Chemical spill pollutes water supply in north-eastern China

By John Chan
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An explosion at a chemical plant that has contaminated the water supply of the north-eastern Chinese city of Harbin, and may affect cities and towns in the Russian Far East, has already endangered millions of people.

The blast took place on November 13 at a major plant of the Jilin Petrochemical Corporation, which is operated by the state-owned China National Petroleum Corporation (CNPC). The complex, located on the Songhua River near Jilin City in Jilin province, is the country’s largest producer of benzene. A tower storing the chemical burst into flames. Five workers were killed and toxic fumes spread across nearby residential areas, forcing the evacuation of over 10,000 people. Far worse was to come.

As much as 100 tonnes of benzene poured into Songhua River and began moving downstream. Benzene is a poisonous carcinogen widely used in the manufacture of plastics, detergents and other chemicals. Depending on the quantity ingested, benzene can cause illnesses ranging from mouth ulcers to blood disorders, liver damage and leukemia. An 80-kilometre toxic slick began moving towards Harbin, a major industrial city of nearly nine million people in Heilongjiang province, which relies on the river for its water supply.

Initially, the Chinese government attempted to cover up the scale of the disaster. The Heilongjiang and Harbin authorities shut down the city’s water supply on November 22 for four days, but informed residents that the closure was for maintenance purposes. Local officials secretly released water from a nearby reservoir into the Songhua in an attempt to dilute the contaminated water.

Rumours soon spread in Harbin, however, that the government actions were being carried out because an earthquake or some other catastrophe was imminent. Fear triggered panic-buying of food and bottled water. Many people began sleeping outside in freezing temperatures due to concerns over a quake. Tens of thousands of others jammed Harbin’s railway station and booked out all flights to leave the city in an attempt to escape.

The chaotic scene resembled the Chinese New Year holiday period when many rural migrant workers return to their home villages and towns. Pang Shijun, a 50-year-old man told the Financial Times at the train station that he and his wife were going to a nearby city, Jixi. “I am fleeing,” he said. “I just do not trust the government to provide true information.”

In the face of the panic, Harbin officials and CNPC were compelled to admit that the explosion in Jilin would affect the city’s water supply, but falsely stated that the chemicals released into the river were “harmless” and water quality was “normal”.

On November 23, the State Environmental Protection Agency (SEPA) finally confirmed that the Songhua River contained benzene levels at least 100 times above the safe limit. While the slick finally reached the main inlet to Harbin’s water supply on November 24, the delay in issuing any warning meant that hundreds of thousands of people living in villages and towns along the Songhua River between Jilin and Harbin may have drunk or used contaminated water.

In Harbin, SEPA estimated that the benzene levels would be safe by November 28, but, as contaminated water would still be in pipes, warned that it could be several more days before residents could safely drink the local supply. The authorities also belatedly warned residents of benzene poisoning symptoms. Schools in Harbin were closed and hospitals were placed on standby.

To provide clean water to residents, the government drilled 100 new wells and reopened 400 closed ones, as well as trucking bottled water into the city. The bottled water, however, was not provided free. A scrap collector, Zhu Yuanliang, angrily told the British Guardian on November 25: “It is all right for the rich and the communist cadres. But most people are poor and cannot afford to waste money on bottled water.” In working class districts of the city, street cleaning trucks converted into water carriers became the primary source of water. People were forced to queue for hours in freezing temperatures to fill up flasks and kettles.

The Chinese government has acknowledged that its agencies began monitoring the benzene levels of the water within hours of the Jilin explosion. According to the state-run journal China Newsweek, the Heilongjiang provincial governor Zhang Zuoji told a meeting of officials that they decided to lie to the public about the toxicity because they were waiting for permission from the central leadership to disclose the spill.

Even after the cover-up had been widely reported, a new order was issued on November 25 for Chinese journalists from other provinces to leave Harbin and report only the press releases of the central authorities.

One reason for the reluctance to release information on the contamination is that exposure of the government’s inaction could fuel already widespread discontent in the north-east toward the regime.

The region is the central base for China’s state-run heavy industries. Large numbers of bankrupt or uncompetitive companies have been closed down or have carried out mass lay-offs over the past decade. CNPC, for example, shed 150,000 jobs during the 1990s—many in the north-east—as it restructured to become profitable. Mass unemployment has produced disaffection. Tens of thousands of laid-off workers in the CNPC-operated Daqing oilfields have staged some of the most militant protests in China in recent years.

In order to generate jobs and stem unrest, the Chinese government is
carrying out a policy called “revitalising the north-east”. It is offering incentives for foreign investors to buy up bankrupt state-owned enterprises. Anheuser-Busch, the American brewing firm, for example, took over Harbin Brewery last year. The company is one of the major industrial users of water in the region and will have been affected by the chemical spill.

The government’s delay in issuing warnings no doubt also stemmed from fears that news of the contaminated water supply might scare off other investors. Such concerns were a factor in Beijing’s deceit over the extent of the 2003 SARS (Serious Acute Respiratory Syndrome) outbreak.

The Chinese government was ultimately compelled to admit to the water crisis because it had to warn Russia. The Songhua forms part of the Chinese-Russian border and flows into the Amur River, one of the main sources of water for Siberia. Russia’s far eastern Khabarovsk region has announced plans to declare an emergency if contamination is detected. The slick is expected to reach the area around December 8. The Russian authorities are testing the water every six hours and have sent 60 trucks of bottled water to the area.

Scientists have warned that the presence of ice flows could slow the flushing of benzene from the river until the end of winter. Both Beijing and Moscow, however, are downplaying the threat. The Russian ambassador to China, Sergei Razov, told a press conference after meeting with Chinese officials that by the time the slick crossed the border, “the concentration of harmful substances should go down to normal”.

The Chinese government has launched a concerted campaign to appease public anger over the disaster. Premier Wen Jiabao visited Harbin over the weekend. He also made a formal apology to Russia for the chemical spill and promised to punish the officials responsible. The vice-governor of Jilin province, where the explosion occurred, also travelled to Harbin to apologise to the residents and donate 71 tonnes of mineral water.

The provincial governor of Heilongjiang, Zhang Zuoji, declared he would “drink the first sip of water when it is turned on”. The CNPC management issued a statement acknowledging it was “guilty”, but blamed the mishandling of chemicals by workers for the explosion.

A chemical industry expert cited by the Financial Times said the likely cause was a blockage in a nitration column that was mixing benzene and nitric acid at high temperatures. The failure of a safety valve to release heat was most likely a “management error,” experts claimed, rather than faulty equipment.

The origins of such an “error” are not individual failings, but the demands of the market. The Chinese government as a whole is responsible for the conditions that have produced the Harbin crisis. They have implemented pro-market polices to attract foreign investment, deregulated industrial production and enforced the ruthless exploitation of the working class. The consequence is chaotic industrial development, with scant regard for safety standards and environmental degradation.

Like the frenzied drive for coal production that kills thousands of Chinese miners every year, the explosion in Jilin was most likely caused by management’s demand for output ahead of any other consideration, including safety. On November 27, just as Harbin declared the chemical spill had passed the city, a massive blast at a coal mine in Qitaihe, in the same province, killed at least 164 workers. Ten are still missing.

On November 24, an explosion at a private-owned chemical plant in Dianjiang County in the south western Chongqing municipality killed one worker and injured three. Six thousand people were forced to evacuate and chemicals have contaminated nearby water sources.

Chinese and transnational petrochemical companies, like BP, Mitsubishi Chemical and Exxon Mobil, are expanding output in China, especially the production of plastics for which there is a huge demand in manufacturing. One indication is that Chinese industry needs 16.5 million tonnes of ethylene, a basic ingredient in plastics, but domestic production only reached 6.2 million tonnes last year. As a result, the prices of ethylene and other chemicals are rising.

German giant BASF has just built a $2.9 billion plant in Jiangsu province in partnership with the second largest state petrochemical firm, Sinopec. It can produce 600,000 tonnes of ethylene, a basic ingredient in plastic, and 1.1 million tonnes of other chemical products every year. BASF estimates that by 2010, 10 percent of its profits and sales will be generated in China.

Companies in China are pouring pollutants into the air, soil and water on a daily basis. The World Bank has reported that 6 of the 10 most polluted cities in the world are in China, and estimated that pollution costs the country $54 billion a year in related environmental degradation, loss of life or disease. This sum is almost equal to annual amount of foreign direct investment that flows into the country.

Acid rain is falling on one third of Chinese territory. More than 70 percent of the country’s lakes and rivers are polluted and less than 20 percent of solid waste is treated. A report on rural China by the Organisation for Economic Cooperation and Development (OECD) on November 14 noted: “Many lakes and water courses contain an excess of nutrients and need treatment before they are suitable as fresh water sources.”

Under China’s pro-business regulations on water pollution, companies only have to pay between 20 to 30 percent of the direct economic losses they cause, with the maximum compensation payment fixed at just 200,000 yuan (about $25,000). Even in a severe case, such as the one in Harbin, the offender may only have to pay one million yuan ($125,000), a minuscule proportion of the damage done to the lives and health of millions of people.

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