



**Secret Intelligence Service
Relevant Reports**

IN BRIEF

No. XVII

Addendum

Nuclear Power Plants

Back in 2016, terrorists in Brussels planned nuclear plant attacks, changed targets only following the arrest of an accomplice



General view of the Tihange nuclear plant of Electrabel, the Belgian unit of French company Engie, former GDF Suez, in Tihange, Belgium.

The Tihange Nuclear Power Station is one of two nuclear *power plants* in Belgium. The plant is located on the bank of the Meuse river, near the village of Tihange in the Walloon province of Liège. The station is operated and owned by Belgian energy company *Electrabel*.



Doel Nuclear Power Plant

The Doel Nuclear Power Station. Belgium. Located on the bank of Scheldt river, near the village of Doel in the Flemish province of East Flanders. The station is operated and owned by Belgian energy company Electrabel

Brussels suicide bombers Khalid and Ibrahim El Bakraoui were planning attacks on Belgian nuclear power stations.

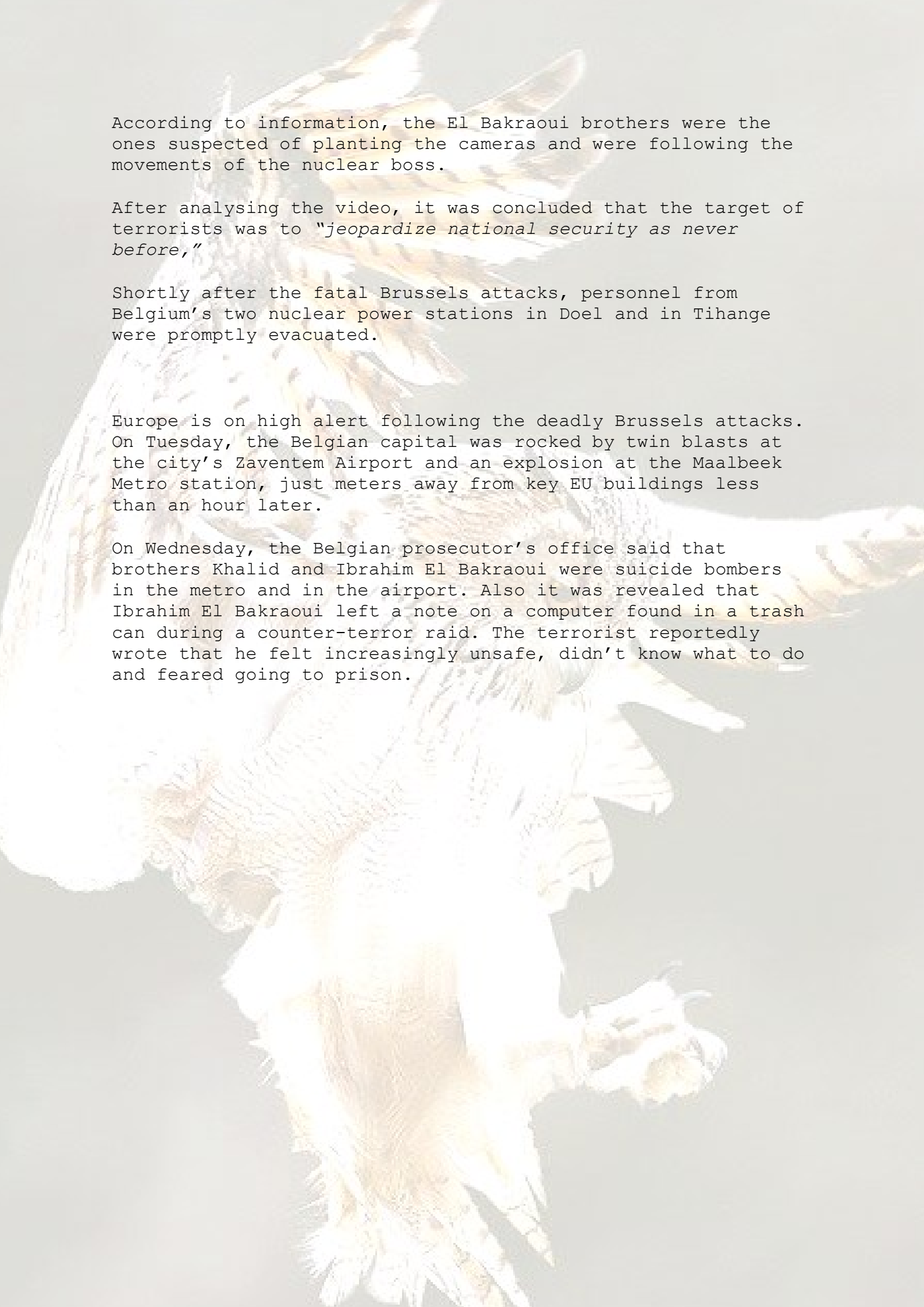
The arrest of Paris attacker Salah Abdeslam accelerated the plans of the terrorists.

The brothers planted a hidden camera in front of the home of the director of the Belgian nuclear research program.

Evidence obtained shows that the same terrorist cell was behind the Paris attacks in November 2016 that killed more than 130 people and the Brussels bombings, which claimed the lives of 32 people and injured over 300. **

**During the morning of March 22, 2016, three coordinated suicide bombings occurred in Belgium; two at Brussels Airport in Zaventem, and one at Maalbeek metro station in central Brussels. Thirty-two civilians and three perpetrators were killed, and more than 300 people were injured.

The footage with *dozens of hours* of the movements of Belgium's nuclear boss was seized during an counter-terrorist raid in the apartment of another suspect belonging to the same terror cell, Mohammed Bakkali.



According to information, the El Bakraoui brothers were the ones suspected of planting the cameras and were following the movements of the nuclear boss.

After analysing the video, it was concluded that the target of terrorists was to *"jeopardize national security as never before,"*

Shortly after the fatal Brussels attacks, personnel from Belgium's two nuclear power stations in Doel and in Tihange were promptly evacuated.

Europe is on high alert following the deadly Brussels attacks. On Tuesday, the Belgian capital was rocked by twin blasts at the city's Zaventem Airport and an explosion at the Maalbeek Metro station, just meters away from key EU buildings less than an hour later.

On Wednesday, the Belgian prosecutor's office said that brothers Khalid and Ibrahim El Bakraoui were suicide bombers in the metro and in the airport. Also it was revealed that Ibrahim El Bakraoui left a note on a computer found in a trash can during a counter-terror raid. The terrorist reportedly wrote that he felt increasingly unsafe, didn't know what to do and feared going to prison.

German nuclear plants are vulnerable to terrorist attacks - 2016 study



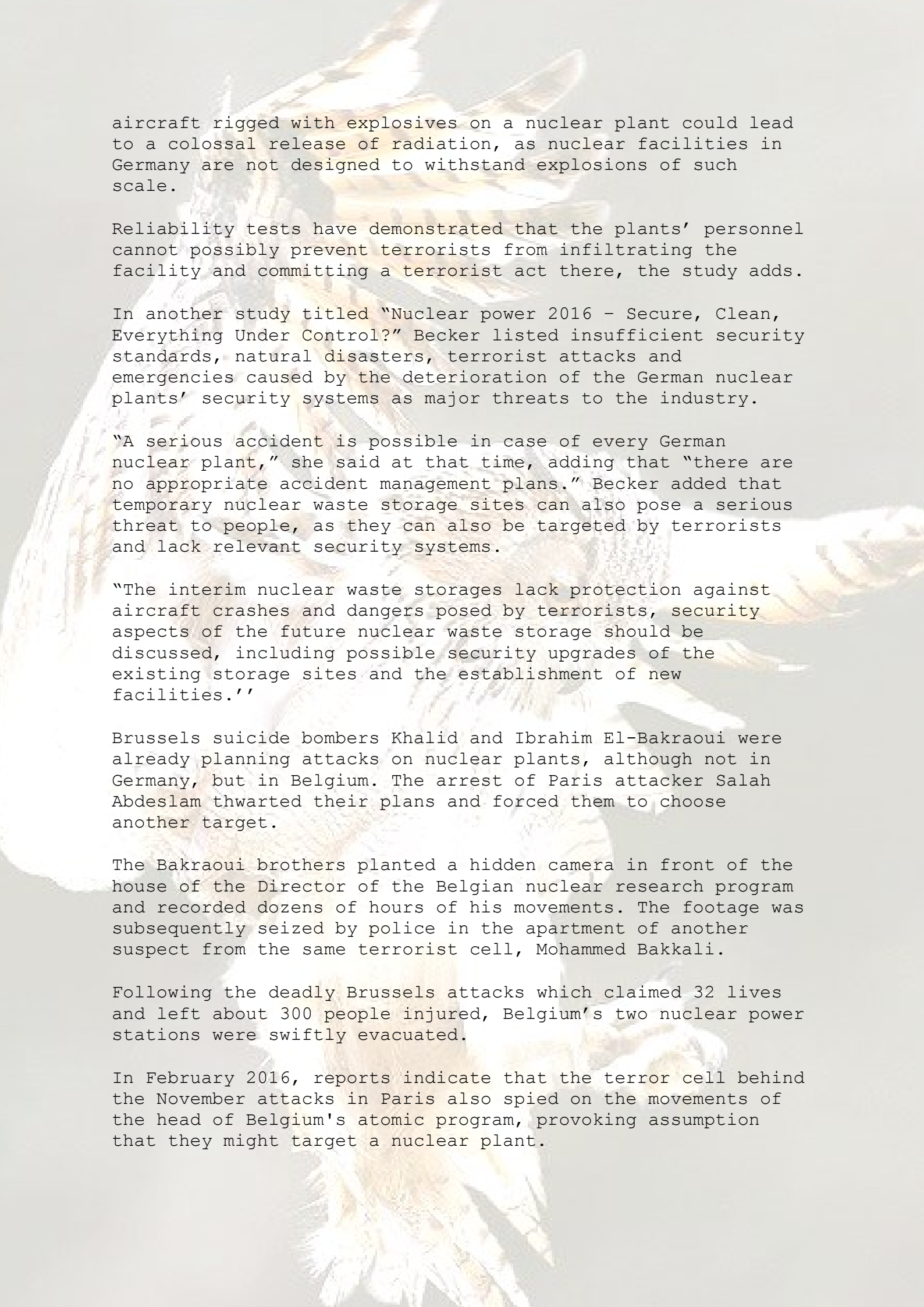
General view of the nuclear power plant in Biblis, near Frankfurt, Germany

Germany's nuclear power plants are insufficiently protected against potential terror attacks, including 9/11-style ones.

A nuclear plant's smokescreen designed to prevent any attacks from air provides only minimal protection for the facility - findings presented by Oda Becker, a physicist and independent expert on nuclear plants, at the German Federation for the Environment and Nature Conservation (BUND).

Such smokescreen "only slightly diminishes a chance of collision with a plane," hijacked by terrorists. Additionally, only two out of eight currently operating nuclear plants in Germany are equipped with such systems, the report points out.

According to Becker's research, another significant threat to German nuclear plants is posed by a possible terror attack using helicopters crammed with explosives. A fall of an



aircraft rigged with explosives on a nuclear plant could lead to a colossal release of radiation, as nuclear facilities in Germany are not designed to withstand explosions of such scale.

Reliability tests have demonstrated that the plants' personnel cannot possibly prevent terrorists from infiltrating the facility and committing a terrorist act there, the study adds.

In another study titled "Nuclear power 2016 - Secure, Clean, Everything Under Control?" Becker listed insufficient security standards, natural disasters, terrorist attacks and emergencies caused by the deterioration of the German nuclear plants' security systems as major threats to the industry.

"A serious accident is possible in case of every German nuclear plant," she said at that time, adding that "there are no appropriate accident management plans." Becker added that temporary nuclear waste storage sites can also pose a serious threat to people, as they can also be targeted by terrorists and lack relevant security systems.

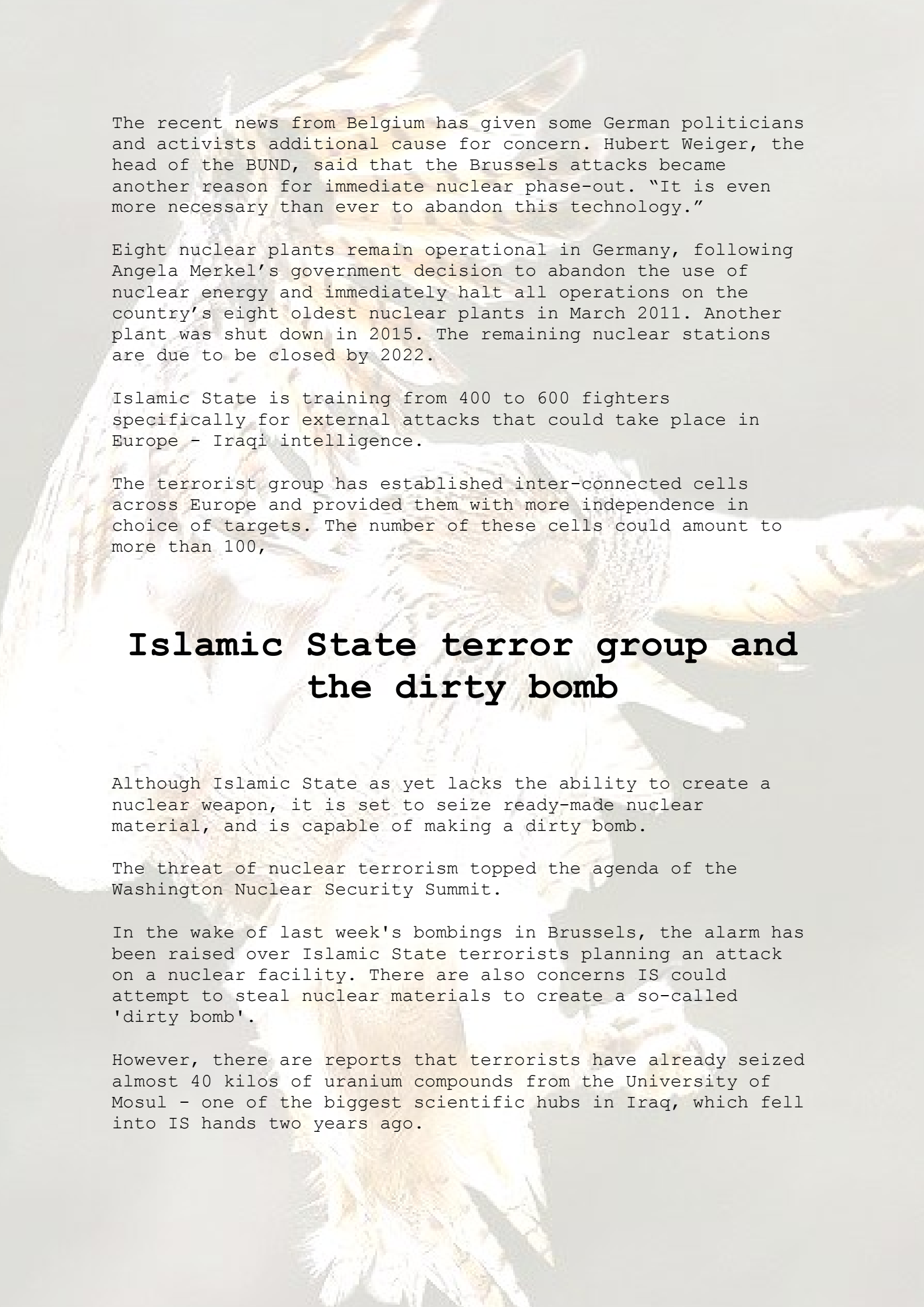
"The interim nuclear waste storages lack protection against aircraft crashes and dangers posed by terrorists, security aspects of the future nuclear waste storage should be discussed, including possible security upgrades of the existing storage sites and the establishment of new facilities."

Brussels suicide bombers Khalid and Ibrahim El-Bakraoui were already planning attacks on nuclear plants, although not in Germany, but in Belgium. The arrest of Paris attacker Salah Abdeslam thwarted their plans and forced them to choose another target.

The Bakraoui brothers planted a hidden camera in front of the house of the Director of the Belgian nuclear research program and recorded dozens of hours of his movements. The footage was subsequently seized by police in the apartment of another suspect from the same terrorist cell, Mohammed Bakkali.

Following the deadly Brussels attacks which claimed 32 lives and left about 300 people injured, Belgium's two nuclear power stations were swiftly evacuated.

In February 2016, reports indicate that the terror cell behind the November attacks in Paris also spied on the movements of the head of Belgium's atomic program, provoking assumption that they might target a nuclear plant.



The recent news from Belgium has given some German politicians and activists additional cause for concern. Hubert Weiger, the head of the BUND, said that the Brussels attacks became another reason for immediate nuclear phase-out. "It is even more necessary than ever to abandon this technology."

Eight nuclear plants remain operational in Germany, following Angela Merkel's government decision to abandon the use of nuclear energy and immediately halt all operations on the country's eight oldest nuclear plants in March 2011. Another plant was shut down in 2015. The remaining nuclear stations are due to be closed by 2022.

Islamic State is training from 400 to 600 fighters specifically for external attacks that could take place in Europe - Iraqi intelligence.

The terrorist group has established inter-connected cells across Europe and provided them with more independence in choice of targets. The number of these cells could amount to more than 100,

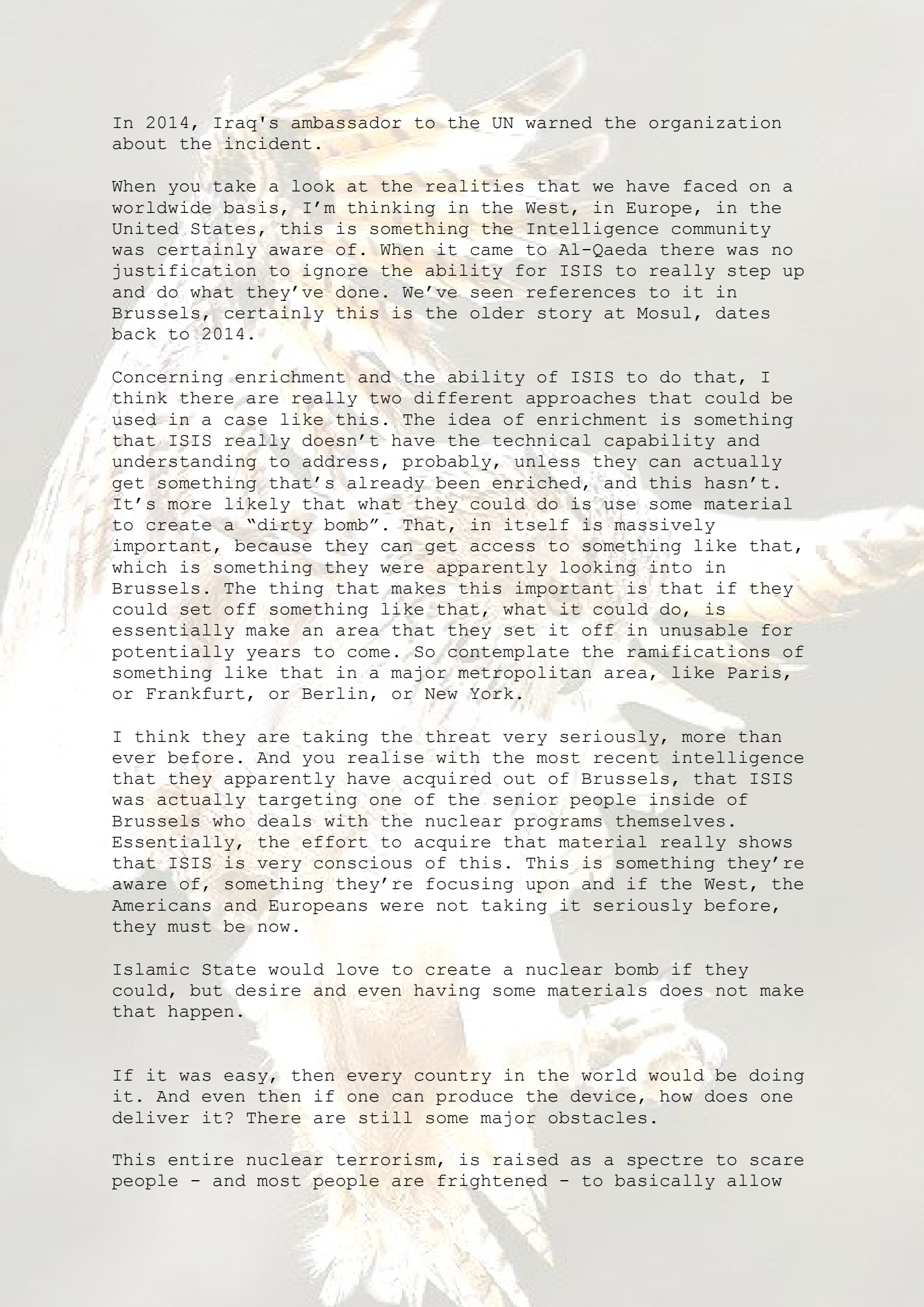
Islamic State terror group and the dirty bomb

Although Islamic State as yet lacks the ability to create a nuclear weapon, it is set to seize ready-made nuclear material, and is capable of making a dirty bomb.

The threat of nuclear terrorism topped the agenda of the Washington Nuclear Security Summit.

In the wake of last week's bombings in Brussels, the alarm has been raised over Islamic State terrorists planning an attack on a nuclear facility. There are also concerns IS could attempt to steal nuclear materials to create a so-called 'dirty bomb'.

However, there are reports that terrorists have already seized almost 40 kilos of uranium compounds from the University of Mosul - one of the biggest scientific hubs in Iraq, which fell into IS hands two years ago.



In 2014, Iraq's ambassador to the UN warned the organization about the incident.

When you take a look at the realities that we have faced on a worldwide basis, I'm thinking in the West, in Europe, in the United States, this is something the Intelligence community was certainly aware of. When it came to Al-Qaeda there was no justification to ignore the ability for ISIS to really step up and do what they've done. We've seen references to it in Brussels, certainly this is the older story at Mosul, dates back to 2014.

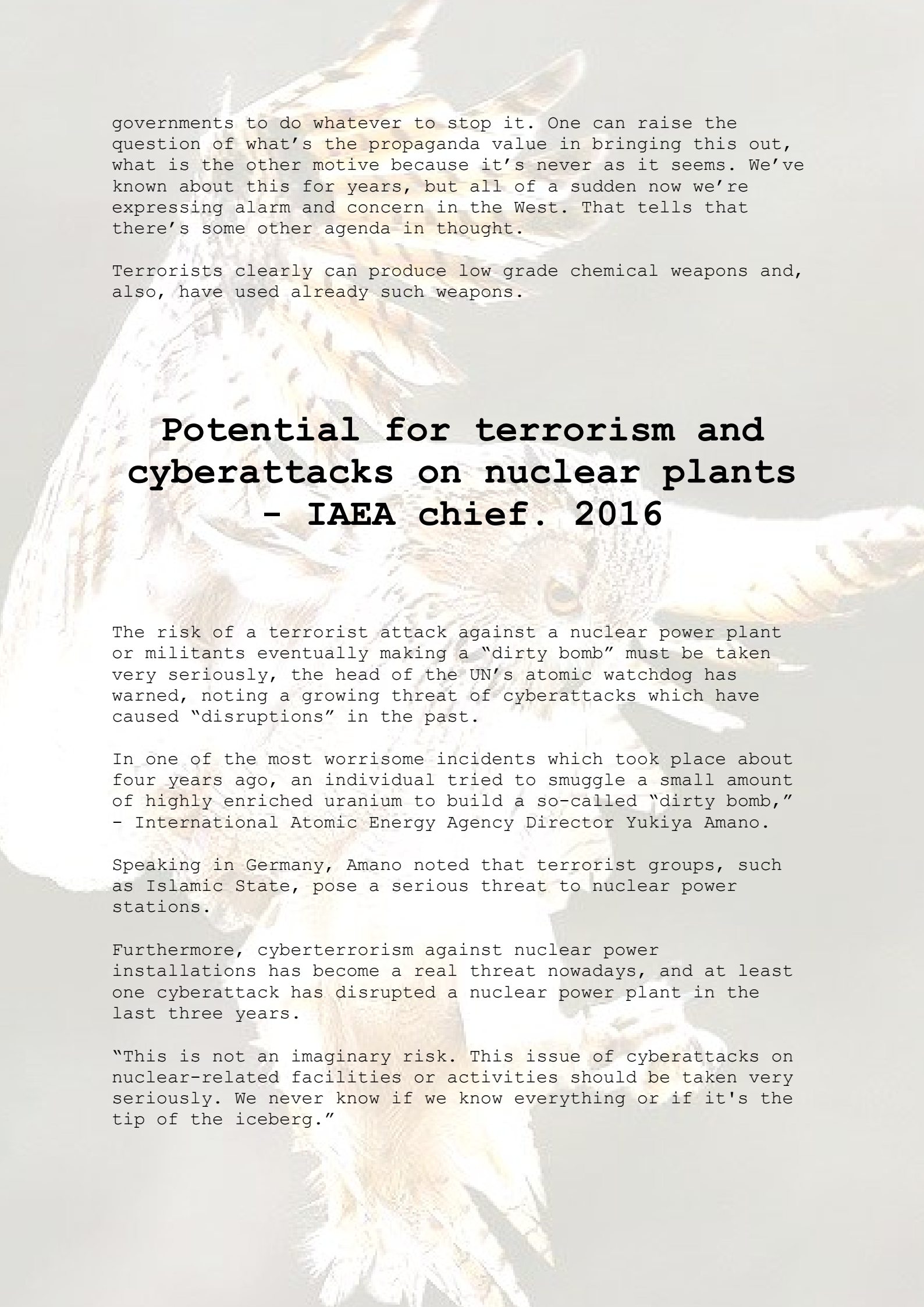
Concerning enrichment and the ability of ISIS to do that, I think there are really two different approaches that could be used in a case like this. The idea of enrichment is something that ISIS really doesn't have the technical capability and understanding to address, probably, unless they can actually get something that's already been enriched, and this hasn't. It's more likely that what they could do is use some material to create a "dirty bomb". That, in itself is massively important, because they can get access to something like that, which is something they were apparently looking into in Brussels. The thing that makes this important is that if they could set off something like that, what it could do, is essentially make an area that they set it off in unusable for potentially years to come. So contemplate the ramifications of something like that in a major metropolitan area, like Paris, or Frankfurt, or Berlin, or New York.

I think they are taking the threat very seriously, more than ever before. And you realise with the most recent intelligence that they apparently have acquired out of Brussels, that ISIS was actually targeting one of the senior people inside of Brussels who deals with the nuclear programs themselves. Essentially, the effort to acquire that material really shows that ISIS is very conscious of this. This is something they're aware of, something they're focusing upon and if the West, the Americans and Europeans were not taking it seriously before, they must be now.

Islamic State would love to create a nuclear bomb if they could, but desire and even having some materials does not make that happen.

If it was easy, then every country in the world would be doing it. And even then if one can produce the device, how does one deliver it? There are still some major obstacles.

This entire nuclear terrorism, is raised as a spectre to scare people - and most people are frightened - to basically allow



governments to do whatever to stop it. One can raise the question of what's the propaganda value in bringing this out, what is the other motive because it's never as it seems. We've known about this for years, but all of a sudden now we're expressing alarm and concern in the West. That tells that there's some other agenda in thought.

Terrorists clearly can produce low grade chemical weapons and, also, have used already such weapons.

Potential for terrorism and cyberattacks on nuclear plants - IAEA chief. 2016

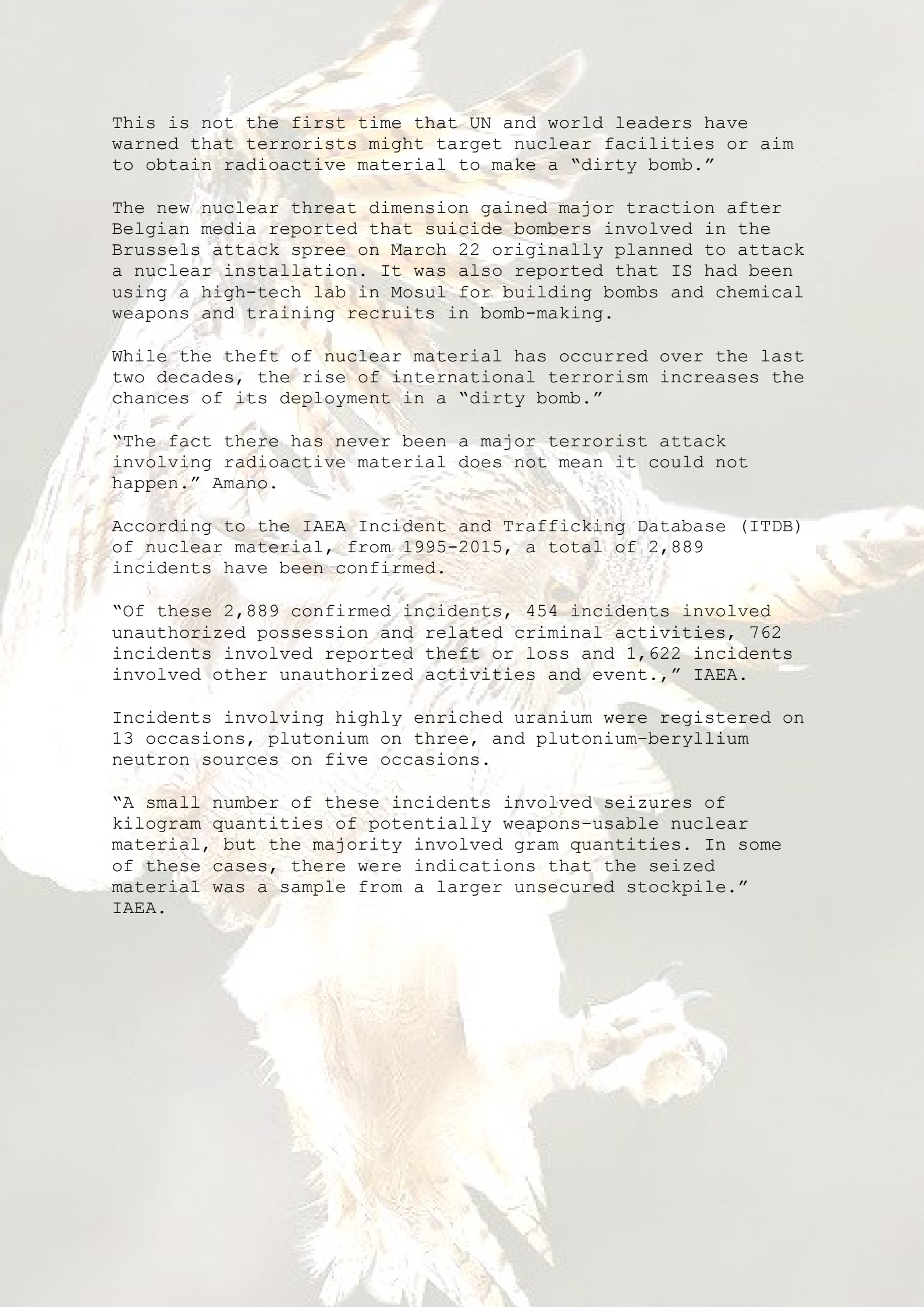
The risk of a terrorist attack against a nuclear power plant or militants eventually making a "dirty bomb" must be taken very seriously, the head of the UN's atomic watchdog has warned, noting a growing threat of cyberattacks which have caused "disruptions" in the past.

In one of the most worrisome incidents which took place about four years ago, an individual tried to smuggle a small amount of highly enriched uranium to build a so-called "dirty bomb," - International Atomic Energy Agency Director Yukiya Amano.

Speaking in Germany, Amano noted that terrorist groups, such as Islamic State, pose a serious threat to nuclear power stations.

Furthermore, cyberterrorism against nuclear power installations has become a real threat nowadays, and at least one cyberattack has disrupted a nuclear power plant in the last three years.

"This is not an imaginary risk. This issue of cyberattacks on nuclear-related facilities or activities should be taken very seriously. We never know if we know everything or if it's the tip of the iceberg."



This is not the first time that UN and world leaders have warned that terrorists might target nuclear facilities or aim to obtain radioactive material to make a "dirty bomb."

The new nuclear threat dimension gained major traction after Belgian media reported that suicide bombers involved in the Brussels attack spree on March 22 originally planned to attack a nuclear installation. It was also reported that IS had been using a high-tech lab in Mosul for building bombs and chemical weapons and training recruits in bomb-making.

While the theft of nuclear material has occurred over the last two decades, the rise of international terrorism increases the chances of its deployment in a "dirty bomb."

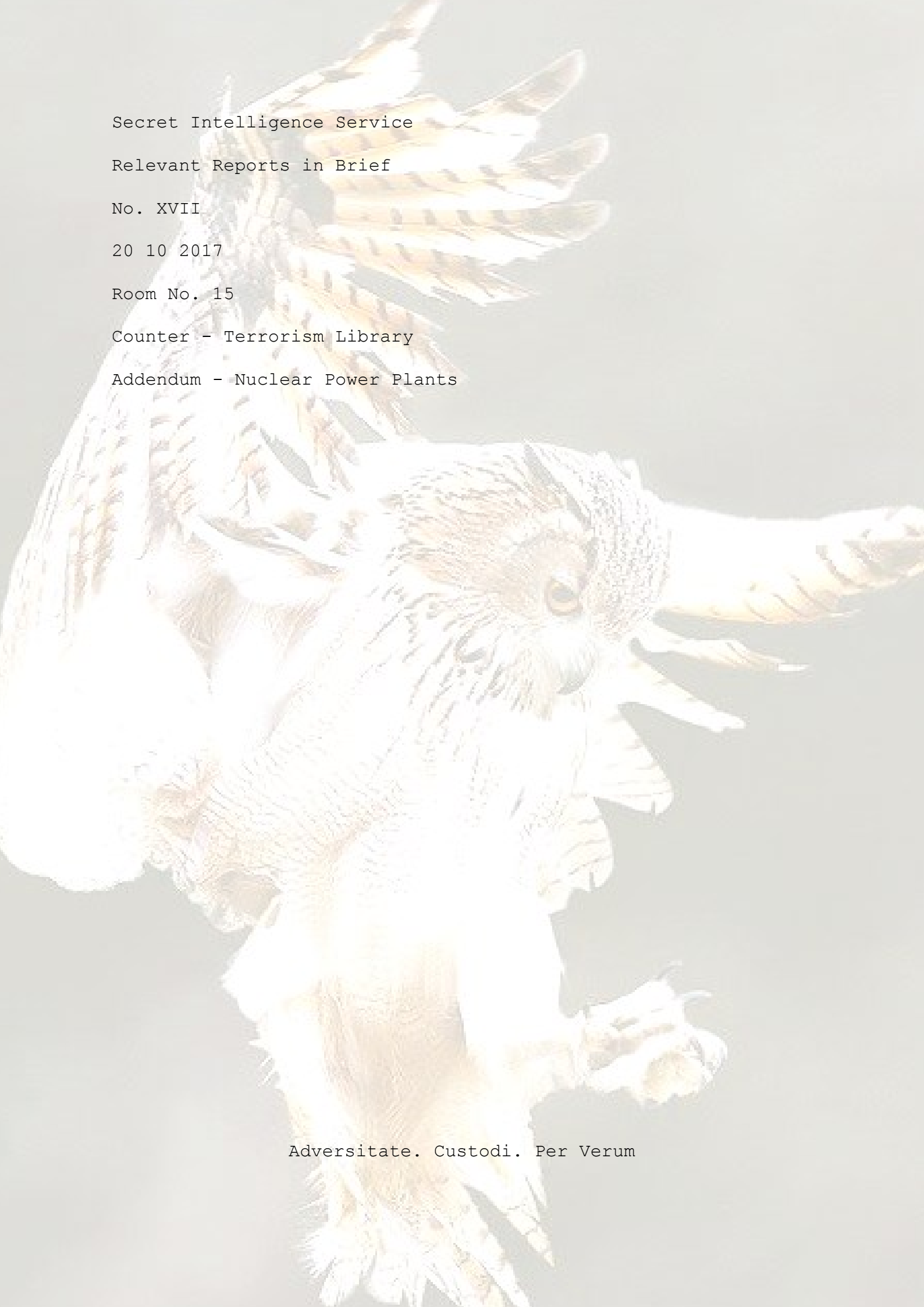
"The fact there has never been a major terrorist attack involving radioactive material does not mean it could not happen." Amano.

According to the IAEA Incident and Trafficking Database (ITDB) of nuclear material, from 1995-2015, a total of 2,889 incidents have been confirmed.

"Of these 2,889 confirmed incidents, 454 incidents involved unauthorized possession and related criminal activities, 762 incidents involved reported theft or loss and 1,622 incidents involved other unauthorized activities and event.," IAEA.

Incidents involving highly enriched uranium were registered on 13 occasions, plutonium on three, and plutonium-beryllium neutron sources on five occasions.

"A small number of these incidents involved seizures of kilogram quantities of potentially weapons-usable nuclear material, but the majority involved gram quantities. In some of these cases, there were indications that the seized material was a sample from a larger unsecured stockpile." IAEA.



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Addendum - Nuclear Power Plants

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