FACT SHEET

"OPERATION SANDPIPER"

"Operation Sandpiper" was part of MOM Occupational Safety and Health Department (OSHD)'s efforts to address the safety of crane/lifting operations at worksites, looking specifically at the use of cranes in bored piling activities[1]. 50 worksites were inspected between April and May this year.

Background

2 In the last few years, piling works have contributed to both fatal incidents and dangerous occurrences. The table below shows the breakdown:

	2011 (Jan to June)	**2010**	**2009**
Total number of Crane-Related Dangerous Occurrences (DOs)	14	26	21
DOs due to piling works	*1*	*2*	*1*
Crane-Related Workplace Fatalities	2	2	10
Fatality due to piling works	*2*	*1*	*0*

3 In the first half of this year, both crane fatalities involved lifting activities carried out during piling works. One case involved a worker who died instantly after being struck by a fallen steel bar. A crane was lowering a steel cage into a borehole when the cage became dislodged from the crane hook and dropped into the borehole. As the cage fell, a piece of steel bar which was welded to the top of the cage struck the worker who had been standing near to the borehole.

4 During piling works, there are several critical areas that need to be properly managed. These include the method of bored piling and casing extraction[2]. Stakeholders must carry out proper risk assessments and implement the necessary safe work procedures. The development and implementation of proper Lifting Plans are critical in addressing issues such as:

- rigging of lifting gears to steel cages and pile casings;
- adequacy of the lifting gears used for the lifting operation; and
- assessment of ground conditions for the movement of cranes and piling rigs across the worksite.

Results and Findings

5 "Operation Sandpiper" looked at these concerns at the 50 worksites inspected. Close to 80 contraventions were found, with $30,000 in compound fines (CFs) issued. The top 4 contraventions found were:

[1] Bored Piling is a process where steel circular casings are installed into the ground by the process of drilling and soil removal. This is then followed by placing of steel and concrete into the ground to form columns of 'bored piles'. Bored piling activities relate to the activities done during installation of bored piles.

[2] Casing extraction is the act of removing a steel casing that is installed in the ground for the purpose of installation of a 'bored pile'.

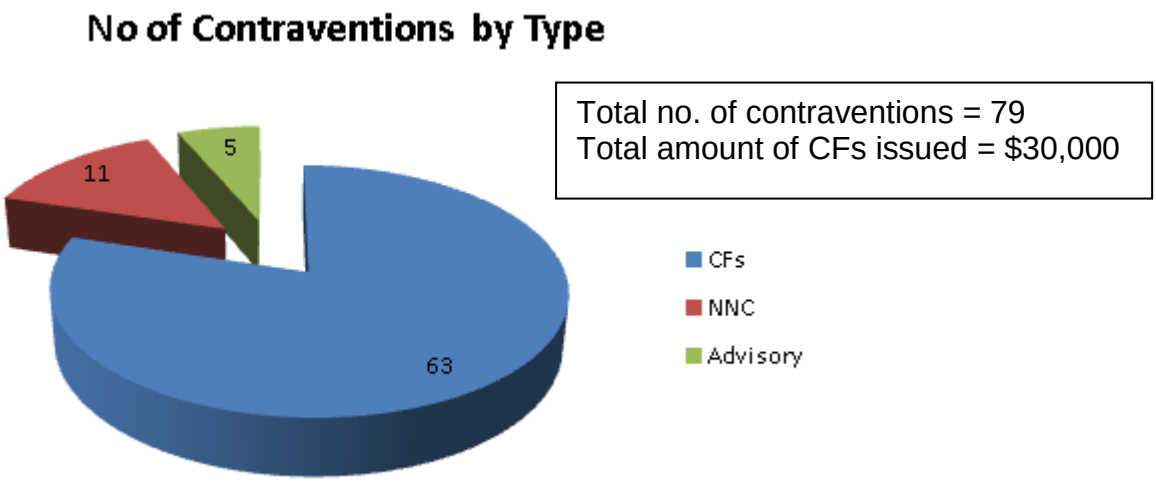
i) improper rigging methods;
ii) faulty safety devices;
iii) defective lifting gear; and
iv) failure to maintain lifting machines.

6 More information about these contraventions is in Annex. Follow-up checks by OSHD also showed that all 50 worksites had put proper measures in place to address these contraventions.

ANNEX

OPERATION SANDPIPER - OVERVIEW

Top 4 Contraventions		No of contraventions	Amount of CF's issued
1	Improper Rigging Methods	25	$12,500
2	Faulty Safety Devices	5	$2,500
3	Defective Lifting Gear	6	$3,000
4	Failure to Maintain Lifting Machines	4	$1,500

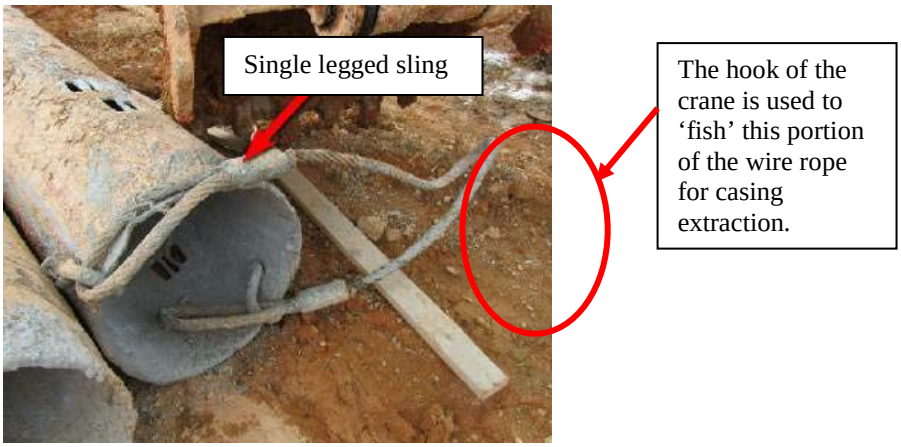


NOTE:
A Notice of non-compliance (NNC) serves as a warning for any breach of WSH regulations in the workplace.
An Advisory letter is issued when there are safety and health concerns even though no part of the law had been breached. It advises Occupiers/employers to address the identified issues.

TOP FOUR CONTRAVENTIONS

(1) IMPROPER RIGGING METHODS – E.G. SINGLE LEGGED SLINGS FOR CASING INSTALLATION / EXTRACTION

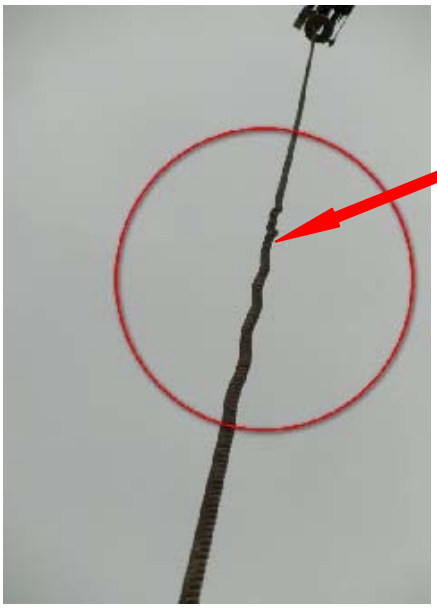
Improper rigging methods employed may cause damage to the slings being used e.g. crane hook used to 'fish' the mid section of a sling often causes damage to the sling, which could subsequently lead to accidents e.g. collapse of loads lifted, toppling of cranes, etc.



(2) DEFECTIVE LIFTING GEARS

Lifting operations involving these defective lifting gears may lead to accidents causing serious injuries or even death e.g. collapse of loads lifted, toppling of cranes, etc. as a result of failure of the lifting gears during use.

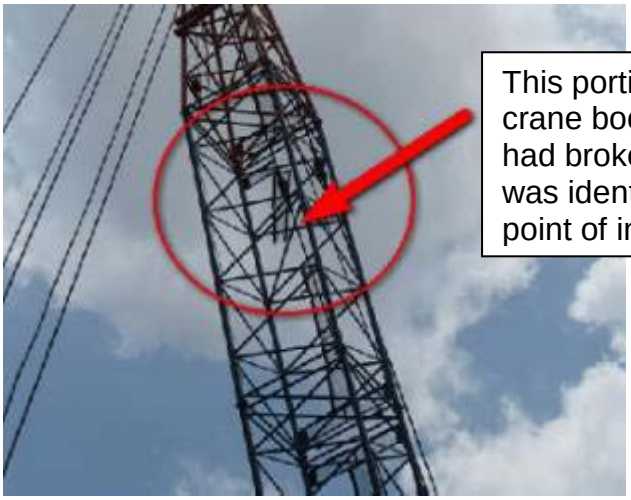
Hooks with safety latches and springs that are defective or damaged should not be used for lifting.



Twists and kinks on wire ropes indicate that wire ropes are damaged and should not be used.

Non-original pin, i.e. cotter pin, is used in place of original pins. The use of non-original parts pose a danger as it may not be able to serve its function and may dislodge during operation.

(3) FAILURE TO MAINTAIN LIFTING MACHINE



This portion of the crane boom panel had broken off and was identified at the point of inspection.

(4) MODIFIED LIFTING GEARS

The safety latch is punctured through and attached with a string to enable the latch to be opened by pulling the string. This is a modification to the original safety latch and would pose a hazard of failure of the latch during lifting operations.