

## Talk on Controlled Blasting at Construction Sites in Selangor and Wilayah Persekutuan

OIL, GAS & MINING TECHNICAL DIVISION



by Ir. Hj. Look Keman Sahari

**TWO** committee members of the Oil & Gas and Mining Technical Division, Ir. Hj. Look Keman and Ir. Tony Chew, gave a talk on controlled blasting at construction sites on 8 June 2013. The former is a Consultant Blasting Engineer and the latter is Deputy Director of Jabatan Mineral and Geosains (Mines & Quarry) or JMG.

The talk began with Ir. Hj. Look explaining that in practice, all blasting – whether at mines, quarries or construction sites – are actually controlled blasting where there is a need to ensure that there is no flyrock, minimal vibration, airblast and dust. However when blasting at construction sites, especially those near residential areas, there shall not be any tolerance for flyrock and the vibration limit must be in compliance to that required by the authorities. The safety of humans and the protection of public property from damage are of paramount importance.

The talk covered cases personally experienced by him such as blasting work at Sogo, Kuala Lumpur, accident cases in Cheras, Johor Baru and Rawang when he was an Inspector of Mines in the 1990s. During that time, blasters (shottirers) were not required to be properly trained or to attend any courses on blasting. There were also no practising engineers or consultant blasting engineers in the construction sector then.

Ir. Hj. Look later elaborated on techniques of controlled blasting that he personally applied as Consultant Blasting engineer after he retired from Government service. These included proper coverings such as using blasting mats, wire mesh, tyres, steel plates etc, to ensure that there were no flyrocks.

In blasting work there is an absolute need to properly prepare blast design records and to record the blast monitoring results. This is important in case of complaints or even lawsuits from the public arising from potential damage to homes. As there is no formal training for blasting at construction sites, project managers must ensure that chosen blasters are experienced and to choose an experienced blasting consultant.

Ir. Hj. Look Keman concluded by talking about the use of Non-explosive Demolition Agent (NEDA) for demolition and breaking rocks when blasting was not permitted.

Ir. Tony Chew began his talk by introducing the Jabatan Mineral & Geosains, Selangor/WP, and his department's role in overseeing mining and quarry operations as well as blasting work at construction sites. There have been many complaints about blasting work carried out at construction

sites such as noise, ground vibration and alleged cracking to buildings.

Sometimes, blasting work was carried out without a proper permit from PBT (Pihak Berkuasa Tempatan) and JMG. It is the duty of the project proponent or developer, he said, to put up a practical blasting proposal, which includes proposed blast design and blast monitoring work, to check for compliance to JMG for technical evaluation, before applying for an explosive permit from the Police and a blasting permit from PBT.

He said all construction blasting proposals must be prepared by a qualified blasting consultant registered as P.Eng (M) in Mining or a mineral resources engineer whose consultant company is registered with BEM, instead of a project manager or civil engineering consultant as many had done so before.

Where the location is too close to residential areas, the project proponents are also advised to consider alternative means of rock breaking such as NED. Ir. Chew added that when crushing and screening of rock are carried out at construction sites, a letter of authority to quarry must also be obtained from JMG as such activities are considered quarrying work, as defined under the State Quarry Rules.

The talk ended after a lively question and answer session with the 71 engineers who attended the talk. ■