Author: Gaby Weber

The nuclear Plowshare

U.S. test trials despite the moratorium?

Author: Gaby Weber

Editor: Karin Beindorff

First broadcast: Friday, 2nd September 2011, 7:15 p.m.

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Author:
I came to the "Project Plowshare" more or less by accident. Because for years, I was researching Nazi war criminal, Adolf Eichmann, and his last employer, Mercedes-Benz Argentina and I was beset by doubts about the official version of the Eichmann case more than 65 years after the end of World War II because the Eichmann files are still kept under wraps. That Klaus Barbie worked for the CIA and the German BND (Bundesnachrichtendienst) was finally told to the public. And even the Mossad admits to having employed the inventor of the mobile gas chambers, Walter Rauff. So why remains there so much secrecy in the Eichmann case? My research on his person and his crimes during the Second World War had reached an impasse.

Two questions would not leave me: In March 1960, German Chancellor Konrad Adenauer and David Ben Gurion were negotiating for a German "donation" of two billion D-marks for the Israeli nuclear program - and the Israeli government offered silence about the extermination of the Jews during the Second World War. In principle, the two old men had reached an agreement, only some details were in question. But suddenly, on 23 May, 1960 Prime Minister Ben Gurion completely surprised the whole world by announcing the arrest of war criminal Eichmann. Why had he not at least waited two hours and warned his partner Adenauer?

And another question arose: Eichmann disappeared on 11 May 1960 in Buenos Aires and appeared only on 23 May in Israel. What happened during those twelve days?

I began where all journalists begin, by reading the contemporary press coverage. What had happened between the 11th and 23 May 1960 in the world? I met with three major events:

Speaker:
On 16 May, the three big powers met in Paris to discuss disarmament and a nuclear test-ban. The large earthquake on 22 May in Chile, and the kidnapping of Adolf Eichmann, announced a day later.

Author:
Three events that could not be more different: A summit conference of heads of state in France, a natural disaster in Chile and the detention of a Nazi in Israel.

Then I began to search in the archives: In order to see the records of the Federal Intelligence Service BND, I had to go first to court. In the meantime, I have received parts of them. They prove that the Nazi exile in Argentina was infiltrated by the intelligence services of East and West; Eichmann had contacts with the Soviet KGB, his old comrades in the CIA and BND.
The Foreign Office, Auswärtiges Amt, gave me access to some secret records referring to the disarmament talks in Paris and Geneva.

Speaker:
Until 1958, the three nuclear powers, the U.S., Britain and the Soviet Union had undertaken 210 nuclear tests, and the winds spread the radioactive particles called fallout around the globe. U.S. President Dwight Eisenhower and his Republican party were under pressure from the public, especially after the Soviet Union had proposed a test stop. Also the Allies urged a test-stop, according to a memo from the Auswärtiges Amt (AA):

"Helsinki. There is a frighteningly high level of radioactivity in the moor of Lapland, caused by atomic explosions. The contamination was not caused by Soviet nuclear explosions but by American. Not an immediate danger to the inhabitants of Lapland but for the reindeer that live exclusively on mosses and lichens."

Speaker:
On 31 October 1958, the big three power met for the first time for talks about nuclear testing in Geneva. On the surface, Eisenhower endorsed the disarmament, but the hard-liners in his cabinet wanted to prevent the ban by all means, according to a document of German AA.

"In 1958, the U.S. was engaged with very important nuclear testing. Therefore, a test ban at this moment would be inconvenient for their technical development. (Only) due to the public pressure, the United States have declared a temporary, unilateral test moratorium."

The German Embassy in Paris reported on a meeting with French Foreign Minister:

"He does not believe that Americans are really interested in an agreement. The Pentagon was clearly against it. After the concessions of the Soviets, the Americans are in a very difficult situation. Also (British Prime Minister) Harold Macmillan wishes such an agreement."

The Atomic Energy Commission AEC and the Pentagon downplayed the issue, the dangers for human health of the “fallout” was not proven, they argued. Radiation is also found in nature. They feared that a test-ban would hamper the weapon development and reduce the technological advantage. But they could not prevent that at the end of 1958, Eisenhower and Nikita Khrushchev, declared a test moratorium. It was voluntary and had no controls. For the German Foreign Office it was a great disadvantage that...

"...nuclear weapons tests at high altitudes and in space as well as underground detonations in the Soviet Union cannot be determined clearly."
That the U.S. government - despite the testing moratorium - would secretly realize underground explosions, the Bonn diplomats did not imagine. When they knew it a short time later, they kept silent. The U.S. was indeed the big brother in the Cold War, the "good guys". In a secret memo, the Foreign Office states:

"A very powerful part of the Pentagon demands the development of very small tactical nuclear weapons. The recently revealed nuclear weapons tests of the U.S. Atomic Energy Agency some 100 kilometers above the South Atlantic Ocean had apparently escaped all previous means of observation. With this test, the Americans provided the evidence that the control system which had been approved by the scientific experts of the nuclear powers does not respond to the status quo of nuclear weapon technology. (AEC and the Pentagon) want to go ahead with the very promising development of small nuclear weapons".

When exactly these secret stratosphere attempts were made and how they had become known, is not explained in that memo of AA, dated 22 April 1959.

According to Argentine press reports, they had taken place in 1959 – meaning, during the test moratorium. Eisenhower asked his Science Advisory Committee how to find out about an underground explosion. The answer:

"US seismologists, on behalf of the government, have continued to study all current available data on the problem how best to detect and identify underground explosions, including new data obtained from the underground tests conducted in Nevada this past October. These studies and new data indicate that it is more difficult to identify underground explosions than had previously been believed".

Earth movements are recorded in wave form, in zigzag lines. In case of an explosion, the first swing of the seismograph is listed as a pressure wave. In case of a natural earthquake, some monitoring stations keep the amplitude as a pressure wave, but others fix them as under pressure. To demonstrate this difference, one needs a network of checkpoints. Only then seismic movements could be compared and evaluated.

But at that time, this network did not yet exist. The Soviet Union resisted inspections because they feared espionage. However, Khrushchev wanted to leave the summit in Paris in May 1960 with a ban about stratospheric experiments and underground nuclear explosions, so he was ready to compromise. Still six weeks before the Paris summit, the New York Times doubted that an agreement would be very unlikely.

"The United States would comply with the proposed moratorium but they are concerned that the Soviet Union will hurt it in secret."
On 7 May 1960, Eisenhower announced new seismic research for the discovery of nuclear tests. What this new research entailed and where it would be carried out, he did not say.

So I had to look into U.S. archives. I had often been in the National Archives (NARA) in Washington and I like to work there. In contrast to German archives, there is nearly everything public, if not explicitly declared “secret”. But this time, a surprise awaited me: After the baggage control at the airport, I was picked out of line, interrogated seven hours and sent back. I was given no explanation. A new visa was refused. Two historians went to the Eisenhower Library in the state of Kansas, almost 3,000 kilometers from Washington, D.C. and emailed me the scanned files: cabinet minutes, memos of the National Security Council and the papers of AEC Chairman John McCone. I was interested in May 1960.

Many of these documents are about the Paris summit, and about how a ban of nuclear tests could be prevented or at least delayed. They show how McCone and the Pentagon invented a special project: Project Plowshare, they also called it "bombs for peace". It was born in 1957 by the atomic physicist Herbert York, the founder of the Lawrence Livermore National Laboratory, and his successor, Edward Teller. Both had worked during the Second World War on the U.S. atomic bomb, the famous Manhattan Project.

Plowshare means the blade of the plow, which digs deeply into the earth. With the biblical concept of pacifism - swords into plowshares - the project of the Livermore laboratory had nothing in common.

Plowshare wanted to use nuclear explosive devices in civil construction, the digging of canals and docks, tunnels and mines. Mid-1959, York and Teller had written the plans for two Plowshare projects, designing a new secret nuclear weapon: the "ditchdigger".

"Project Chariot, a five-detonation experiment first proposed as one 100-kiloton yield, 700-foot-cratering detonation to produce a harbor at Cape Thompson, Alaska, and an additional four 20-kiloton yield detonations to produce a channel connecting the harbor to the ocean..."

...notes an official report published one year later by AEC. Chariot was never realized. Cape Thompson is under ice nine months a year and the Alaska Natives have announced opposition when they learned of the project. Nevertheless, in early 1960, the AEC approved "development studies" for 'Ditchdigger' at the Livermore Laboratory.

Quotation:
...the prospect of conducting actual detonations was not likely as the voluntary moratorium continued. AEC authorized an ecological survey and developmental studies for 'Ditchdigger' as long as there was no other shot preparation”.

Author:
The Atomic Energy Commission put pressure on the White House, because the "other shot preparation" was indispensable for the development of the new super weapon. Because of the test-ban, it could not take place in the U.S.

Speaker:
On 11 May, Edward Teller presented a letter to Eisenhower, pointing out the arguments for Plowshare and his 'Ditchdigger', cutting the rocks with the help of nuclear explosions. Teller mentioned a channel in Central America, from the Pacific to the Atlantic – it was still unclear in which country. The project, however, was technically ready for experimental use. Underground explosions, said Teller, do not create a problem of radioactive fallout, people may not be evacuated, which would be a big advantage, because it costs "several hundred million dollars" and unleash "emotional resistance” in the affected areas.

Quotation:
"The combination of reduced fission designs which already exists, with quite deep burial of the explosive, can reduce the radioactivity released to the atmosphere by a factor of one thousand. However, further development in this direction, such as 'Ditchdigger’ would greatly decrease emotional objections. If we use the explosives available for us at the present time, we would have to spend several hundred million dollars of moving people out of controlled areas. I have no doubt that Plowshare will ultimately become one of the most important applications of nuclear energy. If we are allowed to go ahead with some of the plan which we have presented to you, I expect that Plowshare will become the earliest large-scale economic use of the energy of the nucleus. Yours respectfully, Edward Teller.”

Speaker:
Copy to John McCone.

Author:
Eisenhower’s answer is not in the files, but numerous withdrawal sheets show that documents have been taken out of the record and are still kept under lock and key. I have requested the release of these secret documents and received some of them. In a memo, I found the sentence:

Quotation:
"After discussion of the subject, the President ordered all documents pertaining to it be destroyed”.

Speaker:
On 12 May, there was a meeting of the Cabinet in the White House. McCone (AEC) was there, Ms. Gertrude Schroeder (from CIA) – for item 2 - and for item 5: Herbert York with Major General Burchinal. York had left Livermore Laboratories by this time, and was the chief developer of nuclear weapons in the Pentagon.
Author:
While item 2 was named - Soviet military power - I did not find out what item 5 denotes. The protocol does not mention item 5, and it ends after item 4.

Speaker:
Until today, it remains secret what York had presented to the Cabinet.

Author:
I have requested information from the CIA, because Ms. Schroeder was sitting at the table and the Agency must have a copy of the protocol. My application was rejected, the search for the requested documents makes too much work, CIA wrote me. Herbert York. I had met this name during my research. But when? And where?

Author:
I checked my own computer, “shift f” for Herbert York. Of course! I got him! Two years ago, I was looking at the National Library of Buenos Aires for documents relating to Adolf Eichmann. There is the private archive of Arturo Frondizi, 1960 President of Argentina. Among these papers are the weekly and daily reports of military intelligence, including the reports of May 1960.

Quotation:
"On Sunday afternoon, on 15 May, a commission of U.S. scientists led by Dr. Herbert F. York, research and development director of the U.S. Department of Defense, DASA, will arrive at the international airport in Ezeiza”.

Author:
This means that the same day, when Eisenhower arrived at the summit on disarmament and test ban in Paris, he sent his chief developer for nuclear weapons to Buenos Aires - together with physicists and Marines.

Speaker:
A day later, the Argentine intelligence service reported that Mr. York came not alone and that he has already sent his equipment:

Quotation:
"Yesterday, a group of American Air Force officers, led by Colonel A. Laird, arrived at Ezeiza International Airport of Buenos Aires, with a giant airplane, a KB-50”.

Speaker:
A Boeing KB-50 was a Superfortress for air refueling of the Strategic Air Command. In addition, the Air Force sent three U2 spy planes and four bomb carriers. The intelligence report described the purpose of the U.S. delegation as follows:

Quotation:
"They want to do tests in a very high altitude”

Author:
The Argentinean press reported on Mr. York, his bomb squadron and the planned tests. The Soviet embassy in Buenos Aires probably saw these articles. No wonder then, that
Nikita Khrushchev at the summit in Paris accused President Eisenhower of "provocations".

Speaker:
On 17 May, Herbert York was invited solemnly by President Frondizi, who wished him "good luck" for the tests.

"En esa época se tenía...
Translator 1:
We did not know at that time about the dangers of nuclear testing. Otherwise, these experiments would not have been carried out.

Author:
Roberto Ornstein is a senior official of the Argentine Atomic Energy Commission CNEA. He does not remember the visit of Mr. York, he told me in an interview.

"Desde que se empeñó a utilizar...
Translator 1:
All countries that dominated atomic energy undertook an attempt to use them for civilian construction. At least they were studying this possibility. There was the plan for construction a channel in Central America with nuclear explosions, because construction with normal explosives would have been very difficult, very expensive and would have taken years. The International Atomic Energy Agency (Vienna) maintained up into the nineteen eighties a Department for the use of nuclear explosions in engineering.

Author:
In 1960, Ornstein was a young officer in the Argentine Navy, which was responsible for nuclear issues.

"Se pensaba que se podia hacer ....
Translator 1:
We thought of very small, controlled explosions, underground of course. But these ideas have never been put into practice.

Author:
He admits, however, that the term "civilian use" is ambiguous.

"Si Usted llega a dominar ...
Translator 1:
If you are dominating this technology for civilian use, you also dominate it for military purposes. You only need to add some details.

Author:
I wanted to learn more about the visit of Mr. York with the Argentine Deputy Minister of Defense. I talked, nearly two hours, with him, off the record. He knew of York's visit with his squadron of nuclear weapons. I asked him for access to the records of the airports at that time in order to follow the U.S. planes. But some days after this conversation, the Deputy Minister's attitude changed. He wrote me that he has, unfortunately, no documentation on this topic. I was forbidden to see the airport books.
Then I went to the Migration Department, where I have been doing research before, checking immigration papers of various Nazis. But this time, I was refused. Any information about the entry of York and his companions was denied. For Privacy Policy, they said. So, if I did not get more information about the stratosphere tests, I decided to look for 'Ditchdigger'. Was Teller's secret weapon secretly tested in Argentina? But where? As I knew from Mr. Teller’s letter to President Eisenhower, the plan of Plowshare consisted in construction of a waterway or a dock, so they had to go to the Atlantic coast. And Ditchdigger had to be transported by ship, because the only big airports, where transport planes could land at that time, were Buenos Aires and some cities near the Andes.

I went back to the papers of former President Frondizi. In the daily Intelligence reports I found the note that on 11 May, just before York's arrival, a "multi-member delegation from the U.S. Navy was on the military base at Puerto Belgrano". From there, the Argentine navy transport ships start to the South - the simplest, cheapest and only way to move heavy freight. I wanted to find out what ships were put to sea after May 11.

Author:
As a precaution, I have not told the Defense Department about my visit to the Naval Archives. And that was very useful. I met bored archivists, who were glad that finally someone was interested in their old log books. And I was lucky! On 14 May 1960, at the Puerto Belgrano Naval Base departed the cargo ship "San Bartolomé" under the command of Lieutenant Commander Marcos Oliva Day.

Speaker:
According to local press, the “San Bartolomé” should bring the staff and the building material for a new landing strip of a naval base in Puerto Deseado, some hundred "experts" were on the way, said the article. According to the annual report of the naval base, in early 1960 an officer, two sergeants, six soldiers and forty conscripts were stationed in the base, but at the end of the year, the number had doubled. As the report says, they "supported the operation in the Bahia Uruguay".

Author:
I was interested in the cargo and the names of accompanying persons.

"Normalmente se registra ...
Translator:
Normally this information must be written here. The log book is a public document, it is an official document.

Author:
But in the log book, I found no information about the cargo, or the material or names of the persons. But I found very interesting daily entries on the draft of the ship.

"Por la informacion de ... 
Translator:
The ship was sitting very deeply in the water. When the “San Bartolomé” departs on 14 May, the front of the ship in only 7 feet in the water, however, the back 14.5. It was unstable. It seems that it had kept something very heavy in the back.

Author:
Something heavy like the Ditchdigger perhaps? I decided to visit this naval base and went to the airport. Puerto Deseado is in the vast, almost empty province of Santa Cruz, deep in southern Argentina, two thousand miles away from Buenos Aires. Puerto Deseado is at the mouth of the Rio Deseado, the “desired river”. It once flowed from the Andes through the province Santa Cruz and ended in the Uruguay Bay and on the end of the bay, on the Atlantic coast, is Puerto Deseado, explained Virginia Martinez, the archivist of the port city.

"Que nació en el Lago Buenos Aires ...
Translator:
The river has its origin in the glacial Lake Buenos Aires. But in the last ice age, the Andes rose and the last part of the river course was filled with volcanic rock. Today it flows somewhere underground in the bay. We do not know where exactly.

Speaker:
Puerto Deseado had been colonized by Spanish and Italian settlers. In 1960 there were living only 4,000 people there, most of them were shepherds. From time to time, a cutter came to the harbor. But for any other economic activities, they needed drinking water.

Author:
Now it would have been the easiest way to lay a pipeline from the Lake Buenos Aires to the city - or at least from the point where the Rio Deseado disappears from the surface and flows underground. But the Navy had a more ambitious idea: they wanted to bomb a channel in the volcanic rock in order to connect the Uruguay Bay with the river.

Speaker:
It was the idea of naval officer Oliva Day, who understood that the whole region needed drinking water for further economic development. But digging many kilometers into the hard rock was a work that had never been done in South America. So they needed help.

Author:
The Americans had just concluded a military agreement with the Argentine government. It was signed in August, 1960, but already at Eisenhower’s visit in Argentina in February 1960 it was arranged firmly. The visit to the military nuclear expert Herbert York was a part of this Agreement. But since the domestic political situation was very tense and Frondizi did not want to provide any ammunition for the campaign of the Peronists, socialists and communists, he kept the new military cooperation secret. I only learned of it from the reports of the military Intelligence in the National Library.

Speaker:
The press wrote that in Patagonia, in the Uruguay Bay, the Navy wanted to build a concrete ramp in order to allow seaplanes to land.

Author:
Marcos Oliva Day, the Argentine commander of the project, is no longer alive. But I found his son in Puerto Deseado, the longtime district attorney of the city.

"Mi padre investiga ....
Translator:
The plan for a landing strip for seaplanes in the Uruguay Bay was older. But it was my father who was able to convince the Admiralty of its importance for the development of the country. It was also useful for defending our waters. So they commanded him to work in the Uruguay Bay.

Author:
If atomic explosives have been used in the construction? The son has no idea. He was ten years old. I wanted to see this landing ramp. And it is still in the bay: a concrete strip along the shore for a few meters. The military base has been demolished. But this ramp never had any logical reason, and no seaplane used it more than three times. Only a few kilometers from the Uruguay Bay is situated an airstrip of the Argentine Air Force. At the old train station of Puerto Deseado, I later meet Pedro Urban, a former railroad employee. He is a walking encyclopedia, has heaps of old newspapers at home. The project in the Uruguay Bay he remembers well. It had always been ranked by legends. The population never knew exactly what it was, because it was a restricted military area.

"De golpe y de raso ...
Translator:
But suddenly all the plans were stopped. As the enthusiasm came, so it left.

Speaker:
In January 1960, the U.S. petrochemical company Texas Butadienne appeared in Puerto Deseado - apparently in order to produce synthetic rubber, they said. In the village they were surprised, because it lacked any infrastructure. But the company flew a dozen engineers from the U.S., including the project manager, Manuel Asensio. He had served in the engineering corps of the U.S. Army; his last rank was lieutenant general. At the age of 54 years, he retired. This was on February 1, 1960, and 19 days later he arrived in Puerto Deseado with the mail plane. Urban:

"Texas Butadienne tenia terenos …
Translator:
The government had assigned to Texas Butadienne several pieces of land.

Speaker:
The company hired Chilean workers experienced with explosives, among them the demolition expert Roberto Oyarzo, who came in March, 1960 to the area. He was 23 years old.

"Ellos fueron a buscar agua ....
Translator:
The company told us that they are looking for a fresh water plant. They needed electricity. But the Deseado Rivers is dried on the surface; it flows underground into the bay. We knew that the water is there, but we did not know exactly where and how much.

Speaker:
The company sent the workers to the point where the river once issued into the bay.

“Hace unos anos que sabian ...
For years it was known that somewhere there must be the river below. Otherwise, we would have never dug and made all the trouble. We have dug in the riverbed. Under the ground had to be the water. We have just shoveled the sand and then blasted holes into the rock.

Author:
He had blasted deep craters with dynamite in the rocks, of other explosive material, he knows nothing. But later, together with the Navy, came experts from outside.

Speaker:
On 12 May, the local press headlined:

Quotation:
"The first phase of construction has been completed successfully".

Speaker:
"Both the geological and hydrological studies" - the chief engineer was quoted as saying.

Author:
According to the logbook, the ship San Bartolomé arrived on 18 May 1960 quayside in Puerto Deseado. Then the mysterious cargo was unloaded and transported in trucks to the place of detonations, at the earliest on 19 May. From here on, the log book reveals only that there were numerous speedboats and divers from the Navy. From the 20 May, the equipment could be installed and set up. From 21 May on, they were ready.

Speaker:
On 21 May at 6 a.m., the ground began to move in southern Chile: tremors of 7.5 degrees on the Richter scale were measured.

"En la manana del dia 22 de mayo ....

Translator:
On the morning of 22 May it shook again, an after shock. People went out on the road to get to safety. And then it happened at 3:11p.m. The largest earthquake in human history.

Speaker:
Professor Carlos Rojas teaches physical geography at the University of Valdivia. He was three years old when his home trembled. Roads were opened, houses collapsed, inside the apartments furniture and books were flying. Roofs and towers fell on cars. The wooden buildings were cracking, but mostly resisted, while the ground was moving in waves. It took three and a half minutes, 210 seconds.

"Mis padres perdieron ...

Translator:
My parents house was completely destroyed and the homes of my grandparents as well. We literally had nothing and had to start from zero.

Speaker:
For the inhabitants of Chile earthquakes are an everyday occurrence. But the earthquake of 1960 was the mightiest ever to be measured: 9.5 degrees on the Richter scale, 50 times stronger than the earthquake in Fukushima. The energy released was 20,000 times greater than the Hiroshima-bomb. Because few people were living in southern Chile, "only" two thousand died. Rivers left their river-bed, new lakes were formed, mountains moved. The following tsunami threw ships inland for miles. The Earth's crust broke over a length of 1,200 kilometers, down to Puerto Aysen. The Puyehue volcano erupted lava and ash for weeks. On 23 May, a huge wave of ten meters reached Hawaii, Japan, the Philippines and the U.S. West Coast. There too, the devastation was tremendous.

"Imagenes de mucha destruccion ...
 Translator: I remember pictures of total destruction, people who sit on the street - with some furniture and belongings, they were able to save. Their faces are scared to death. We had no more electricity or drinking water, the whole city was in ruins. My mother, my brother, a few months old, and I left Valdivia for some months. I was in the car on the back seat and could not sit, because the interior of the car filled with water. The road led through an area that had sunk and was under water and had turned into a lagoon. And we had to go through.

Speaker: The tremors lasted until 6 June and ended on the Chilean Pacific Taitao Peninsula, near the glacier lake Buenos Aires.

"Debe haber sido ...
 Translator: I suffered a very deep shock. I stopped to talk. In my childhood I was shy and confused, like many here. It returned to normal only slowly.

Author: I told Professor Rojas of the U.S. Project Plowshare and the nuclear explosions in southern Argentina in May 1960. He was suddenly very sad. He asked me to send him the documents. I would like to do this.

Author: In Puerto Deseado no emergency measures were taken. Nobody informed the police, hospitals and the population. The former railway worker Urban still believes only that a U.S. chemical company wanted to invest in 1960 in the region and was doing some strange things.

"Eso fue otra gran ilusión ...
 Translator: In the end of the year (1960, after the completion of construction work in the bay), the company disappeared from one day to the next. That was a bitter disappointment.

Author: Disappointing too for the locals was the visit of the German Ambassador, Werner Junker. He visited Puerto Deseado five months after the ominous events. There he rented a plane and a boat and inspected the Uruguay Bay. He was looking for "lucrative opportunities for German investors," he told the people, and they hoped again. The
Ambassador never returned. The German Foreign Office cannot find his report about the trip, they told me. And nothing could be found in the Federal Military Archive in Freiburg and in the Federal Security Council in Berlin.

Puerto Deseado is still a God-forsaken place. Drinking water remains rationed.

**Speaker:**
The official report of the U.S. Department of Energy on Plowshare lists the underground tests from 1961 on. According to this report, no nuclear test took place in 1960. However, in November 1960, AEC increased to 200 kilotons from the original 100 kilotons scheduled previously in May for the Chariot tests. The report does not mention on what new findings this decision was based.

**Author:**
The "U.S. Geological Survey," which collects seismic information from all over the world, told me they did not have information from the time immediately before the earthquake in Chile. At that time, there were no stations in Southern Argentina. In Chile, the University in Valdivia set up a station after the earthquake. I have asked the Pentagon about the trip of its top weapons developer Herbert York to Argentina. Referring to York, they were silent, but referred me to NARA in Washington instead. But NARA-employees who were very helpful, found only two pages: Deputy Director in the Pentagon, Edward Witting, was invited months later by the Argentine Atomic Commission to Buenos Aires in order to continue York’s work and asked the State Department for assistance. The response to his request is missing in the NARA archives.

I made a request under the Freedom of Information Act to the Department of Energy. I only received a receipt but no answer, neither from the State Department who still denies me a visa. At the Eisenhower Library in Kansas, I tried to obtain the release of the still secret documents. However, it is unclear who is responsible, as the papers of the presidential archives are not subject to the FOIA; their release is therefore not enforceable. The declassified documents in Kansas don’t mention either the York visit in Argentina, or the use of Teller’s secret weapon, the 'Ditchdigger'. But the library declassified on my request a memo from the White House. After York’s return from Argentina, the Cabinet discussed in which cases nuclear-tipped long-range bombers can be sent in distant countries.

**Quotation:**
"The president reviewed a letter from the Secretary of Defense dated 6 October 1960 on the subject of current peacetime procedures and practices with respect to the flying or other peacetime operations involving atomic weapons. He noted the reservation of AEC with respect to the degree to which War Reserve weapons may be used in exercises not directly related to operational readiness”.

**Speaker:**
And then Eisenhower decided:

**Quotation:**
"Approved. (…) assure that risks are held to practical minimum".

**Author:**
The Argentine government has denied me access to the immigration authorities and to the registers of the airports. They keep secret both the original text of the agreement about cooperation with the U.S. military and the secret protocols of the non-public debates in the Senate. The Senators had summoned the Air Force Minister and Foreign Minister to answer questions about the presence of U.S. soldiers and their Bomb Squadron on Argentina soil.

Author:
I interviewed the leading geologists and physicists of Chile and Argentina. I wanted to know if Teller’s magic weapon – the 'Ditchdigger' - equipped with 100 kilotons of nuclear explosive – could have caused an earthquake like that of Valdivia. The answer was: No.

Speaker:
Professor Mario Pino teaches like his colleague, Carlos Rojas, geology at the University of Valdivia. He holds a Ph.D. in Germany.

"Cuando han hecho ...
Translator:
Of course, underground explosions cause earth movements. But these are minor earth movements, not to compare with those we know in the south of Chile.

Author:
An earthquake, he explained, occurs over decades, sometimes centuries, when one tectonic plate slides under another.

Speaker:
On the coast of Chile two plates were dashing against another: the Nazca and the South American Plate. Each year, the South American plate is pushing three inches over the Nazca plate. The technical term for this is "subduction". This collision produces a huge amount of energy that is stored in a minimum depth of 30 kilometers, and sooner or later paves its way to the surface. This energy release is an earthquake, and several times it has reached in Chile almost 9 degrees. 1960 even 9, 5 degrees. Geologists can find these underground accumulations of stored energy and predict earthquakes roughly. Therefore, where tectonic plates are pushing, people built their houses to withstand earthquakes.

Author:
Earthquakes of this magnitude cannot be induced artificially. This is very clear today. But whether they can be triggered by underground explosions - as a last drop that brings the barrel to overflow, I asked the head of the geology Department of the University of Buenos Aires, Professor Victor Ramos.

"En punto de vista fisico ...
Translator:
From a physical point of view that is imaginable. Anyone who engages in the earth’s crust can trigger earth movements. If a lake is filled with water, then an extremely high pressure is exerted on the ground. Water weighs a lot. But up to an artificial triggering of an earthquake, it is very far.
In the Internet there are many conspiracy theories that claim that the earthquakes in Haiti and Japan has been man-made, induced by so-called "tectonic weapons".

Professor Ramos says - like his colleagues – that this is impossible.

"Siempre una idea tentadora ..."

For the military, the idea to provoke earthquakes with weapons is certainly seductive. The energy released there is beyond the magnitude that we can capture at the moment. But in order to cause a catastrophe, they would need a huge amount of energy. You would have to drill very deep to get into the areas in which earthquakes occur, at least 30 miles deep, probably fifty or even lower. The mining industry goes no deeper than four kilometers, the oil industry sometimes up to a maximum of seven. And I think it is very difficult to do this in secret. The Russians tried in on their Kola Peninsula. It took years, was a huge thing and has swallowed many millions of rubles. And everyone knew it. Nevertheless, they could only penetrate the earth until thirteen kilometers. This is the deepest hole that has ever been made in the world.

The scientists take it as certain that the military - in both East and West – are searching for a magic weapon with the greatest possible destructive power and have spent vast sums of taxpayers' money for research for a "tectonic weapon". The universities are deprived of this research, however.

Finally, in May 1977 the UN adopted ENMOD, the “Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques”. Since that time, interventions to change the weather or geological reactions such as artificially induce earthquakes are forbidden. The United States has signed.

During the earthquake in Chile, President Eisenhower was resting on his farm. The available documents do not mention when he learned of the disaster and what his reaction was. At that time, the physicists of the Pentagon did not know of the theory of the earth plates pushing against each other. This theory was created in the sixties. And the inventor of the "Ditchdigger", Edward Teller, had a bad reputation as a physicist because he had often enough mistaken 'feet' for 'meters' and 'diameter' for 'radius' and his calculations rarely were right. Until today, the declassified papers do not show what the military’s reaction was when they saw the huge earthquake in Chile while their highest arms developer, Herbert York, was realizing in Southern Argentina underground explosions with nuclear explosives.

The earthquake in Valdivia began at 3.11 p.m. local time in Chile as well as in Washington and seven hours earlier than in Israel. So, while the earth’s crust broke over in southern Chile, it was in Jerusalem after 10 p.m. The next day, 23 May, Prime Minister Ben Gurion surprisingly announced in the Knesset at 4 p.m. the arrest of Adolf Eichmann. This was 9 a.m., local time in Washington.
The news of the arrest of the Nazi war criminal in Israel displaced the horror stories about the Chilean earthquake from the front pages of the world press for days and weeks. Nobody asked about the US tests in Argentina and about the purpose of Mr. York's visit, who had arrived in Buenos Aires on the same day as the summit meeting for disarmament in Paris began, four days after the disappearance of Adolf Eichmann. The nuclear tests carried out in Argentina in spite of the moratorium, fell into oblivion - and they are still kept secret by all the governments involved.