculators have been developed to measure CO₂ emissions in the warehouse, as well as comparing various modes of transport. APL Logistics works closely with customers to optimise their logistics network and identify mode conversion opportunities. It has developed proprietary decision support tools such as Shipment Optimizer™ that enable customers to find optimal shipment routing and choice of transport modes that may be more environmentally friendly.

REDUCING EXHAUST GAS EMISSIONS

Cold-Ironing

Cold-ironing is the term used to refer to a vessel that switches off its diesel-powered generators and uses shore power while in port. This has been one of APL's significant environmental improvements. When APL's cold-iron capable vessels call at terminals that have the ability to provide shore side electrical power, these ships "plug in" and eliminate the need to burn fuel during their stay in port. With a goal of improving the environment for the workers and the surrounding community, the APL Singapore switched off its auxiliary

diesel engines and successfully became the first vessel to commence regular cold-ironing in the Port of Oakland in 2011. By making the switch, APL has cut more than 50,000 pounds of nitrogen oxide emissions, a leading component of smog, from ships berthed in Oakland, plus 1,500 pounds of particulate matter annually.

Seawater Scrubber

Currently being tested aboard an APL ship, the seawater scrubber technology uses seawater to filter pollutants from the ship's auxiliary engines and boilers and it is demonstrating a significant reduction in a ship's sulphur dioxide (SO_x) and particulate matter (PM) emissions.

The scrubber project was enabled by a grant from the Technology Advancement Programme (TAP), a joint initiative of the Ports of Los Angeles and Long Beach. TAP is part of the San Pedro Bay Ports Clean Air Action Plan (CAAP), and focuses on accelerating the commercial availability of new clean air strategies to reduce air pollution.

Following installation during drydock, testing of the scrubber was conducted in April and May 2012 aboard the vessel while in transit between Taiwan and China and while at berth at the APL Global Gateway South Container Terminal in Los Angeles. Testing of the emissions from HFO and Marine Gas Oil (MGO) followed the ISO 8178-D2 marine engine certification cycles. Real-time gaseous emissions data (CO₂, CO, NO_x, THC, SO_x, and PM) were sampled before and after the scrubber and particulate matter filter samples were collected and analyzed in a laboratory to quantify the total (PM 2.5) emissions and reductions. Overboard discharge of treated wash water met IMO criteria.

Final test results, which were certified by the California Air Resources Board, show that the seawater scrubber reduced air emissions

PROTECTING THE ENVIRONMENT

by approximately 80 percent in diesel particulate matter, 99.9 percent in sulfur oxide emissions, more than 90 percent in volatile organic compounds (VOC) and 10 percent in nitrogen oxide pollutants.

Other Technologies

Slide valves have already achieved widespread implementation aboard our ships. Slide valves reduce fuel leakage when fuel is injected into the engine resulting in a more complete combustion with fewer emissions. From 2005 through 2012, slide valves eliminated nearly 29,000 tons of NO_x.

In 2012, four APL ships were outfitted with a proprietary Cavitation Technology. This mixes fuel with water to produce a fuel emulsion, which is further cavitated before injecting into the main and auxiliary engines.

GREEN MEASURES

Ballast Water

Seventy percent of the earth is covered in water and it is important to protect its biodiversity. Effective Ballast Water management allows APL to protect this resource. Ballast water can be a vector that introduces invasive species which can have a dramatic effect on local ecosystems. Our vessels actively perform mid-ocean ballast water exchanges on all vessels to remove the risk of introduction.

From 1992 until 2011, APL's fleet achieved its goal of zero ballast water incidents. In 2012, APL received two citations for Ballast Water Management non-compliance. It has since undertaken comprehensive corrective action and is well-positioned to reach the annual goal of zero ballast water incidents in 2013.

APL is currently testing, through a partnership with the Port of Los Angeles/Long Beach and NEI Treatment Systems, the U.S. Coast Guard approved Venturi Oxygen Stripping (VOS) ballast water treatment system on existing vessels. This system ejects inert gas into the ballast as it passes through the Venturi Injector, which removes around 90% of the dissolved oxygen in less than 10 seconds. It is designed to operate during each ballasting event, negating the need to complete ballast exchanges at sea.

Each of APL's new vessels is equipped with the latest in ballast water treatment technology. The installation of this technology is in line with the framework provided in the International Maritime Organisation's (IMO) Ballast Water Management Convention, which will enter into force 12 months after ratification by 30 states, representing 35 per cent of world merchant shipping tonnage. APL is also a member of the Global Industry Alliance for the GloBallast Programme, a joint initiative of IMO, United Nations Development Programme (UNDP) and Global Environment Facility (GEF) that aims to assist developing countries to reduce the transfer of harmful aquatic organisms through a ship's ballast water and sediments.

Green Passport

APL vessels have a Green Passport, which documents the hazardous materials used in construction. It accompanies the ships throughout its operating life and is updated during equipment changes. The ultimate owner of the ship will deliver it with the vessel to the recycling facility to allow for proper processing of the materials.

Green Ship Certificates

APL's largest and most efficient vessels have Green Ship certificates



from the Maritime and Port Authority (MPA) of Singapore for meeting its Green Ship Programme. The programme targets Singapore-flagged ships with energy efficient ship designs that reduce fuel consumption and CO₂ emissions. NOL was one of the first organisations to sign the Maritime Singapore Green Pledge which promotes and supports clean and green shipping in Singapore.

Sewage

The discharge of sewage into the sea is a hazard and regulated by law. With limited capacity to store sewage in holding tanks, proper planning is critical to reduce the risk of illegal discharges. Environmental impact resulting from sewage discharge from ships include the introduction of nutrients which cause algal blooms and reduced oxygen levels, in addition to potential health risks for people who come into contact with polluted water during recreational activities or who consume contaminated seafood.

APL complies with MARPOL Annex IV through our Safety Management System that is audited by classification societies for compliance. Due to stringent controls, quality management, and training, APL has eliminated this risk of incidental sewage discharge and achieved its annual goal of no accidental discharges in 2012.

Advances in Containerisation

APL introduced water-based sealants on all new containers from 2011. It completed a successful trial using water-based paint on 100 40-foot containers which has eliminated 8000 kilograms of Volatile Organic Compounds (VOC). In addition, APL requires all container floorboard suppliers to be accredited by the Forest Stewardship Council using only renewable sources of wood supplies.

APL's refrigerated containers are more energy efficient, resulting in the reduction of about 20 million tons of carbon per year and a corresponding reduction in generator fuel.

Refrigerated containers require power to ensure cargo is kept at the necessary temperature. Originally, diesel generators were used in port to supply power to these containers. Now, APL has nearly 2,600 electrical plugs in all of its container yards on the U.S. West Coast. Each plug replaces a diesel generator set for the container.

On-dock Rail System

In Los Angeles, APL's terminal was the first to have a full-service on-dock rail facility in the U.S. It is also the only one that has electric rail mounted cranes for loading rail cars. There are eight loading and eight storage rail tracks, which hold the equivalent of nearly three trains worth of cargo. In Seattle, the on-dock rail system has enough room for the equivalent of two complete trains of cargo with an adjacent storage facility of the same size.

Terminal Equipment

All APL terminals world-wide employ electric gantry cranes to load and discharge cargo from vessels. This further reduces diesel emissions by eliminating emissions per crane. Also, all tractors used by APL since 1997 meet all on-road emission specifications, exceeding the standards for operation in terminals.

Warehouse Operations

Throughout North America, APL Logistics runs a continuous process improvement programme in its warehouse operations. This programme is based on the use of "lean" and six sigma principles.

PROTECTING THE ENVIRONMENT

In addition to realising cost savings and improved process efficiencies, many projects have also resulted in a positive impact on the environment and associated benefits.

Other measures to reduce energy and water consumption include the use of more energy-efficient lighting, increasing the use of natural lighting, installing motion sensor light switches, and powering down non-critical office equipment after regular business hours.

Waste is reduced by encouraging recycling across offices and facilities, using digital documents instead of paper and improving packaging of freight.

OUTREACH AND EDUCATION

The Group acts to ensure we protect the environment through a variety of both internal and external environmental outreach measures.

Employee Education

Educating NOL employees on environmental responsibility is an important part of its programme. Employees have access to updates on external environmental issues and internal environmental efforts. APL training aboard ships consists of a wide-array of subjects including company policies and procedures, familiarisation for new crew members, ongoing training during voyages including Vessel General Permit inspections and Hazardous Materials training. There is also a computer based training programme aboard every vessel that all crew members must complete. Ashore, crew members complete training in flag state requirements.

In 2009, APL began a systematic series of outreach seminars to educate and train employees on environmental issues and

initiatives. In 2010, 18 seminars were conducted worldwide and in 2011, an additional 10 seminars were organised in various parts of Asia and North America.

The Group runs a "Go Green" initiative that empowers employees to develop processes to save energy and natural resources, promote recycling, and use green office products. To date, there are 26 participating locations worldwide and we have an established performance goal of a minimum of 5 additional locations annually.

Recycling Containers

APL's donation and recycling of containers has helped the community and served as a platform for promoting recycling and sustainability. We have donated containers to the Philippine Christian Foundation for the construction of the Philippine Technical College. The Group also donated two cargo containers to the Boy Scouts of America, Marin Council for use at their camp in the Sierra Nevada Mountains in California. This allows them to prevent damage to their equipment during the winter season.

PARTNERSHIPS

Partnerships with industry groups and educators further expand environmental outreach efforts. APL has been a member of CCWG since 2004. As a global, business-to-business initiative, CCWG improves the environmental performance of marine container transport. The group is made up of about 30 member companies, including 11 of the top 15 world liner fleet operators and over a dozen global shippers. APL is an elected member of the group's Steering Committee.



CCWG creates practical tools for measuring, evaluating, and reporting the environmental impacts of global goods transportation. These tools help ocean freight carriers track and benchmark their performance, and easily report to customers in a standard format. Cargo owners in turn review and compare carriers' environmental performance when making informed buying decisions. Today, CCWG tools represent the industry standard for measuring and reporting ocean carriers' environmental performance on carbon-dioxide emissions.

APL is a member of the North American Marine Environment Protection Association (NAMEPA). NAMEPA's aim is to increase environmental awareness and educate the wider public and school communities on the importance of the world's oceans and the maritime industry's role and actions to preserve it.

APL Logistics is an active member of Smartway, the U.S. Environmental Protection Agency's flagship programme for improving fuel efficiency and reducing greenhouse gases and air pollution from the transportation supply chain industry.

RECOGNITION

The Group's environmental commitment has garnered significant attention in the past few years. In 2012 we received several environmental awards, including the Osprey Level of the US Coast Guard's William M. Benkert Marine Environmental Protection Award. APL is the first container shipping company to achieve the Coast Guard's highest level of performance. Other recent awards include:

- Federal Maritime Commission Chairman's Earth Day Award (2013)
- Green Ship of the Year – MPA International Maritime Awards (2013)
- Clean Air Action Plan (CAAP) Innovative Air Quality Improvement Technology Award – Ports of Los Angeles and Long Beach (2012)
- Blue Circle Award – Port Metro Vancouver (2011, 2012 and 2013)
- Clean Air Action Plan Air Quality Improvement Leadership Award – Ports of Los Angeles and Long Beach (2012)
- Environment Protection Award – Seatrade Asia Awards (2012 and 2011)
- Green Gateway Partners Award (Gold) – Port of Seattle (2012 and 2011)

SUPPORTING COMMUNITIES

By strengthening the communities in which it operates, NOL seeks to build a sustainable future hand in hand with those it serves. The NOL Group engages in numerous community support activities around the world – from providing free transportation to monetary contributions and donations-in-kind.

NOL understands that respect and support for the community are important to our ongoing success. As a global citizen, the company reaches out to:

- assist youths in realising their potential
- help the disabled and disadvantaged
- improve and protect the oceans and air quality
- support emergency services and aid relief programmes

In 2012, NOL Group contributed more than US\$300,000 towards social causes. Its philanthropy centred on helping the disadvantaged, poor and underprivileged. Many employees across the Group willingly participate in office-initiated volunteer events.

GLOBAL CITIZENSHIP

The Group placed greater emphasis on protecting the environment in 2012. Its calendar, themed “Greening the Supply Chain”, featured environmental initiatives across the Group and an online quiz each month. For each correct answer in any given month, the Group made a donation to Trees for the Future, a not-for-profit organisation dedicated to planting trees to absorb carbon dioxide. In total, NOL contributed US\$25,000 to Trees for the Future, or the equivalent of planting more than 250,000 trees in agro-forestry and reforestation projects run by the outfit. Each year, these new trees remove more than one million tons of carbon dioxide from the atmosphere.

2012 was an eventful year for international sporting events. NOL supported disabled athletes from Singapore as they prepared and trained for the Paralympics. APL also sponsored ocean freight for boating equipment from Miami, Florida and from Singapore to Weymouth in the UK for the Paralympics and other related competitive events.

AMERICAS

At the Group’s Americas headquarters in Phoenix, Arizona, employees and their family members participated in an annual initiative run by Rebuilding Together, a charitable organisation. The task was to paint the outside of the home of a community member who needed assistance.

EUROPE

UK-based employees participated in the World’s Biggest Coffee Morning, raising money for Macmillan Cancer Support. The charitable organisation provides practical, medical and financial support for better cancer care. Employees in Uxbridge also organised a bake-off, channelling funds collected towards a local organisation that helps underprivileged communities in the UK and some of the world’s poorest countries.

ASIA AND THE MIDDLE EAST

Through a year-end fund-raising drive, employees at NOL’s headquarters in Singapore helped raise money for the Autism Resource Centre. The Group organises annual year-end activities with active employee participation.

In Bangladesh, APL helped communities in extreme poverty by sponsoring ocean freight of medical equipment and supplies from



US-based AmeriCares. The containers carried donated medication and supplies for poor patients in and beyond Dhaka who seek medical treatment from a network of charity hospitals in Bangladesh. Donated items included surgical gloves, hand sanitisers, stethoscopes, Doppler fetal heart monitors and rehydration solutions.

In Chongqing, China, home to one of NOL’s global service centres, employees visited Ming De Primary School in the mountainous area of Xing Long town in Feng Jie District. A donation drive in which staff contributed books and recyclable cartons and paper helped to raise money for the purchase of printers and goodie bags packed with stationery for students. Employees from offices in Hong Kong, Shenzhen, Guangzhou and Zhongshan visited two primary schools located north of Guangdong, and helped more than 160 students with much needed basic necessities such as winter wear.

APL and APL Logistics employees helped 1,000 public school children in Cagayan de Oro in the Philippines by packing and distributing back-to-school kits comprising a school bag, t-shirts, slippers, notebooks and other stationery. The children are from communities affected by Typhoon Washi when it hit the province in December 2011. Flash floods wiped out thousands of homes and school communities in the area.

In Malaysia, as part of an ongoing community engagement programme, more than 100 employees participated in a movie night with 30 children from local orphanage Yayasan Sunbeam.

In Egypt, employees initiated a recycling program collecting shredded paper and unwanted cartons for recycling through a local charitable organisation Resala Association. All proceeds were channeled towards helping orphans and disabled children under the care of Resala.

SEARCH AND RESCUE AT SEA

APL vessels actively respond to calls for help from maritime safety agencies or individuals in distress. For example, the APL Spain, on route from Shanghai to Hong Kong, helped rescue three survivors from a fishing vessel east of Hong Kong. Sighting the sinking vessel about less than 2 kilometres away, the Hong Kong Maritime Rescue Coordination Centre (HKMRCC) as well as the Hong Kong Marine Department (MARDEP) were immediately alerted. The APL Spain lifted the survivors to safety and brought them ashore to the Port of Hong Kong. For their professionalism and role they played in the rescue mission, the Captain and his crew received a letter of commendation from the HKMRCC.

In October 2012, the vessel APL Bahrain was involved in a search and rescue mission in the Sunda Straits off the West coast of Indonesia’s Java island. The ship master coordinated the search along with other merchant vessels in the area under direction from Australia’s Rescue Command Centre in Canberra. Through their valiant efforts, the crew on board the APL Bahrain rescued 19 survivors and were commended by the Australian Maritime Safety Authority for their commitment to the safety of life at sea (SOLAS) convention.



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