SALON FILMS

S C R I P T

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PRODUCT	**Site Safety Seminar for Capital Works New Works Contracts** (2) Housing Authority Safety Auditing System		
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旁白： 現在播映的是 2013 年 4 月 17 日房屋署「新工程合約工地安全講座」的片段，台上的講者是職業安全健康局顧問徐健威先生，他的講題是「房委會安全稽核制度 1.5 版，應用於建築及工程合約」。

V.O.: Here is the footage from "Site Safety Seminar for Capital Works New Works Contracts", which was held on April 17, 2013. The speaker is Mr Ray Tsui, Consultant of the Occupational Safety and Health Council. His presentation topic is "Housing Authority Safety Auditing System Version 1.5 for building and engineering contracts".

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職業安全健康局顧問

SUPER: Mr Ray Tsui
Consultant, Occupational Safety and Health Council

徐： 今日很高興、很榮幸有機會跟大家介紹稽核計劃。在這裡我們會講解房委會安全稽核計劃的 1.5 版本。印象中應該也不是第一次跟大家說過，可能有一些朋友是新來到的，我們都再介紹一下那些重點、計劃裏的一些要求等等。

Tsui: I am pleased and honoured to introduce this auditing system to you all today. We are going to walk through the Housing Authority Safety Auditing System Version 1.5. As far as I can remember, this is not the first time I present this topic, but since we have some new comers today, let's go through the main points again, as well as the requirements of the system.

[0:25]
我們的計劃已經執行了兩季，我們有一些分數的資料可以跟大家介紹。另外，譬如承建商方面一些新的安全建議，都會跟大家談談，知道一些比較新的發展，可見到(今天的)內容比較豐富。關於升降機的部份，這部份的資料相對地較少，因為我們仍有一些稽核工作正在進行，有一些稽核報告仍未收到，比較新一點，那部份我們會介紹系統的模樣，內容比較短，所以我們會做一些調節，約五至十分鐘，前面的部份就可能長一點。總括來說，下午三時之前該部份也應該會完成。

As we've already been promulgating this system for two quarters, we do have some statistics to share with you. Besides, some safety innovations brought forward by contractors will also be featured today, therefore you will also hear about some recent development. You can see that the programme is quite rich today. Regarding lifts and escalators audits, the materials are relatively less as there are audits still ongoing. Some audit reports haven't reached us yet. This is relatively new. We will just focus on the logistics of the lift and escalator safety auditing system. Hence, this part will be shorter. After this adjustment, it's about five to ten minutes, while the previous section will probably be longer. Generally speaking, we will finish before 3pm.

[1:15]
好，我們首先是看一看這個 1.5 版本。內容方面…… 這個計劃是在 2012 年十二月，即是說第四季開始，到現在已經執行了兩季，一會兒可以給大家看看那些結果；內容亦包括介紹 1.5 版本一些加強了的範圍、部份或者題目，很快會跟大家介紹。

Great. Let's take a look at this Version 1.5. The content… We launched this programme in December 2012, that is the fourth quarter of the year. Up till now, it has been running for two quarters. We will share the results later. We will discuss the enhanced scope of audit under this Version 1.5, as well as individual sections and questions. We will touch on those soon.

[1:48]
那麼 Part A、Part B 方面有甚麼改動呢，你會看到 Part B 方面問題的寫法，那裡的改動會比較大。接著會介紹 Part B、1.5 版的安全工作系統，我們用了這個概念去從新鋪排過這些題目，這裡亦會跟大家講解概念的重點、如何去執行這些題目。而在分數表方面，即總數的分數、題目方面的分佈，會讓大家看看，還有關鍵項目，相對於 1.4 的版本是有一些改動，一會兒大家就會看到。我們

會作一些總結，就是 1.5 版本裡面最主要的改動、新的要求等等，我們會讓大家知道。一如既往，我們在以往的版本亦有的，就是我們會鼓勵承建商在安全方面有一些創新發明，而近幾季我們亦看到一些創新的措施，大家可以參考可否在你們的工地裡面執行呢？在執行 1.5 版之前，有無一些措施跟大家去配合呢？這些我們也會提及。又例如，各位承建商代表，如果在對稽核當中對我們的結果或報告有意見的話，都可透過一些渠道或方法來反映的，這個我們亦會跟大家介紹。主要的內容就會是這幾個部份。

So, what are the changes in Part A and Part B? You can see that the questions in Part B are written quite differently from the last version. Take a look at Part B, in this Version 1.5, we have re-organised the questions based on the concept of Safe System of Work. We will go through the main points of this concept, and explain how to execute these items. Also the marking scheme, meaning the total points and the allocation of the questions, I will show you those. The Critical Pass section, it is also relatively different from the Version 1.4. We will talk about it later. We will summarise the major changes and the new requirements of the current Version 1.5, and so on. You will know about this. As in previous versions, we encourage our contractors to innovate in safety aspects. In the past few quarters, we have also come across some innovative measures. Could they be some references applicable to your construction sites? Before Version 1.5 is launched, were there any innovative measures to complement your operations? That will also be covered. All contractors'representatives please note that, if there is any opinion concerning the auditing results or the reports, there are also ways or methods to reflect it. We will also talk about this. Those are the key components of presentation today.

[03:25]

好，交代完一些背景。為何會有這個 1.5 的版本，又或者內裡的改動主要源自甚麼分析等等，大家可以看看這裡。就是說 1.5 版之前的版本，亦即是 1.4 版本，是在 2009 年 1 月 1 日開始的。在我們做這個分析的時候，即用 1.4 版去進行稽核的個案數目大概是 285 個，分佈在不同類型的項目裡面。當中，我們抽取了一些不同的項目來作一些分析。

Well. That's the background. So why is there a Version 1.5? What is the rationale of the changes made there? We can look at here. The version preceding 1.5, i.e. Version 1.4, was launched on the 1st of January, 2009. The analysis here is based on the Version 1.4 framework. Roughly 285 auditing cases are sorted into different categories. We took some examples to perform some analysis.

[04:04]

就分析的結果，大家可以看到，在關鍵項目的表現方面，大家見到不同的項目

也好，可察覺到一個現象，就是在我們的安全巡查方面，某個項目的表現，很多承建商都做得非常好，亦即是說，我們還需要把這個項目放在關鍵項目的部份嗎?，這屬於當時的考慮。繼續去讀這些資料，就會發現另外一件事， 電力供應系統這個因素在 Part B 裡面其中一個次章節。大家可以見到這個表現相對上就沒那麼理想了，分數集中在較低分的位置，這是我們觀察到的情況。這裡主要都是表達分數，剛才我們談及的電力供應系統方面，在工地的分數表現是比較低一點的。

As the analysis reveals, no matter which kind of audited projects, you may notice this phenomenon: The performance in Safety Inspection - most contractors performed extremely well here. In other words, is it still necessary to put this item under the Critical Pass section? This also reflects it was a consideration at that time. As we continue to read these data, we will discover something else. Look at Electricity Supply, which is one of the subsections in Part B. The performance here is not that brilliant. The scores concentrate in the lower range. That's what we have observed. We can read information from the results here. Regarding Electricity Supply, most construction sites didn't perform well.

[05:15]
在其他的項目方面，地基工程裡面，類似的情況亦能夠見到的，安全巡查方面的分數高一些，表現會比較好一點，而電力方面則需要再改善。而且在電力工作方面，相信大家都知道，近年意外數字非常高，後果亦都很嚴重，所以我們在電力方面是可以再加強一些的。
[05:45]
而在拆樓工地亦都是一樣，我們做了一些分析，亦看到類似的情況出現。

Let's try with other items. Similar case can be found in the foundation projects. Contractors score higher in Safety Inspection, meaning better performance, while there's room for improvement in Electricity Supply. Talking about electricity works, I think most of you already know that, the accident figures is extremely high in recent years, the consequences are often serious too. So we think this part about electricity can be further improved.

It is also the same in demolition projects. We have conducted some analysis and similar phenomenon can be observed.

//PAUSE//

[05:55]
其他的工程都是一樣的情況。總結來說，我們當時考慮了是不是不需要再把巡查這個項目放到關鍵項目裡面，因為大部份的工地已經做得非常好。至於新的關鍵項目方面，又用不用將「電」這個範疇加進去呢？這就是為何會出現了新的部份的原因。

The case is equally true in other types of projects. In a nutshell, we were thinking whether we should take the item of Safety Inspection off the Critical Pass section, since most construction sites already did very well in this regard. While as far as new items are concerned, should we put “Electricity” under the Critical Pass section? So this explains the rationale of the changes we made.

[06:34]
好，我們講講那個 1.5 版本究竟有甚麼主要的改動呢？就包括了我們稽核的準則。這個是非常重要的，無論是稽核員、或者承建商，在準備我們的稽核系統的時候，都需要一些清楚的指引，題目的要求在哪裡、怎樣為之符合要求、怎樣為之需要改善、目標是怎麼樣，這個準則都是非常重要的。若然大家把我們 1.5 版那本書拿在手上的話，會發現厚了很多。隨後我們會看到，其實我們題目的總數是少了，但為甚麼會厚了那麼多?其實就是每條題目差不多都加進了準則，而這些準則，其實都是以往的一些情況，譬如有些承建商對審核的結果有些意見，亦都回到我們這裡，令準則寫得更清楚，我們在這裡加強了內容，成為一個很重要的部份。另外，剛才提過關鍵項目會有一些改動，稍後會給大家看一看那個情況。

Great. What are the major changes in this Version 1.5? That includes our auditing criteria. This is very important. No matter the auditors or the contractors, in order to benchmark against such auditing system, specific guidelines are needed. What are the requirements? How to meet them? What does it mean by “improvement needed”? What are the targets? These criteria are very important. If any of you have the hardcopy of this Version 1.5 at hand, you will find the book has become significantly thicker. Later you will realise, the total number of questions has actually been reduced, but why do we end up with a much thicker volume? This is because we have added specific criteria into almost every question. These criteria are actually based on past events. For example, some contractors had opinions about our auditing results, and gave us the feedback, which in turn prompted us to clarify the criteria. These elaborated parts become the very important components of the current version, in addition to the changes made in the Critical Pass section which we have just mentioned. I will show you how it looks later.

[07:49]
另外我們亦把這個工作安全行為、氣候指數調查、以及一些創新部份的計劃放進了題目的相應部份，主要是放回那個位置。另外，健康方面，就加了熱壓力和寒冷天氣部份，以往是沒有的。對工地來說，當然熱壓力的情況都很嚴重，有些意外亦有可能因此而發生的，如在很熱的情況下搭棚工作容易令工友暈倒，會否增加了高空墮下的危險呢？我們也非常重視這個情況。另外就是 Part B 部份，亦都有一個大一點的改動，稍後我們會詳細說明。

We have also put Work Safe Behaviour, Safety Climax Index Survey and Innovation into relevant parts. That's mostly about re-organising. Besides, concerning health, we have added Heat Stress and Cold Weather. They were non-existent. As far as a construction site is concerned, heat stress can be very serious and it can cause accidents. For example, scaffolding workers may go dizzy under heat stress, will that increase the danger of falling from height? We take this very seriously. There is another significant change in Part B which we will explain in details later.

[08:34]
首先我們把一些新的元素加了進去。以往沒有特別注明的部份，我們就相應加進去。譬如說，機械護罩，以前我們是有的，例如木工機械又或者磨輪等等，去到次章節那部份，通常會有一兩條題目包括了這樣的東西。但是有時亦有些問題出現，如我們有些設備、又或者是工具，並沒有放在相應的次章節裏面，如何處理呢？如果稽核員看到的時候，應該在那一部分「扣分」呢？所以我們就開設了這個部份。如果在其他部份沒有觸及到的設備或工具，我們就可以集中地在這裡處理。

Firstly, there are new elements. Some parts we didn't specify in the past, now we do. For example, machine shield, which was covered in the previous versions. Or woodworking machinery and abrasive wheels, we had one or two questions in the sub-sections that touch on them. But problems still arise. If there is equipment or tools that have not been put under the relevant subsections, what should we do? If an auditor discovers cases of non-compliance, in what sections should the auditor deduct the scores? So we've created this new section. If there are equipment or tools that aren't covered by other sections, they can be collectively processed here.

[09:25]
另外一個比較大的改動，相對於 1.4 版本來說，在 1.5 版本裏的吊重部份，以

往是一個次章節包括全部的吊重設備，現在我們把它拆開了，不同的設備相應有相關的法例或者工作守則要求又或者相應的安全措施，所以亦都適合將它們分成不同的部份去處理。

Another relatively big change in Version 1.5, comparing with the previous Version 1.4, is the part about lifting operation. In the past the lifting equipment was listed in a subsection, now we make it separate. Different equipment and its governing regulations, working guidelines or relevant safety measures, we have made them into various sections.

[09:55]
好，那麼當中的細節包括甚麼?譬如我們第一部份講安全方針的時候，其中一條題目，就有一個更高標準的要求，不過怎樣為之一個更高標準，我們加了一些準則進去，包括工地會有一些承諾，如研發一些創新的措施；執行安全施工程序，以及一些安全氣候指數調查，安全行為的一些工具，在這個題目裡就符合一個更高標準的要求。

Great. So what are the details? Like Safety Policy in section one, one of the questions requires “higher standard”. What does it mean by a “higher standard”? We’ve elaborated the criteria. For example, a construction site may make some pledges, such as developing innovative (safety) measures, implementing Safe Working Cycle, conducting Safety Climax Index Survey, as well as equipment for Work Safe Behaviour. So that’s how a site can meet a “higher standard”.

[10:35]
另外，我們亦都加強了宣傳方面，把題目擺放到適當的位置，亦增多了一些題目到某一些部份。譬如說，工作安全行為方面，包括有沒有關於工作安全行為的推廣，有沒有一些工作安全行為裡..... 大家知道基本的概念訂定了一些高風險、以及一些與安全行為非常有關的情況，譬如我做錯那些動作、行為，就會導致很嚴重的意外，怎樣去找尋出來呢？有沒有就這些行為做一些觀察、訂定檢查清單，怎樣去作出干涉等等。我們有沒有相應的計劃，我們把這些題目分配到宣傳那個部份裡。另外，安全氣候指數亦是一個有分數的題目，與及創新措施的部份。

We have also reinforced the importance of publicity. We have put the questions into appropriate sections and expanded some items. For example, regarding Work Safe Behaviour, is there any publicity on Work Safe Behaviour? Is there any Work Safe Behaviour that… I think everyone understands the basic concept is about

defining situations that involve high-risk and safe activities. For example, what kind of steps or behaviour if I do it wrongly, then it will result in serious accidents? How to locate them? Is there any observation of such behaviour? Is there a checklist or is there any mitigation, etc? Is there any plan responding to this? We have put these items under the publicity part. Besides, Safety Climate Index and Innovative Measures have now become scorable parts.

[11:42]
就創新措施的部份，題目模式是要鼓勵大家，所以如果大家的工地暫時未有執行，那個題目會列作不適用，而不會列作沒有做，令到大家扣分。而相反地，如果大家是有做的，那條題目就會得分，這樣對大家有個鼓勵作用。另外，除了分數反映外，一些創新措施提交上來，我們批准後，房屋署亦會有款項發給創新措施的部份，值得大家去做一些發明。一會兒，我們會有一些例子給大家看看，是一些近期的例子。

Talking about Innovative Measures. The design of this question is to give incentive. Therefore, if your construction sites haven't carried out any of it, it will just be listed as "Not Applicable" rather than "Not Achieved" which entails score deduction. On the contrary, if there are Innovative Measures being put into practice, then you can earn scores here. This serves as an incentive. Besides, rather than just being reflected in the scores, if you submit your innovative measures to us, after approval, the Housing Department will make payment for those innovations. So it's worthwhile to make some innovations. Later I will share some recent examples with you all.

[12:30]
健康方面，我們先前提及了一點，包括如何做一些熱壓力的評核，安全的相應措施等等。當然有熱亦有冷，在冷的天氣下有否照顧我們的工友，有沒有關顧他們呢？這個我們亦都已加進去了。

Regarding health, we've mentioned a bit earlier, such as how to carry out heat stress assessment and respective safety measures, etc. Not to forget about the cold weather condition as well. Have the workers' situation under cold weather condition been taken into account? We have also included that.

//PAUSE//

[12:54]

好了，Part A 那部份，其實大家看到的改動不是那麼大的，正是我們剛才說 Part A 主要的部份。Part B 的部份，大家會看到，即是工序監控的部份，就是我們去到工地實際的情況，各種不同的設備、環境、工具，或者物料的表現，這裡我們亦有些改動的，可以給大家介紹。

Great. For Part A, you can see the changes here are not that big. Here are the key components of Part A which we've mentioned. For Part B, you can see the Process Control part, that means the actual situation of the sites, the different equipment, environment, tools or material performance, there are some changes here which we can introduce.

//PAUSE//

[13:26]
包括我們用了一個安全工作系統的概念，我們把以往的一些做法，好像是 1.4 版本的情況，我們會把現場環境的情況，如何把一些工具或者設備，又或是一些安全設施，是如何去制訂和執行。在 1.5 版本，我們用了一個概念，參考勞工處的安全工作系統的概念去執行。在這裡大家會看到題目是如何鋪排，不同的次章節都好，我們都會用一套概念來設計問題，包括第一個部份我們如何拿到相關安全的資料，一會兒我們會有相關的例子方便大家容易理解。另外我們獲得相關的資料後，我們會做一個風險評估，相關的、特別的、針對性的風險評估，就是說去到我們的工地，包括要考慮我們的環境、工友工作的情況、或者附近有沒有其他工序等等，希望能代替以往比較一般性的風險評估，有機會未必能針對性地看到工地實際的不同情況。

We have incorporated the concept of Safe System of Work. In the past, like the Version 1.4, we looked at the working environment, and looked at how to use some tools or equipment, or how to form or implement some safety measures. In Version 1.5, we've incorporated a concept, with reference to the Labour Department's Safe System of Work. You can see the distribution of the questions, as well as the subsections. We all use the same set of concept to design the questions, including how we acquire information about site safety, it will be easier to understand as we share some relevant examples later. After we have received relevant information, we will do a risk assessment. That is a relevant, special and specific risk assessment. During site visit, we should consider the working environment as well as the working procedures or some other procedures, etc. We hope this can replace the more general risk assessment in the past, which did not allow us to specifically identify what's happening on site.

[14:50]
當然我們做完風險評估後，需要制訂一些安全措施，包括一些安全施工程序、訓練，以及有關設備的保養等等的安全工作系統。接著，來到最後，每一個章節都是一樣的，我們會有一個部分關於如何監察安全的情況，這個亦都會是一個要求，在題目裡面需要反映到這些監察的工作。
After we have finished the risk assessment, safety measures will have to be formulated, including Safe Working Cycle, training and plant maintenance, all are relevant to Safe System of Work. Now, lastly, in each chapter, there will be a section about how to monitor site safety. This will also be a requirement to fulfil. Monitoring work needs to be reflected in this question.

[15:28]
所以，這裡整合了給大家看看在新的概念下我們這些題目會用一個怎樣的模式去設計問題。對大家的影響，又或者是對大家最大的影響會是甚麼，其實主要是在風險評估那部份，因為剛才提到在 1.4 版本內的相關部份，可能未必能夠如此針對性的觸及每一個工種、或者每一個特定的環境。在 1.5 版本，我們的要求就會高一點，希望我們的風險評估可以照顧不同工地、情況、或者不同的環境。另外，亦都多了一個監察的要求。
Hence, we have summarised how the questions are set under this new concept. How does it affect you all, or should I say what will be the biggest impact on you all, that will be the risk assessment section, as I have just mentioned that the relevant section in Version 1.4 did not pinpoint every single type of work or a specific working environment. In Version 1.5, the requirement is higher as we hope our risk assessment can cover different construction sites, conditions or different environment. In addition, we have another monitoring requirement.

[16:22]
在分數方面，大家可以參考一下，在 1.5 版本 Part B 的部份，我們會把文件方面的題目保持在 3 分，而在一些執行、實施一些安全措施的題目，我們的題目會是 6 分，而分數比較重的，就會放進關鍵項目的部份，針對性會有 9 分的要求，相對上如果每一條題目做不到要求，扣分的影響就會大一點，因為它屬於關鍵項目的部份。
Regarding the score calculation, you can make reference to this. In Part B of Version 1.5, the questions for documentation will each carry three marks. For those about

executing or implementing safety measures, they are six marks each. Questions with higher weighting belong to the Critical Pass section. Those questions will be nine marks each. That means if these requirements were not met, the penalty will be more severe, since they belong to the Critical Pass section.

[16:55]
這裡有一個例子想給大家看看，是有關密閉空間。在 1.5 版本的系統裡面，它的題目會是怎樣?首先我們需要知道相關的安全資料。譬如我們在一個密閉空間，位置會在哪裡?譬如說出入口是怎樣的呢？而那個工作環境會是怎樣?在那裡我們會做甚麼工作?例如會不會有燒焊，或者其他情況?這些相關的資料，我們會要求各位提供，這些都是在 1.5 版本方面的要求。而有了這些資料之後，我們才可以做一個詳盡而又針對性的風險評估，針對我們這個工地裡面，把這個密閉空間裡面獨有的風險找出來，從而做一些安全措施、針對一些風險去做一些控制。
Here is an example about working in confined space. What will be the questions like in this Version 1.5? First we have to know about the related safety information. For example, where will we be in a confined space? How is the ingress/egress? How will the working environment be? What types of work we will do in it? Does it include welding or any other type of work? We will request everyone to provide such relevant information in Version 1.5. Only after acquiring such information, we can carry out a comprehensive yet specific risk assessment. That means we can pinpoint this construction site, find out the specific risk of this confined space and come up with specific safety measures to control them.

[18:02]
有了風險評估之後，我們就會制訂一些安全措施，包括有沒有一些合資格的人士去做一些風險評估、包括量度氣體等等?這都是和以前分別不大。要核准工友進入密閉空間工作，需要有訓練，要訂立程序，亦都要有適當的監察。
After assessing the risk, it has to be followed by safety measures, such as the presence of competent personnel to carry out assessment or to gauge gas level. This isn't very different from before. Workers permitted to enter and work in confined space also require training. The procedures need to be established and monitored.

[18:30]
有關工作許可證，有沒有執行呢？這都是屬於安全措施的部份，而在緊急的情

況之下應該如何去處理，有沒有跟相關的同事溝通，讓他們知道，這都需要留意，最後亦都是一個 1.5 版本的新題目:有沒有適當地做一些監察，有沒有制定一些清單去定期做一些巡查。這是一個例子，其實在 1.5 版本的 Part B 部份，每一個次章節都會用這樣的概念、模式去設計問題。

Has such kind of permit-to-work system been running? This is a part of the safety measure. If under emergency, is there any procedure in place and is there any communication with related workers? We hope to draw their attention to this. Lastly, the new questions that appear in Version 1.5: is there any appropriate monitoring? Is there a check-list for regular inspection? That's an example. You will realise that, in Part B of Version 1.5, we will ask questions in such format in each subsection.

[19:19]

這裡我們有小小的圖表讓大家看到分數的分布、題目的分布，關鍵項目的部份。大家應該還有印象，從前 1.4 版本在 Part A 的部份，巡查以及風險評估是屬於關鍵項目的，但到 1.5 版本的時候，巡查方面大家都做得非常好，無必要再放在關鍵項目的部份內。所以只剩下風險評估。而 Part B，高空工作、工地整理、物體下墮、吊運這些亦都保留，這些都是 1.4 版本一直有的部份。只不過在起重機方面，我們特意加了，因為我們把它分開了，所以在吊重的部份，我們亦都把吊機放進了關鍵項目的部份裡面。電的部份亦如是，剛才有提及過一個新的關鍵項目的部份，因為過往審核的表現和意外的情況。

You can see the score distribution and the question distribution in this little chart. For the Critical Pass section, I think everyone can still remember, Safety Inspection and Risk Assessment used to fall under the Critical Pass section in Version 1.4. But now, in this Version 1.5, since everyone already did very well in Safety Inspection, there is no more need to place it under the Critical Pass section. Only Risk Assessment is left here. In Part B, it still includes Working at Height, Housekeeping, Falling Objects and Lifting Operations. These are inherited from Version 1.4. But we have expanded a section for Cranes. We've made it a standalone section. Correspondingly, in the section of lifting operation, we have listed Cranes as a Critical Pass item as well. The same applies to Electrical Supply System, which we have mentioned – a new Critical Pass item, responding to the previous auditing performance and the severity of accidents.

[20:35]

這裡大家可以看到一個總結，就是 1.5 版本裡面的題目總數是少了，由 470 減

至 448，都有不同的部份，這個資料大家亦都可以取得，詳細的大家可以參考那些資料。這個是關鍵項目的部份，剛才我們亦有提及過，就是新的 1.5 版本的情況是怎麼樣。這裡我們有少少總結，就是說在新的 1.5 版本方面主要的輸入包括些甚麼，那個安全工作行為、資料，剛才都提及過，在此不重複。我們在評分方面加強了的部份大家亦可以參考，觀察員方面我們一直都不建議全由安全主任做，譬如會否有一些工友可以大家互相監察和提點，亦都是推動安全文化的工作，可以配合安全施工程序去執行，這個我們要提一提的。另外 1.5 版本裡面亦有一些新加的要求，減少人為失誤方面，有一個「指差呼稱」的措施，可能大家都聽過，「指差呼稱」簡單講講，「指差」就是用手指去確認，「呼稱」就是用口說出來，舉個例，譬如說吊重，吊鈎的承受力及格，我們要打兩個圈的威也，就可以確認一次，然後才去做吊運，好處就是避免人為失誤，譬如我們要做這些「埋碼」的工作，是否需要工友自己個人的行為要配合，譬如做漏了就可能發生意外。我們可以怎樣去減少這個失誤?這個「指差呼稱」是參考日本的一些措施，香港有很多機構都在執行中，譬如地鐵、中電，我們開始把它推行到工地那裡，大家可以去嘗試。我們也有一些小小心得，舉個例，不是每一樣東西都要去指，每樣東西都要對一次，反而我們是要去找一些高風險的工序，容易有人為失誤出現的地方，譬如說吊重。當中我們是選擇幾點而已，譬如有幾個重點在吊運之前是要特別去檢查的，確保減少人為失誤的情況。Now we can see the big picture. Overall the number of questions has been reduced in Version 1.5, falling from 470 to 448, covering different sections. This material is obtainable. Please refer to this for details. Here is the Critical Pass section, which we've just mentioned, the new situation in Version 1.5. That's the summary. The new items in Version 1.5 such as work safe behaviour, we've already talked about it, not going to repeat. We have elaborated the criteria so that everyone can make reference to. We don't suggest the safety officer to be the observer For example, can workers do the monitoring work among themselves? This is also related to safety culture promotion and it can also complement the safe working cycle. That was a suggestion. The new requirements in Version 1.5, on reducing human errors, we have introduced the "Pointing and Calling" system, which many of you may have heard about. Here is an introduction. "Pointing" refers to using finger to confirm; "Calling" refers to verbal confirmation. For example, in lifting operation, we have to check the safe working load of the hook and tying two knots with a wire. If we always confirm the status before we operate, then human errors can be avoided. In lifting work , workers may have to take extra caution about their work behaviour, simply because missing a step can cause accident. So how can we avoid such mistakes? The "Pointing and Calling" system originates from Japan and this has been adopted by many organisations in Hong Kong, including MTR and CLP Group. We are applying it to our construction sites, we hope everyone can try. But

we have something to point out, for example, not everything requires “Pointing and Calling” but those involve high risk, where human errors often occur, such as lifting operations. We only need to select several key steps to double confirm, so as to reduce the chance of human errors.

[23:38]
這一個措施，在 1.5 版本，我們亦都有一條題目是有關這個部份的。在現在的措施來說，如果大家有執行到這個「指猜呼稱」，譬如說應用在某一些工序的，你們可以把這些情況寫下，當稽核員要進行稽核的時候，通知他們，然後報告送到職安局，我們會去審核的。如果那個情況是滿意的話，那麼我們會推薦為一個創新措施，然後交給房屋署來批准，所以大家亦可以考慮一下，去執行「指猜呼稱」，做一個創新的建議。
In Version 1.5, we have a question about this system. In the current system, if your construction sites have applied “Pointing and Calling” to certain procedures, please write them down and inform the auditors during auditing. The report will then be sent to OSHC, and we will process it. If the condition is satisfactory, we will then recommend it to the Housing Authority as an Innovation for their approval. Think about that. Introduce “Pointing and Calling” to your sites and make innovation.

[24:30]
另外一樣可以提的，就是在 1.5 版本方面，風險評估是一個很重要的部份。當中包括以往的，我們於 Part A 已經有風險評估的部份、一個要素，亦都屬關鍵項目。而 Part B 方面我們每一個次章節都有一個風險評估的要求，所以相對上風險評估的比重就大了很多。大家看到在比例上，有 8% 是風險評估的要求，所以是高了的。吊重方面，吊重的工序亦都是非常高風險，我們亦都把它分拆出來，而總分數方面分別就很大，從前我們只分配了 3%，雖然是關鍵項目，現在它的分數在 Part B 的部份是佔 12%，所以大家看到這個比重是大了很多。
Another thing that can be brought up here is that, Risk Assessment has become a very important section in Version 1.5. This includes the item in Part A which already exists in previous versions and is a Critical Pass item. In Part B, we now have Risk Assessment under each sub-section. Hence, the weighting of Risk Assessment is significantly bigger than before. Put it into percentage, Risk Assessment accounts for 8% of the requirement – clearly it has got higher. Referring to Lifting Operation, lifting operation is a kind of high-risk procedure, we have made it a standalone chapter. It accounted for only 3% in the past, despite being a Critical Pass item, now its weighting in Part B is 12%. You can see the proportion is significantly higher.

[25:35]
而在 1.4 版本方面，可能大家有留意到，就是在檢查清單的方面是有一些要求，但相對地我們又沒有特別的題目去審視。到 1.5 版本方面，我們就增加了如剛才所說的監察，大家可以用一個檢查清單的形式去處理和去執行。而在 1.5 版本裡面，亦都定了如哪一些高危的情況需要監察，需要有一些檢查清單，我們會有相關題目。而在我們的系統裡，都有將它列出來，方便大家參考。
Back in Version 1.4, you may realise we required the production of safety checklists, but we didn't have a specific item to monitor that. In Version 1.5, we have introduced an item to cover that. Now everyone can use a safety checklist for different processes. Also in this Version 1.5, we have listed out which kind of high-risk situations require monitoring and specific safety checklists. There are questions for that. You can find the list in our system for reference.

[26:20]
好，到最後的部份，我們就揀選了一些工地新的安全措施，大家可以參考。如果你們工地適用的話，亦都可以考慮實行。譬如這是一個全方位的電線掛架，這是一個地基的工地，以往發電機的一些電線問題，工友要怎麼樣搬來搬去？用很多體力，或者電線隨地去拉，都很難去處理。這個掛架的好處是可以轉動的，方便掛一些電線，以及把一些電線搬運到另一個地方，減少人力搬運。
Great. This is the final part. We have selected some safety innovations from

construction sites of which you can make reference. If you find an item is applicable to your construction site, please consider using that. This 360-degree Free Rotating Hanger System is an example. This is a construction site of foundation work. There were problems about transferring electric cables that connect with the generator. That requires physical strength, it is also difficult to drag the cables along the ground. The merit of this hanger is because of its rotating nature. It's pretty convenient to hang cables, or transport them to another location, reducing manual handling.

[27:05]
而這亦都是一個安全的新發明。這是一個在磨樁位置，當我們在放下一些所謂鐵籠的時候，我們用一些俗稱刀仔、刀架的東西去架起鐵籠的時候，亦都曾發生過意外，這個刀架打翻了，使到工友嚴重受傷。我們能否在側面加一個部份作支撐，去減少翻倒的機會呢？這個是承建商設計出來的，並命名為「鯨魚刀」，因為多了兩邊的翼，看起來像鯨魚。當這個創新建議交過來時，我們會問一些題目，並不是我們否決了這個創新，而是當然我們發明了一些新的東西，它會否產生了一些新的危害出來呢？如果說，我們用了一些新的方法，原來還變得危險些，我們一定要重新考慮。所以舉個例，這些新的結構，我們會不會有工程師去設計、計算過它的承托力足不足夠？或者用了一些新的設備後會否變重？員工搬運的時候會不會受影響？需不需要做體力處理的評估呢？這些我們亦都會在考慮的時候，提議給承建商去考慮。有些情況，他們可能會有改善，然後再提交過來，那就及格，亦都能夠拿到創新措施的款項。所以在這裡提示大家我們會如此處理。
Here is another safety innovation. When we lower a steel reinforcement cage of a bored pile, we often use some knife-like objects as a support. Accidents did happen. The knife-object was tipped over and the worker was seriously injured. Can we add some supporting components on the sides to avoid the chance of falling over? A contractor has come up with this innovation, which is named as "Whale Knife". Because it looks a whale spreading fins. When this innovation is submitted to us, we will ask some questions. This does not mean we have denied this innovation. This is to confirm whether this new product poses some kinds of new dangers. If we come up with a new method which actually creates more danger, then we have to re-consider its usage. To elaborate, are these new structures designed by engineers? Has its strength been calculated? Has the weight increased with the addition of new equipment? Will it affect the workers who transport the object? Should there be an assessment of manual handling capacity? We will consider all of these and we will pass these over to the contractor for their consideration. In some

occasions, they will revise and re-submit the proposal. Then they obtain a pass and the Innovation payment. That's a reminder of how we process such proposals.

[29:02]
另外，在鐵籠方面，除了剛才說的例子，有數樣東西和這件事亦有關，譬如紮鐵籠，有承建商採用一個預製的工序。怎樣變做預製的工序呢？給大家看一些照片。在廠房那裡去做，你可看到環境、支撐、管理等等，都可以做得好一些，在紮鐵籠的時候可以減少在工地出現意外的情況，好處是希望用自動的設備、生產線的工具去輔助我們去做，讓鐵籠有良好的支撐，亦都減少體力的搬運、倒塌的危險，整個工作場所的工地整理亦都加強了。
Besides, dealing with steel reinforcement cage, apart from the example we've just mentioned, there are few more things related to this, like one contractor has adopted Prefabricated Large Diameter Bored Pile Reinforcement Cages
. How does this pre-fabrication happen? I'll show you some pictures. They did it in a factory. You can see the environment, support and management here and so on, these all can be done better in the factory. To reduce the rate of accident during the making of steel reinforcement cage on-site, one of the ways is to use automatic equipment and tools from the production line to assist us. Then the cage will have better support and in turn reduce the physical strength required in transportation as well as the risk of collapse. This also enhances housekeeping of the construction site as a whole.

[29:58]
另外，其他的，譬如有一些消減噪音的工序，給一些高噪音的工作、範圍、設備、位置加上一些隔音的設施，這是其中一個例子，有其他承建商有其他的工序加了這些隔音的措施。
There are also noise enclosure measures for places and machines that involve noisy operation. This is one of the examples. Other contractors have different ideas of noise enclosure.

[30:15]
另外，亦有承建商使用建築資訊模型的技術，譬如這個是用建築資訊模型的技術畫了一些圖出來，有一些動畫，亦都方便在做一些訓練的時候容易讓工友認識到，讓大家清楚高風險的程序在哪裡，我們做的時候要留意甚麼地方，亦都增強了訓練的工作。
In addition, some contactors have made use of Building Information Modelling (BIM). This is an example of BIM in which graphs and animations are produced to let workers being trained understand where the high risk procedures will be carried

out and what they should be cautious of. This also enhances the quality of training.

[30:46]
另外，有些設備方面，有些機械設備加裝了閉路電視，相信亦不是一些新的東西，大家亦可以作為參考。亦有一些承建商，在紮鐵場上加裝了一些額外的防止物件下墮的保護，並有遮擋太陽的功用，特別在夏天的時候。利用一個動滑輪可以令它收放，譬如做吊運的時候可以收起，完成吊運的時候可以拉出來，方便到那個工作。其他譬如一些安全的梯具、一些梯台、一些流動的消防泵，亦都是一些措施。

In addition, talking about equipment, close-circuit television camera has been installed in some equipment. I believe this is not something new. Just for your reference. In some steel bending yard, there is a protection net to prevent falling objects and can also reduce heat stress, especially in summer. It can be expanded and collapsed through a pulley system. For example, it can be folded during lifting operations and restored after it is finished, facilitating the process. These portable platform ladders and mini-fire engines are also some examples.

[31:34]
譬如有一些機械設備裡加裝了過濾系統，亦都有一些熱壓力方面，例如在反光衣上加一些冷凍的物料。這個亦是特別一點，很多承建商有用，譬如有很多街車進入工地，有時我們不知道怎樣給一些倒車視像裝置給它，這個好處就是一個無線的設備，屏幕可以放在司機位，而鏡頭可以掛在車尾，用一個無線的形式去連接。即是說，司機可以看到車尾的情況，就算街車亦好，進來的時候我們可以很快地安裝，離開的時候拿走就可以了。很方便使用。也有很多工地使用。
Some machines have been installed with exhaust gas purifier. For reducing heat stress, some cooling materials have been inserted into a reflective vest. This is also a special one. Some of us feel helpless as to how to instruct vehicles from outside to manoeuvre their vehicles backwards in construction sites. This wireless portable equipment can be placed in front of the driver's seat, whilst the camera can be attached to the rear of the vehicle, forming a wireless connection. Hence drivers can view the back. This can be easily attached to any vehicles that come in, detached when they leave. Very convenient. It is used by many construction sites.

[32:26]

而這是一個額外的防止高空墮物的保護措施，就是全棟大廈的一個防護網，是加強了的一些措施。另外這個在物料升降機裡加置了閉路電視，除了是監察操作外，亦可以作為巡查的功能，譬如說升降機升降的時候我們可以看到閘門的情況，使用的情況等等，這亦可以做到巡查的功能。另外，在進行磨石的工序時會產生很多塵，在這個工序的情況，就是有一個灑水的系統，減少塵土的情況。當然我們亦要考慮安全的情況，譬如灑水會不會有觸電的危險，所以它由電變成了「氣動」的工作，免除了觸電的危險，這些都是我們使用新措施需要留意的地方。

This is another measure that counters falling objects. A protective screen that covers the whole building. It is an additional safety measure. A close-circuit television camera has been installed in this material hoist. It is not only for surveillance but it also facilitates inspections. For example, now we can view the condition of gates while the hoist is operating. This facilitates inspections. Besides, there is a lot of dust during grinding. This sprayer can help reduce dust in the air. Of course we should think about safety issue as well. Will spraying water increase the danger of electric shock? Luckily the gadget is equipped with an air pressured sprayer instead. This eliminates electrical hazard. These are the areas to which we should pay attention when using a new piece of equipment.

[33:25]

其他的，譬如我們改變一些傳統的方法，譬如用石屎磚，減少了高空工作的情況，這裡亦是轉用了其他物料令到噪音降低，這些是額外木工機械的保護，減少塵和噪音的情況。

We can also renovate some traditional methods. Concrete blocks are replaced by steel blocks which can reduce the height of the set-up. Change of materials can also help reduce noise. This is an extra protection during woodcutting process. It reduces dust and noise.

[33:55]

這裡…我們要說快一點了。我們的資料就是給了大家那麼多，我們說一些重點的地方，在分數方面，1.4 版本，直至 2012 年第四季，我們推行 1.5 版本，大家看到其實對分數的影響不是很大，我們看到 Part A 和 Part B 在 80 分以上其實是大部份項目都做到。只有四個是七字頭的分數，尤其是在關鍵項目的部份大家可以看看，只有一個工程項目不及格。第四季來說，我們工程項目的數目是多了，如果按比例來說，合格的比例還是高了，所以我們覺得對承建商的影響不是那麼大，亦不會是一個很明顯在分數上的影響。

Okay, we have to speed up. Those were the information I want to share with you. Now we go through the main points. Take a look at the scores. Version 1.5 was

introduced in the 4th quarter of 2012. It hasn't affected the performance greatly. Many scored over 80 in both Part A and Part B. That means they have achieved the targets. Only four projects scored between 70 to 79. In particular, I want to show you the Critical Pass section, only one project failed. In the 4th quarter, we had many more projects, proportionately the passing rate still went higher. Therefore, we think the version switch has not caused much influence to contractors and so as the marks they scored.

[34:54]
最後提提，如果各位承建商進行稽核的工作，和稽核報告，當然我們亦會定期和稽核員有簡介會，提醒他們如和承建商做稽核時要多點溝通，令承建商知道稽核員的要求是甚麼，亦都要求給予一些改善措施的建議，讓大家容易點去做，亦有一些情況是我們收到一些報告，我們不太同意報告內容的時候，又要怎樣做呢？其實是有機制的，就在大家收到報告一個星期內，請大家以書面形式寫到職安局，包括一些理由，如為何不同意稽核員的報告，我們會作審視，同意的話、有需要的話就會改動分數，亦都曾做過，也是一直有做的功夫。簡單點，這一部份說明完畢。
On a final note, if any contractor is going to be audited and submit report, of course we will have regular sessions to brief the auditors, reminding them to better communicate with the contractors, letting them know what auditors are looking for. Yet, the auditors have to give suggestions for improvement as well. In some occasions, if you receive a report and you don't agree with the content, what should you do? There is a procedure in place. You should write to OSHC within the week you receive the report, listing out the reasons, such as why you don't agree to the auditors' judgement. Then, we will review the report. If we accept the appeal, the scores will be reviewed when necessary. This has happened before, and this will be continued. That's the gist. I'm done this part.