

Geologists say North Korea's nuclear test site likely collapsed

By Christopher Bodeen

The Associated Press

BEIJING — Research by Chinese geologists suggests that the mountain above North Korea's main nuclear test site has likely collapsed, rendering it unsafe for further testing and requiring that it be monitored for any leaking radiation.

The findings by the scientists at the University of Science and Technology of China may shed new light on North Korean President Kim Jong Un's announcement that his country was ceasing its testing program ahead of the summit meetings with South Korean President Moon Jae-in and U.S. President Donald Trump.

The results also support some of the findings of an earlier study by another group of Chinese researchers that was published in March by the journal *Geophysical Research Letters*.

Nuclear explosions release enormous amounts of heat and energy, and the North's largest test in September was believed early on to have rendered the site in north-eastern North Korea unstable.

Chinese authorities say they've detected no radiation risk from samples collected along the border. Calls to those departments were not immediately answered.

The data in the latest Chinese study was collected following the most powerful of North Korea's six nuclear device tests on September 3, which is believed to have triggered four earthquakes over the following weeks. The yield of the bomb was estimated at more than 100 kilotons of TNT, at least 10 times stronger than anything the North had tested previously. (The bomb the United States dropped on Hiroshima in 1945 had a yield of about 15 kilotons.)

The University of Science and Technology of China paper, authored by Tian Dongdong, Yao Jiawen, and Wen Lianxing, said the first of those earthquakes, which occurred 8½ minutes after the explosion, was "an onsite collapse toward the nuclear test center," while those that followed were an "earthquake swarm" in similar locations.

"In view of the research finding

Peppa Pig wins street cred, attracts censors in China

By Yanan Wang

The Associated Press

BEIJING — A cherubic British cartoon character has become an unlikely target of China's censors as fans use her porcine likeness in rap videos and "gangster" tattoos.

The bright pink swine's subversive alter-ego has made her a viral hit but also an apparent target of government workers who police the internet.

Videos with the hashtag #PeppaPig could not be searched on Douyin, a popular video app. The catchphrase, "Get a tattoo of Peppa Pig, give a round of applause to gangsters," was also not searchable on the Weibo microblogging platform, which posted a message saying it was acting "in accordance with relevant legal regulations."

Regulators have been ratcheting up control over Chinese blogs and apps in recent months. A controversial cybersecurity law was introduced last June as part of President Xi Jinping's efforts to tighten control over what China's public can see and say online while still trying to reap the economic benefits of internet use.

It was not clear whether the censorship of Peppa on Douyin was prompted by a government mandate.

Bytedance saw its social-networking app Neihan Duanzi shut down by the State Administration of Radio and Television. The app was a hub for GIFs, memes, and



NUCLEAR REACTION. Earthquake and Volcano of the Korea Monitoring Division director Ryoo Yong-gyu speaks to the media about North Korea's artificial earthquake with a map of the Korean peninsula in Seoul, South Korea in this September 3, 2017 file photo. A study by Chinese geologists shows the mountain above North Korea's main nuclear test site has collapsed under the stress of the explosions, rendering it unsafe for further testing and necessitating monitoring for any leaking radiation. (AP Photo/Lee Jin-man, File)

that the North Korea nuclear test site at Mantapsan has collapsed, it is necessary to continue to monitor any leakage of radioactive materials that may have been caused by the collapse," the authors said in a summary dated April 23 and viewed April 25 on the university's website.

The study is peer-reviewed and has been accepted for publication by *Geophysical Research Letters*.

The Chinese study makes sense and is based on well understood research, said Rowena Lohman, a seismologist at Cornell University who wasn't part of the work. She said she believes there's an international effort that monitors these tests for radiation.

A study published in March by the journal, authored by a team led by Liu Junqing at the earthquake bureau in Jilin province along the border with North Korea, found similar results of the September 3 explosion. It described the aftershock that followed seconds later as most likely a "rapid destruction of an explosion-generated cracked rock chimney due to cavity collapse."

North Korea's nuclear tests are of special concern to Beijing, since the test site near the town of Kilju is less than 60 miles from the border with China.

North Korean nuclear tests have caused seismic events in Chinese border towns and cities, forcing evacuations of schools and offices, sparking fears of wind-borne radiation

and leading to a backlash among some Chinese against their country's unpredictable traditional ally.

Ties between the sides have been deteriorating for years, although Kim made a long-anticipated visit to Beijing last month after China's implementation of United Nations economic sanctions reduced trade between them by as much as 90 percent.

The quakes that followed the September test were not manmade and didn't appear to cause any damage in the area. The region isn't one where earthquakes naturally occur and no quakes were detected after the five smaller nuclear tests North Korea has conducted since 2006.

Kune Yull Suh, a professor of nuclear engineering at Seoul National University, warned last year that further tests could threaten to cause a volcanic eruption at Mount Paektu, which is about 60 miles away.

North Korea recently announced it will close its nuclear testing facility and suspend nuclear and intercontinental ballistic missile tests — a move welcomed by Trump as "big progress" — and which came ahead of the summit between him and Kim.

However, the North stopped short of suggesting it will give up its nuclear weapons or scale back its production of missiles and their related components.



PHOTO OPPORTUNITY. North Korean leader Kim Jong Un, left, and South Korean President Moon Jae-in, right, shake hands at the border village of Panmunjom in the Demilitarized Zone on Friday, April 27, 2018. A day after the leaders of the two Koreas met for a summit along their shared border, the emotional, memorable, even funny scenes from their time together were both a bitter reminder of the countries' seven decades of division and an insight into the mysterious character of North Korean leader Kim Jong Un. (Korea Summit Press Pool via AP)

Summit offers South Koreans rare insight into Kim Jong Un

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men kept pace, running fast as they enveloped the leader. When Kim rolled back to the North after a farewell ceremony that night, the bodyguards reappeared and ran alongside his car again.

A North Korean security worker was also seen spraying disinfectant on the chair and table to be used by Kim at the Peace House while another used a headphone and a black, square-shaped piece of equipment to check for explosives, according to South Korean media reports.

Kim's sister

Kim's younger sister, Kim Yo Jong, took a prominent role in the summit. She handed her brother a pen when he signed the guestbook, and took his gloves after he shovelled dirt on a ceremonial tree and a bouquet of flowers that he'd been handed at the border. During the meeting with Moon, she sat next to her brother, scribbling notes.

Her proximity to her brother during most of the summit events added credence to speculation that she's virtually the No.2 in the North. Kim sent his sister to South Korea in February to attend the opening ceremony of the PyeongChang Winter Olympics, making her the first member of the North's ruling family to visit the South since the end of the Korean War.

Kim acknowledged his sister's popularity in South Korea when he joked to Moon during their talks that she has become a "star in the South," causing her face to turn red, according to Moon's spokesman, Yoon Young-chan.

Private chats

Another striking moment came when Kim and

Moon chatted while strolling slowly to a footbridge in Panmunjom, where a rusty signboard marking the military demarcation line stands. There they sat, engaging in about 30 minutes of private conversation. It wasn't clear what the leaders talked about. The chirping of birds was all that could be heard on the live television footage.

When they returned to the Peace House, they chatted again, but their conversation was largely inaudible.

Joint announcement

The two leaders' close body language was also on display. They held each other's hands and raised them into the air and hugged each other after signing their names on what they called the Panmunjom Declaration, a joint statement following their summit. They also stood at a podium together outside the Peace House and jointly announced the deal in front of officials and pool reporters.

The declaration has lots of accords on improving inter-Korean ties and exchange programs, but lacks any major progress in a U.S.-led international effort to end the North Korean nuclear standoff.

Intoxicated Kim

During a dinner banquet, Kim appeared a little drunk, his face red, his eyes unfocused. He didn't wear his horn-rimmed glasses as what appeared to be champagne was placed on the table before him. Kim's wife, Ri Sol Ju, and Moon's wife, Kim Jung-sook, also joined the banquet.

Kim is a big fan of French wine and once drank 10 bottles of Bordeaux in one night, according to media reports citing the Kim family's former sushi chef.

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