

NSL *Link*

Issue 27

Jan 2019



**Coming
Together
as One**



A Note from Our **Executive Director**



Dear Colleagues

Wishing you and your family Good Health and abundance of Love, Joy and Peace in 2019!

2018 had been a challenging year for the Group. Nevertheless, we managed to smoothly transform our organisation, making it leaner and fitter. Eastern Pretech Group closed its plant at Sungei Kadut in June and had successfully transferred production to the Seelong plant. The Seelong plant is now operating at full capacity to support its Singapore market. The Enterprise Resources Planning system was also implemented albeit with initial hiccups. At NSL OilChem, management had rebuilt its facilities and resumed operations since September 2018. The construction of new industrial wastewater complex in Tuas is progressing well, on time and on budget. We had purchased two new slop barges to expand our marine slop collection business during the year.

2019 is a year of harvesting, reaping the transformation seedlings that we sowed in 2018. We will continue to focus our efforts to streamline

processes leveraging on digitalisation and automation technologies. We will continue to use technology as an enabler to work smarter and better. However, to benefit from such disruptions, we must approach them with an open mind, working as a team within and across departments.

Founder of Ford Motor Company, Henry Ford once said that



**COMING TOGETHER IS
A BEGINNING. KEEPING
TOGETHER IS PROGRESS.
WORKING TOGETHER IS
SUCCESS.**

Our CEOs and Head of Departments (HOD) must play a leadership role to coordinate the team in managing the disruptive changes confronting us both internally and externally.

We are all professionals. We should all come to work happily, working as a team at the same time developing friendship and rapport with each other. Throughout 2019, Human Resources department will be introducing training programmes to foster inter-department communication and teambuilding.

I would define teamwork as doing our own job well in a timely and accurate manner while communicating with others, before it is passed down the value-chain to the next department. It is not about counterchecking and covering each other's mistakes; that is not productive.

Every department has its set of key performance indicators and everyone must know its role in the whole value-chain to support the business. I would therefore urge everyone to do their part well and come together as ONE to bring NSL to greater achievements!

Dr Low Chin Nam

Our People, Our NSL

Interview with 8 staff

In this issue of NSLink, eight representatives were rounded up from various SBUs to give their thoughts on NSL and their workplace. With different portfolios and positions, they gave their take on what teamwork means to them and what they would like to see in NSL to make it an enjoyable working environment.

Krishnasamy Srikumar

Structural Engineer

Eastern Pretech Pte Ltd
Design

What do you look forward to when you come to work?

I look forward to being in a workplace with a culture that is courteous and caring. For example, coming into work every morning and being greeted with a "Good morning", "How are you?", "Thank you" and "Have a great day!". Such warm interactions are heartfelt and genuine. It felt great to be surrounded by the wonderful colleagues of Eastern Pretech and that makes my work day much more enjoyable!

Celatia See

IT Executive

Raffles Marina Ltd
Finance

Describe a project that showcased the importance of working together as a team?

I'm working on an automation invoicing project (AP) which requires working with respective departments to understand the operational processes and then translate them into a system process. Through a series of sharing sessions, I feel it is important to come together as a team because it helps to provide a culture of participation and learning.



Celatia (middle) at X-Park Adventure for NSL Active Day

What do you look forward to when you come to work?

I like the dynamic work culture at Raffles Marina. It provides me with plenty of opportunities to learn new technology skills and apply it to business operations. Not forgetting, we have a beautiful marina scenery which you don't usually get to view from your workstation. This helps to brighten my day at work!



Sri (second from left) with colleagues

What do you hope to see in NSL Group to make it a vibrant working environment?

There are many things that make EPS a vibrant workplace. One important factor is how everyone cares for each other like a family. Also, it is fun place to work in with everyone working together. These things help me to produce a better quality of work.

Christopher Chang

Project Engineer

NSL Oilchem Waste Management
Pte Ltd
NSL Industrial Wastewater
Treatment Complex

What's one of the greatest achievements that required departments to come together to make it happen?

NSL's project for the construction of wastewater treatment complex illustrates the importance of teamwork in bringing a project to fruition, as it involves collaboration and coordination between multiple parties; both external to NSL and among NSL departments. Ultimately, the success of the project is achieved when each member of the team performs their task well.

What do you hope to see in NSL Group to make it a vibrant working environment?

I envision an environment where employees are constantly challenged by one another to grow in their specific skill set and area of expertise. Also, having "relax zones" within the workplace would help improve employees' comfort and satisfaction during the day, which in turn promotes higher motivation and productivity.



Christopher (second from right) together with NSL SRC at NSL Family Day 2018

Jessica Lee

Ops Planner

NSL Fuel Management Services Pte Ltd
Distribution – Ops Planning

Describe an incident that showcased the importance of working together as a team?

Our staff retreat in Vietnam was a success! Team leaders had to plan activities and it wasn't easy since some of us have not been there before. We also came up with interesting activities that encouraged teamwork and bonding. Also, Mr Jeffrey Fung took up all challenges with us.

What's one of the major achievements that required departments to come together to make it happen?

The F1 project was one of our biggest achievements that could not have been possible without the combined efforts from other departments. Our Human Resource department assisted in hiring part-time staff. The Fuel Management Technology department provided storage equipment and aided in SCDF clearance submissions for almost 30 top-up stations. The Operations department had to schedule drivers for morning and midnight deliveries. Eight of us,



Jessica (third from right) with her team on the F1 tracks

including our Chief Operating Officer Mr Patrick Ng, were on 24/7 rotating shifts at the site.

Nea Viitanen

Finance Manager

Parmarine Ltd
Finance

Describe a project that showcased the importance of working together as a team?

Implementing new software for finance can be a challenge, such as the ERP system. Smooth system integration is only made possible through the combined efforts of all.

What do you look forward to when you come to work?

Whenever I complete a task, there is a sense of achievement. This is also true when I am able to solve complex problems.



Nea at her desk

Rickson Sin

Ops Planner

NSL OilChem Waste Management
Pte Ltd
Logistics, Projects & Training

What's one of the major achievements that required departments to come together to make it happen?

The fire incident that took place back in 2017 greatly affected our SBU and our work. Thankfully, we have a robust Safety department and Training department to put our plant back on track.

What do you look forward to when you come to work?

As an Ops Planner, I face daily work challenges, both internally and externally. However, these challenges make my workday go by faster. I look forward to going home with the satisfaction gained from tackling these problems that arise.



Rickson (third from left) having fun at work

Sudhir J. Purohit

Operational Manager
Dubai Precast Concrete LLC
Site, Project

Describe a project that showcased the importance of working together as a team?

Successful completion of the Expo 2020 project is the result of brainstorming and rigorous coordination amongst all concerned departments. We worked as a team from project inception to developing innovative methods in addressing all concerns of the project's executing teams. This approach resulted in the project's smooth completion, without any issues cropping up during production and execution at site.

What's one of the greatest achievements that required departments to come together to make it happen?

Rotation of high ground floor panels using a single tower crane was challenging. Stability was a concern during rotations when separating the external and internal panel skins. The panels were very slender with both skins completely separated by 120 mm of thick rock-wool insulation. A working solution was formulated by using motorised and manual chain blocks to rotate the panels with a single crane. The team managed to stiffen the panels, while trials were carried out offsite.



Sudhir (middle) in a discussion session with colleagues

Teoh Teik Aun

Assistant General Manager – HRA & SHE
Eastern Pretech (Malaysia) Sdn Bhd
Human Resources and Administration

What do you look forward to when you come to work?

I look forward to a conducive working environment that is happy and peaceful. Having superiors and fellow colleagues that are full of energy, motivated and positive also makes for a great workplace.

Tell us more about how someone has made your time at NSL interesting.

Great teamwork within my department, as well as guidance and advice from my immediate superior help make my daily work life interesting. Respect from other departments makes my time in the company enjoyable. They never fail to cheer me up with their support and willingness to offer assistance.



Teik Aun (second from right) at a dinner get-together with department heads

Rate NSL!

We did a survey on staff sentiments about working as a team. Results show that teamwork within a department, as well as with other departments is important as it creates a conducive workplace and motivates staff.



4.875

Working together with my colleagues makes my day



4.875

Teamwork is important in my course of work



5

It is important to work well with other departments

(In a scale of 5 being the maximum)

A Showcase of Teamwork at Dubai Precast

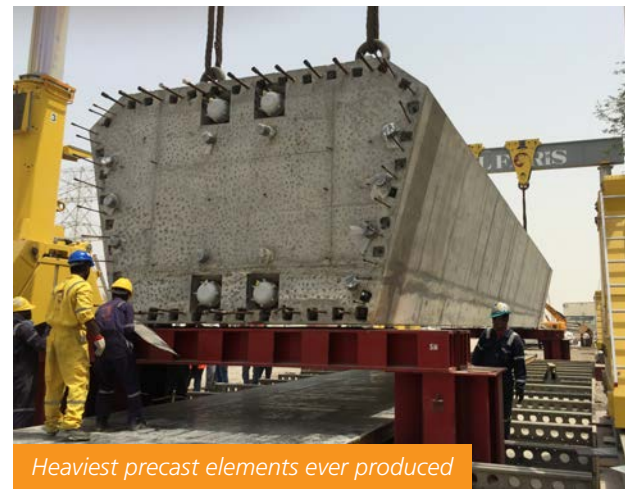
By Henrik Jensen



Installation of beams at night

Teamwork was the main driving force behind the success of Dubai Precast's most recent project of manufacturing two record weight of precast portal beams needed in the construction of Route 2020's metro extension. The project was completed in August 2018 and to the client's satisfaction.

brainstorm on the production process and logistics needed. Mould building, reinforcement fixing and placement, casting and transportation are various aspects to consider when constructing these beams. These heavy beams were internally produced at Dubai Precast's external stockyard.



Heaviest precast elements ever produced

During construction, the challenge emerged as road closures or diversions of existing roads were disallowed at the elevated part of the route. To tackle this issue, precast portal beams were employed and installed during the six hours nighttime road closures. These beams weigh 410 tons and 340 tons each and are the heaviest single elements ever produced. Previous productions were approximately 50 tons.

To ensure smooth completion of the project, staff from different departments were deployed to



Workers casting for precast portal concrete beams



Tailored Trainings for all at NOC

By Carol Yen

Leadership Workshop



Fruitful and enjoyable workshop!

From 21 to 22 June, 16 managers from NOC, NSL Fuel Management Services and NSL Chemicals Ltd attended "The Human Dimension of Leadership" workshop held at Raffles Marina. At first reluctant and apprehensive, they had the impression that it was just another workshop to fulfill training requirements.

It proved to be otherwise. During the workshop, they identified their Dominance, Influence, Steadiness and Conscientiousness (DISC) profiles, as well as emotional and social competency levels. Different hands-on activities opened up their minds in learning what influences human behavior and team dynamics.

"The workshop was a very good opportunity to improve aspects of emotional intelligence that may seem like common sense but are often difficult to manage," said Mr Law Choong Ming, Sales and Marketing Director.

Mr Raymond Tay, Senior Manager also added that "it has been a great journey of self-discovery, as there were many blind spots that I was unaware of. Discovering these weaknesses and thoroughly discussing them with my superior and subordinate enabled me to better position and improve myself."

Working together in a group activity



English Literacy Course

NSL OilChem Waste Management (NOC) values all staff, as everyone plays a pivotal role in the organisation's success. In an effort to cater to the learning needs of all employees, NOC rolled out trainings tailored to the needs of specific portfolios.

To provide a higher level of service to our clients, the first batch of Chinese-speaking employees attended a customised English literacy course in June to be trained at handling client enquiries onsite and offsite. This also helps to boost their confidence in speaking English. Commonly used terms in their jobs were incorporated during the course to increase their efficiency levels and allow them to better appreciate their jobs.

The Engineering and Maintenance team said, "Our maintenance personnel, Shi Shaojie enjoyed the course. His confidence in the language has grown, as he practices English by speaking to our Indian workers and has even started to proactively write simple English."

The Garage team mentioned, "Xiaoxi has benefited from the course. Nowadays, we only converse in English to encourage him to speak the language."

Employees who attended the course felt valued by the company and were encouraged to use the new found language at work. NOC's Human Resources department will be organising another course due to the positive feedback.



◀ *Graduates of the English literacy course*



Cohesion at the core of RM's Operations

By Samuel Lee

Raffles Marina (RM) promotes cohesion between departments, as it is important in the running of the club whereby different departments share a common system and have to work together to allow smooth operations. In light of this, a series of combined trainings were rolled out to build a better understanding of each department's roles and processes.



MarinaOn! ClubOn!

From 25 to 26 September, 20 staff from Finance, Marina and Membership departments attended the MarinaOn! and ClubOn! trainings. These two systems help manage membership and berthing records. For 15 years, staff have been utilising the two systems with minimal formal training. This has resulted in knowledge gaps and miscommunication, mainly due to staff turnover. The objective of the trainings was to bring staff up to mark and enable them to handle daily tasks competently. Aimed at addressing the systems and emphasising on areas required in daily operations, the sessions gave staff an opportunity to clarify and ask questions.

Gerard Danker, Berthing Executive said "training was useful as it allowed me to understand the system better and be more competent at my job."

"It helped me to better understand the work processes of other departments, how the system is interconnected and how that affects other colleagues," said George Lim, Senior Credit Executive.

Anticipatory Service of F&B Professionals

On 4 and 5 June, 28 employees from Marina Bistro, Captain's Table, Discovery Pub and Banquet department attended a training titled "Anticipatory Service of F&B Professionals". Staff of various portfolios and positions were given the opportunity to listen to each other's views with an aim of working towards a common objective.

Active participation was encouraged by using actual working scenarios to make it more realistic. Role playing during the training added both fun and interaction among the trainees. Department heads also took this opportunity to reinforce positive attitudes of staff during actual operations.

Michael Leong, F&B Operations Manager mentioned that "there was good dialogue between the staff and their supervisors which helped them to understand each other's work scope better."

Henry Ng, Restaurant Manager of Captain's Table also added that "the training gave my team and I a deeper understanding of what service excellence is about and the importance of team work. Personally, I gained a lot from the training."



NSL Reported a Loss despite Higher Revenue in 3Q2018

- Group Turnover increased by 9% to \$88.4 million in 3Q2018 from \$80.8 million in 3Q2017.
- Group reported a loss before tax of \$0.6 million due to lower losses incurred by the Singapore and Malaysia precast operations following the restructuring exercise in 2Q2018 and the waste treatment business which resumed full operation during the quarter.

Financial Highlights (Continuing Operations)	The Group					
	Quarter ended 30 September			9 months ended 30 September		
	2018 S\$'000	2017 S\$'000	Change %	2018 S\$'000	2017 S\$'000	Change %
Group Turnover	88,387	80,816	9	290,134	250,439	16
Group Profit Before Tax	(591)	(3,358)	n/m	(4,628)	325	n/m
Group Profit Attributable to Shareholders	(1,136)	(2,692)	n/m	(5,888)	876	n/m
Earnings Per Share (cents)	(0.30)	(0.72)	(58)	(1.58)	0.23	n/m

n/m: not meaningful

NSL Group achieved an increase in Group turnover of \$88.4 million in 3Q2018 which is an increase of 9% from \$80.8 million in 3Q2017. This is largely from improved contribution from both the Precast & Prefabricated Bathroom Unit ("PBU") and Environmental Services divisions.

Turnover of the Precast & PBU division increased by 9% in 3Q2018 which is attributed to increased project delivery in Singapore and Malaysia. Environmental Services division turnover rose by 11% in 3Q2018 driven by higher sales from waste treatment and fuel management businesses.

The Group incurred a loss before tax of \$0.6 million in 3Q2018 compared to \$3.4 million in 3Q2017. This is due to lower losses incurred by the Singapore and Malaysia precast operations following the restructuring exercise in 2Q2018 and the waste treatment business which resumed full operation during the quarter.

After taking into account income tax and non-controlling interests, the Group reported a lower loss

attributable to equity holders of \$1.1 million in 3Q2018 compared to a profit of \$2.7 million in 3Q2017.

The Precast & PBU division saw a pre-tax profit of \$0.6 million in 3Q2018 as compared to a loss of \$0.9 million in 3Q2017. The improvement was mainly attributed by lower losses by the Singapore and Malaysia precast operation on the back of higher revenue and a leaner cost structure after the restructuring in 2Q2018.

The Environmental Services division reported a loss of \$0.6 million in 3Q2018 compared to a loss of \$1.6 million in 3Q2017. This was due mainly to lower loss reported by the waste treatment operation, which resumed its full operation in September 2018 after 18 months of disruption.

Group turnover in 9M2018 is \$290.1 million, 16% higher than the \$250.4 million achieved in 9M2017, due to higher revenue from both the Precast & PBU and Environmental Services divisions. Notwithstanding the increase in turnover, the Group incurred a loss before tax of \$4.6 million in 9M2018 compared to profit

before tax of \$0.3 million in 9M2017. This was due to restructuring costs of \$2.1 million for the Singapore precast plant in June and unabsorbed overhead costs incurred prior to the plant closure.

Outlook

The precast business in Singapore and Malaysia is expected to remain challenging amidst very competitive market conditions. However, the business should continue to benefit from lower cost following the relocation of its Singapore operation to Malaysia. Dubai operation faces increasingly difficult market conditions with downward pressure on selling price. Business outlook for the division's PBU business in Finland is expected to remain favorable with healthy order book.

In the Environmental Services division, improvements are expected from increased slop collection from the two additional slop barges and the full reinstatement of all operating licenses of the waste treatment service. However, the current weak recycled fuel oil demand is likely to dampen selling price. The construction of the division's organic wastewater treatment facility in Tuas is progressing on schedule for commissioning by end of 2018.

CRD Celebrates its 30th Anniversary

This year marks the 30th anniversary of NSL's Corporate Research and Development (CRD). Coincidentally, it was also their 100th meeting. In commemoration of this significant milestone, a luncheon was organised at Raffles Marina on 15 November 2018 whereby pioneer members of the Advisory Panel were invited to grace the event. Management staff from each SBU and staff from the CRD department also attended the celebration.

Kickstarting the event, Dr See Soo Loi, Head of the CRD department, gave a speech and expressed her thanks towards the Advisory Panel for their continuous guidance and leadership.

Special thanks and appreciation were attributed to Prof Cham Tao Soon, Chairman of the CRD Advisory Panel, for his passion to CRD and not missing a meeting these 30 years.



Prof Cham recapping CRD's successes through the years

Prof Cham proceeded to deliver a speech on how far NSL has come over the years. With the objective of achieving long term growth through technology innovation, approximately \$120 million of total return from 50 completed projects, new products sales and process improvement is an indication of CRD's success. The celebration followed with a cake cutting ceremony.

Moving ahead, the CRD management and staff will continue to deploy innovative solutions for new products and services and to enhance productivity and competitiveness. Technology remains a core feature of the CRD programme, by leveraging on digitalisation to develop innovative products and process improvements.

50
Projects implemented
thus far

\$30 million
Total direct manpower
cost incurred

\$120 million
Estimated total return from
completed projects, new products
sales & process improvement



Past and present members of the CRD Advisory Panel

NSL Through a Lens – Winners

NSL's photo competition results are out! The NSLink Editorial Team would like to congratulate the winners for their creativity in achieving all the wonderful photo submissions. This year, we received 91 entries from 22 contestants from different SBUs. Employees showed us their take of how NSL is seen through their lens. They were encouraged to portray the unique work places and capture the best shots of our products and services.

Your vote counts!

13 shortlisted entries were put to a poll and 173 employees voted for their favourite shots. The top 5 winners are:

Prizes

- 1st prize – Google Home
- 2nd prize – G-Shock Watch
CSG-7900-3DR
- 3rd prize – D-Link HD Pan &
Tilt Wi-Fi Day/Night
Camera
- 4th prize – Google Home Mini
- 5th prize – Philips 10,000 mAh
Power Bank



Abdul Rahim Bin Amat
Raffles Marina Ltd



1st Prize "Lighthouse at Raffles Marina"

Consolation:

Submissions for this year's photo competition have been overwhelming. Eight consolation prizes were added to the list of winners.



Ng Ai Li, Raffles Marina Ltd
"My workplace view is better than yours."



Teo Wee Kian, NSL OilChem
Waste Management Pte Ltd
"Men at Work"



Kamil Bin Abu Samah, NSL OilChem
Waste Management Pte Ltd
"Conformance" & "Blue Skies Above Us"





Steven Lee
Eastech Steel Mill Services (M) Sdn Bhd



2nd Prize "Sunlight beam on a worker debagging at mixing plant"



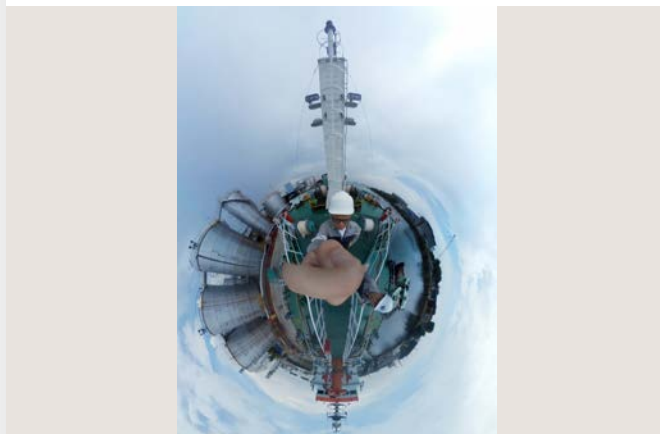
Jamie P. Bautista
Dubai Precast Concrete LLC



4th Prize "Dubai Precast, Fill Up My Missing Parts"



Bernard Lim
NSL OilChem Waste Management Pte Ltd



3rd Prize "360 Tiny Planet"



Steven Lee
Eastech Steel Mill Services (M) Sdn Bhd



5th Prize "Refractory Products"



Huang Shengjie, NSL
OilChem Waste Management Pte Ltd
"I set sail, not to sail the 7 seas, but to optimise fleet efficiency 7 days a week."



Glyn Sim, NSL OilChem
Waste Management Pte Ltd
"Bottoms Up – Tank Cleaning"



Christopher Chang, NSL OilChem
Waste Management Pte Ltd
"Entrance of Wastewater Treatment Complex"



Kamariyah Binti Kasam, Eastern Pretech (Malaysia)
Sdn Bhd
"An empty trailer waiting to be loaded with elements."

Eastern Pretech Group Updates

Singapore By Wilson Chong

EPS awarded contract for National Skin Centre

Eastern Pretech Singapore (EPS) was awarded the contract to supply and deliver a total volume of 3,800 m³ of precast column, beam and hollow core slab for the National Skin Centre at Mandalay Road.

The delivery will commence in April 2019 and is expected to complete in September 2019.

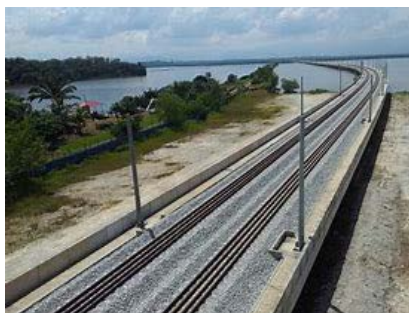
Malaysia By Lee Mun Sam

EPM secures Electrified Double Tracking Project

Eastern Pretech (Malaysia) Sdn Bhd (EPM) will be supplying railway sleepers for the prestigious Electrified Double Tracking Project (EDTP) from Gemas to Johor Bahru, as agreed with the Main Sub Contractor, SIPP-YTL.

750,000 nos (approximately 64,000 m³) of railways sleepers will be designed, manufactured and supplied by EPM for a period of 18 months, commencing in early 2019. This is a significant contract secured which will provide a healthy base volume for the factories in Beranang and Seelong.

This RM8 billion project is a continuation of the EDTP from Rawang to Padang Besar in early 2000s. EPM was one of the suppliers of viaducts and railway sleepers. The new Gemas – Johor line covers 191 km and will include nine passenger stations and two depots. Travelling at a speed of 190 kilometres per hour, it will cut travelling time from Kuala Lumpur to Johor Bahru by almost half, from 6 hours to 3.5 hours.



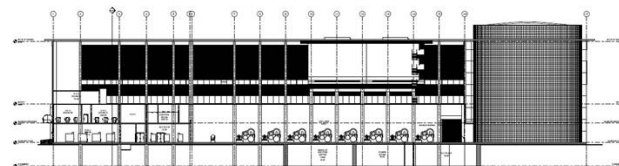
Precast elements, viaduct and railway sleepers supplied in the previous EDTP at Bukit Merah, Perak

Dubai By Henrik Jensen

DPC awarded contract for Meydan District cooling plant

Dubai Precast (DPC) was awarded the contract for design, supply and erection of approximately 8,000 m² of hollow core slabs along with 4,500 m³ of reinforced concrete precast walls, columns, beams and stairs for Meydan District cooling plant in Dubai.

Production and erection will commence in 4Q2018.



An autocad drawing of Meydan District cooling plant

Finland By Jussi Raunio

Parmarine delivers bathroom units to Elementti-Sampo Oy

Parmarine delivers 103 bathroom units to Elementti-Sampo Oy, which builds wooden blocks of flats from free-standing volumetric modules. Unit bathrooms are delivered to the prefabricated prefinished volumetric construction factory where they are installed in the modules. Delivery will take place in 2018.



Unit bathroom in a module

EPM Moves Headquarters to **New Office in Mines 2**

By Matti Mikkola

Eastern Pretech (Malaysia) Sdn Bhd (EPM)'s headquarters has moved to their new office at Mines 2, which is located closer to its Beranang factory.

Previously housed in a shop lot office at Taman Sungai Besi, Kuala Lumpur, EPM's new office now occupies one full floor. This new space will cater for additional resources required, as well as for future staff recruitment.

Designers were engaged with the intent to design an office with a simple, modern yet functional look. It has open concept workstations with fun elements incorporated to improve the comfort and wellbeing of staff.

Upon completion of renovation, EPM moved in on 21 April which was followed by an office open house held for families and industry partners on 6 May.

Old Office



Previous EPM headquarters located at a shop lot office



Work cubicles in the office

New Office



Reception counter



Lounge area

Breakout areas for staff to recharge



Open concept workstations

FMS is F1's Fuel Distributor

By Phang Mun Wai

F1 FORMULA 1 2018
SINGAPORE AIRLINES
SINGAPORE GRAND PRIX
MARINA BAY STREET CIRCUIT 14-16 SEPTEMBER

NSL Fuel Management Services (FMS) was chosen as the preferred partner for diesel refuelling at the Formula 1 2018 Singapore Airlines Singapore Grand Prix night race at Marina Bay Street Circuit in September.

Planning and preparation started in July, as there were strict safety and security protocols to adhere to. Diesel was used to generate electricity for lighting and staging equipment, camera transmission centres, fork lifts and trucks. To ensure the event ran smoothly, the FMS crew was tasked to refill 29 refuelling points

surrounding the racing circuit on a 24-hours basis.

To store and monitor diesel consumption, Harlequin tanks were deployed across refuelling points for a cleaner and more efficient diesel refuelling experience. The refuelling stations were equipped with fire extinguishers, spillage kits and battery operated transfer pumps to provide uninterrupted supply and especially during an emergency diesel outage situation.

It was a successful event, thanks to the tireless FMS team who worked

shifts round the clock responding to all refuelling request. Leonard Leong, supervisor for overall setup and event operations said, "There was a last minute need to set up a new point and the team had to carry diesel stored in carboy containers for the initial supply. Nevertheless, with dedication, the team overcame it and delivered beyond their call of duty." It was a significant milestone for NSL to be involved in this world class event. Till then, we look forward to Formula 1 2019 Singapore Airlines Singapore Grand Prix.



Mapping of Harlequin tanks around the Marina Bay Street Circuit



Harlequin tank supplying multiple Aggreko generators

NOC Making Headway for Progress

Industrial Wastewater Treatment Complex – A Progress Update

By Lim Chiow Giap

Construction of the WTC started in October 2017. With its steady progress, it is expected to complete construction end December 2018. The plant testing and commissioning will be conducted over several months, and it will start receiving wastewater samples from customers during that period. The new plant is targeted to be in full operation by 2Q2019.

On 14 November, NSL's Board of Directors visited the project site and was briefed on the facilities and technologies installed in WTC. Various treatment and best practices will be implemented. In anticipation of rising demand from customers, plans for the expansion of plant facilities are ongoing. This ties in with enhancing business capabilities and having well-equipped facilities to serve our industrial customers.



◀ Visit by NSL Directors



Work in progress

NSL OilChem Waste Management (NOC) is charting its progress in the environmental services industry with the upcoming Industrial Wastewater Treatment Complex (WTC) and the addition of new slop tankers.

NOC 7 & NOC 8 – New Slop Tankers

By Huang Shengjie and Thanabalasingam

NOC successfully converted and dry-docked two former bunker barges to fully equipped Class A slop tankers. Named NOC 7 and NOC 8, the arrival together with NOC 9 signifies the preparedness of the division to take on greater challenges in the marine arena.

Mr Jeffrey Fung, CEO of NOC said, "It was completed in less than three months at a lower capital outlay of \$3 million per vessel as compared to the nine months period for a new built at USD 3 million per vessel."

Owning and operating de-slopping barges provides direct services to our customers instead of hiring a contractor and allows for better control and performance accountability. Customers will get enhanced transactional transparency. Also, customer service levels are better in terms of communication, professionally trained staff, higher operational safety and regulatory compliance. This complex project involved installing additional equipment and replacing existing equipment.



◀ NOC 7 at sea



Purchase condition of bunker barges

CSR Initiatives with Yangzheng Primary School

Project SeedLinks

In conjunction with Children's Day, 19 staff from NSL OilChem Waste Management volunteered for Yangzheng Primary School's Project SeedLinks on 4 October. This event aims to empower primary school children to serve the community through the sharing of Science knowledge with preschoolers. Reaching out to the community is part of NSL's corporate social responsibility efforts to care for our community and to create a positive impact in society.

The volunteers ensured the safety of the children during a short garden trail in the eco-garden. With the guidance of Primary Five student buddies, 127 preschoolers from My First Skool, PCF Sparkletots and Bethesda Kindergarten were given the opportunity to have a hands-on experience of growing their own seedlings using recycled seed holders. Besides nurturing the young on caring for the environment, this programme also aims to contribute to a sustainable environment for our future generations.



▲ A big thank you to all volunteers!

◀ Trying their hands on planting their own seedlings



Garden trail at the eco-garden ▶

Primary 6 Career Day

On 9 October, Emily See, Senior Chemist from the Quality Control department in NSL OilChem shared her experience in the environmental services industry at the Yangzheng Primary School's Career Day. Primary 6 students were given a peek into what work is like in a lab and how they can apply Chemistry theories into practice.

As a chemist, unknown substances are identified through testing of samples; this requires curiosity and a keen eye for details. Quality of test results is established through management systems, documentation, proper procedures and training. Waste management also helps in maintaining environmental sustainability through correct discharge methods. Besides sharing about her expertise, Emily emphasised on safety as a crucial aspect of her work. Students learnt about Globally Harmonized System Labels and Personal Protection Equipment (PPE) that are implemented to ensure a safe work environment.



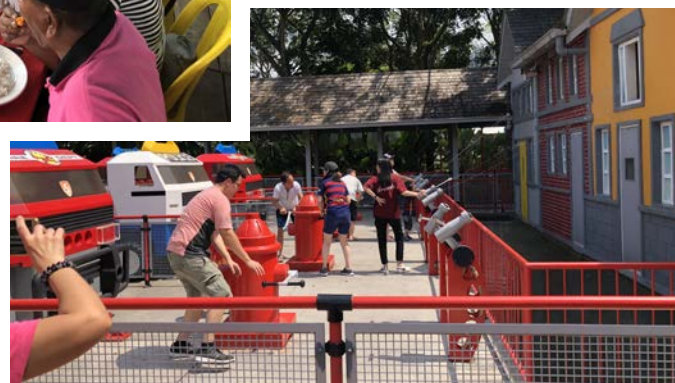
Demonstrating the importance of wearing PPE



Let's go to Legoland!

On 29 September, NSL SRC organised a day trip getaway across the causeway to Legoland Malaysia. 87 family and friends set off for the first pit stop at Gelang Patah for breakfast before arriving at the theme park.

Located in Johor, participants were greeted by a colourful backdrop of Lego bricks. Unique interactive experiences at this family theme park include amusement rides, games, shows and activities. Participants were free to roam the compounds and relived their childhood dreams of playing with Lego. To end the trip, they were treated to a feast at a local restaurant before heading back to Singapore.



Terrarium Workshop

NSL staff green thumbs were put to the test at the terrarium workshop held in their respective offices. Organised by SRC, participants were provided with all the materials to create their own mini-garden in a glass jar. At the end of the workshop, staff brought home their beautiful creations.



◀ NSL HQ

▼ RML

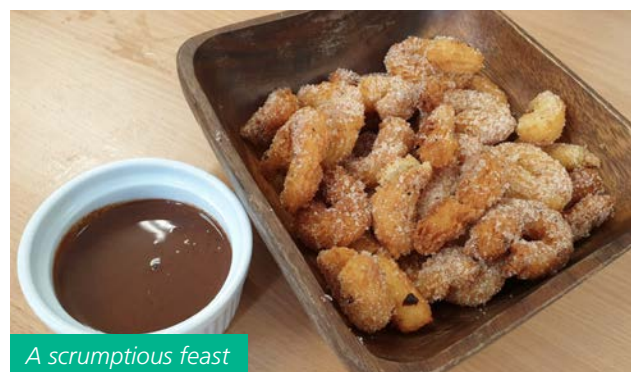


Cooking Workshop

In November, staff who attended the SRC cooking workshop became chefs for a day. The menu included dishes like seafood paella, crispy Churros with warm chocolate dip and assorted sushi maki rolls. Staff were treated to their very own dishes for lunch.



NOC



A scrumptious feast



Lightning is a lesser known potential risk factor in our workplace. In April 2016, the Workplace Safety and Health Council reported that three workers were struck by lightning while doing concreting works on a building under construction in Singapore. They had earlier stopped their concreting work due to heavy rain, and resumed after the rain had stopped. They were conveyed to hospital where one of them subsequently succumbed to his injuries.

Later in November 2017, MRT train stalled after getting struck by lightning. All passengers were safe as trains are covered with conductive material, known as “Faraday cage” that blocks electric fields and currents. This helps to keep the passengers safe from lightning strikes. However, the train driver felt unwell and received medical attention.

According to the Meteorological Service Singapore, a total of 181 lightning days were recorded in 2017 by the Changi climate station. With high frequency of lightning strikes, it is important to include heavy rain and lightning strikes as potential hazards during risk assessment for all outdoor work activities.

Open areas, like construction sites, are more prone to such risks during heavy downpour and lightning strikes. If lightning protection systems are not available to protect employees working outdoors, administrative control measures must be implemented.

Prior to commencing outdoor work activities, check for lightning risks in the vicinity through the following channels:

- 1** “myNEA” app, developed by the National Environment Agency, allows users to be notified when lightning strikes are detected within a radius of 8 km based on location defined by the users. This app is recommended as it will provide real-time notifications to users when lightning is detected.
- 2** Information on lightning strikes is also available online at <http://www.weather.gov.sg/lightning>
- 3** Lightning warning systems installed on-site which typically provide alerts through strobe lights or sirens.

When lightning conditions are encountered, we should take the following precautions:*

- Resume work outdoors at least 30 minutes after thunder is heard. Lightning strike can still occur with clear skies as thunderstorm clouds can strike a distance away.
- In case of lightning, do not stay outdoors. Seek shelter in a building or in a metal-bodied vehicle. Stay away from metal objects, metal pipes, electrical wiring that are wet.
- Do not seek shelter under tall isolated tree.
- Move away from high ground or open areas such as beaches, open fields, rooftops or hilltops.
- If there is no shelter nearby, adopt a low crouching position with feet together and hands on ears. For personnel working in open water, it is advisable to stay out of the water until the thunder has passed.

*Information is extracted from WSHC.

4 Major Causes of Young Onset Dementia

By Thava Rani and Suki Lor

Alzheimer's Disease is the most common cause of Young Onset Dementia. The Department of Neurology at National Neuroscience Institute shares 3 other causes.



These four types of dementia are among the major causes of young onset dementia (YOD). Symptoms and treatments vary according to the brain disease causing YOD.

Four major causes of Young onset Dementia

Alzheimer's disease

Most common cause of YOD (one third of patients)

- Symptoms: predominantly memory difficulties
- From onset of symptoms to death: about 10 years
- Currently available treatment offers only symptomatic relief (no cure)

Vascular dementia

Second most common cause of YOD

- Symptoms: problems with executive functions such as planning, sequencing and judgement
- Treatable if diagnosed early

- Caused by stroke (which may be silent, without physical symptoms) brought on by chronic diseases such as diabetes, high blood pressure and high cholesterol
- Usually not picked up at home until symptoms have worsened
- Treatment is aimed at preventing another stroke

Fronto-temporal dementia

Third most common cause of YOD

- Symptoms: changes in behaviour (personality changes, disinhibition, food obsessions) or language (word-finding difficulty, wrong word use)
- Most aggressive form of YOD – may progress from word finding difficulty to becoming mute in three years
- From onset of symptoms to death: about seven years
- Associated with the existence of family members who exhibit atypical behaviours, e.g. alcoholism, criminal behaviour

- Treatment offers only symptomatic relief (no cure)

Auto-immune dementia

Seen in about 10 per cent of patients with YOD, less often seen in older people

- Symptoms: fluctuating changes in behaviour and executive functions (some days may be good, some bad), unlike other dementias which progressively deteriorate over time; may manifest with tremors, involuntary jerky movements, and slowness of movement
- Treatment with steroids or immunosuppressants should be started only when diagnosis is confirmed. Patient may be completely cured if the disease is caught early and damage to the brain is minimal

Continue reading on healthxchange.sg to **find out more about the 4 major causes of young onset dementia.**

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