Jan Chr. Warloe
Ex-diver

Written when the film Pioner was launched in August 2013, too long for VG, Aftenposten. Otherwise never published

The below was written by Jan Christian Warloe when the film Pioner was launched in August 2013, deemed too extensive for the leading newspapers. Otherwise never published

"THE WORLD'S SAFEST DIVE"

This was what the Directorate for the Norwegian Labor Inspection Authority (Atil) called the test dive in Skånevik in February 1978 before it ended in a fatal accident. The drama was the starting point for the film "Pioneer" and is the theme of the Focus program about the accident. The dive was to prove that it was possible to comply with the authorities' wish to lay pipelines over the three-hundred-meter-deep Norwegian trench. To transport oil and gas for processing in Norway, which was to become an industrial nation in its own right and no longer a developing country that solely exported raw materials.

However, the test dive became one of the most uncertain and ended with the American diver David Hoover dying at 316 meters. He died under such risky circumstances that Atil and the companies found themselves hiding what they had allowed and resorting to fighting against Norwegian divers' warnings and demands for an independent investigation. All this to save the state, Hydro and Statoil from accusations of negligence, guilt and responsibility. While unjustified accusations of guilt - as in many previous accidents - were again placed on the dead diver.

In the race to get rich and to realize the dream society, what shone in the new jewel of social democracy - AML - gave way to what the philosopher Machiavelli said four hundred years earlier about the morals and goals of the state: Purpose sanctifies the means.

After three years of preparations in the USA, Hydro started the test diving at 316 meters in Skånevik. Two pipes were laid on the sea bed from Brown and Roots' pipe-laying barge and were to be welded together. Ten divers from the American company Taylor Diving & salvage were pressured to live, sleep, and eat between work shifts spent down with the diving bell in the pressure chambers on board the barge. Three divers were going down with the bell, two out to work in the sea each shift. A welding habitat, like a kind of cabin without a bottom, was sent down and placed over the pipe ends in order to enable the water to be blown out so that the welding could take place in a controlled manner and with a safe result in a dry atmosphere.

The divers breathed a mixture of 98% helium and 2% oxygen. Helium prevented life-threatening anaesthesia, as from nitrogen in the air, but had to be tempered within narrow limits close to body temperature to not cause dangerous cooling or heating through the lungs. 2% oxygen was between the lower limits for oxygen deficiency and higher limits for oxygen poisoning associated with seizures. The porridge-thick breathing gas forced the divers to master physical efforts so as not to end up in hyperventilation, where the breathing work required more oxygen than they were able to breathe. As

protection against the most significant danger underwater, cuts in the supply of breathing gas, the requirement for the availability of emergency gas applied to the divers. It was as unthinkable in 1978 as today to perform any diving without emergency gas at three hundred or three meters of water depth.
Extreme conditions.
In Skånevik, diving had barely started when problems arose. Breathing equipment had to be replaced. Communication was too poor. A hot water machine for the vital heating of the divers' suits and breathing gas intermittently failed, and the fault that came and went was not found and repaired until after the fatal accident.
No one demanded a complete stop.
Despite the critical situation, further diving was allowed with orders for the divers to return to the bell if the hot water failed. Several errors occurred. A diver had both eardrums blown while filling a sealing plug that exploded in one of the pipes he had entered from the welding habitat. There were problems getting in and out of the diving bell with all the equipment, and in this obviously risky situation, Hydro and Taylor Diving Atil applied to drop the diver's emergency gas requisite. - And got approval and dispensation! This inexplicably, instead of logically ordering a complete stop on operations until everything was under control and it was possible to dive safely.
The next day, 07 February, the hot water fails again while diver John Kohl installs a new bladder in the water-filled pipe. David Hoover is in the habitat to observe the gas pressure to the sealing plug. They are told by the dive leader to return to the bell. Then they see in the control room on the screens that Kohl comes out of the pipe, tears off his mask, and breathes in the gas pocket under the roof of the habitat while he shouts: "I can not breathe in this mask!" The dive leader demands the mask is put back on, afraid that the gas in the habitat is not breathable, and performs a "massive blowdown" by adding breathing gas into the habitat. At the same time, according to the reports, there is complete chaos with triggered gas alarms, observed falling gas pressures to the divers, and "crazy screaming" between the gas operators.
By miracle John Cohl survives inside the habitat, David Hoover dies on the seabed.
When Hoover's colleague, after a minute or more, gets gas back in the mask (differently reported in logs from Taylor and Hydro), he gets out of the habitat and finds David Hoover lying lifeless on the bottom. Hoover is brought into the bell, where the third diver receives Hoover, removes the mask and removes "bright red blood" and "bloody froth" from the mouth and throat before resuscitation is started. (Atil does not mention the bleeding reported by both divers in writing to the police in its investigation, and neither is the lack of an emergency gas supply, which excludes suffocation and concludes with CO2 poisoning). Hoover is declared dead after two hours of resuscitation in the bell and up in the chambers. The body is decompressed out of the chambers and sent to Gades Institute in Bergen for autopsy. The report from there concludes that "the cause of death is not clear" and "There may have been a functional failure in the deceased, such as a sudden cessation of breathing." After the autopsy, the companies' doctors focus on the fact that the diver had beard growth, which Arbeids-Tilsynet also uses to explain that leakage in the mask could cause CO2 poisoning. This fairytale story is distributed to the media while keeping a close lid on much of what went wrong and not mentioning a single word about the lack of emergency gas. However, right after the accident, I was informed by people who had participated in the operation.

Off the record.

"Close the door behind you", said the engineer behind the office desk at the newly started Norwegian Underwater Institute NUI in Bergen shortly after the accident. "This is off the record." He had been present during the entire diving operation and began to list everything that had gone wrong. About hot water, diving masks that had to be replaced, poor communication, burst sealing plugs, burst eardrums, and diving that just continued, right up until there was a dead diver on the bottom without emergency gas. I could hardly believe what I heard and was even more shocked when the engineer told me that the companies had applied for and received the green light from Atil.

Knowing how previous accidents were handled.

I witnessed a diving accident at Ekofisk in the autumn of 1974 and had first-hand knowledge of another fatal accident a month later. These were two fatal accidents that were not investigated by Atil, not even included in a published accident statistic for 1974. When I reacted to this in 1975 with a reader's post in Bergens Tidende (a large newspaper printed in Bergen), it led to Atil claim that these accidents had occurred outside Norwegian jurisdiction, more than five hundred meters from the installations. It did not help that I had stood and seen that one of the accidents happened at and under the platform Ekofisk Delta a platform where I had worked earlier. Here, Peter Kelly died from having received pure helium delivered to his mask in the autumn of 1974. Gary Shields died shortly afterwards during diving work on a Norwegian pipeline at Ekofisk. These accidents were never investigated and reported to the police and public prosecutor in Rogaland according to law and rules. This with its consequences for relatives after the death, for a surviving injured diver Danny Stokes and for other divers who did not receive information and warnings about what had happened. And there was bad blood between the labour inspectorate and divers who wanted to ensure decent conditions for a vulnerable group.

And now we were there again.

I started calling and sending letters to confront Atil with more and more details that became known, which did not agree with the official explanations. It became difficult and eventually impossible to talk to Atil. I experienced that phone calls were interrupted by allegations of technical errors on the phone lines. Letter after letter was sent with questions without any forthcoming answers. Finally, we in the YS oil association NOEMFO, of which I was a member, heard about Arbeid Tilsynets's report to the Public Prosecutor in Hordaland with the CO2 explanation that was perceived as a recommendation to close the case as "not punishable". And when the Public Prosecutor dropped the case, and we understood that he was only building on the Atil report and not on the police findings of failure in the gas supply, we demanded all papers handed over. We were initially denied access but were eventually given all material because YS had more than a hundred thousand members and thus had access to the documents under the law.

The police did their job.

During his investigation, the sheriff in Skånevik, who had literally not understood a quack from divers with helium voices in the chambers, had collected written reports from diving personnel, doctors, and everyone involved in the operation. After reviewing the provided documents, we found additional grounds for criticizing Atil's findings. We demanded the accident be thoroughly and independently re-

investigated. Then came the most desperate attempt to stop us. Atil's chief executive called NOEMFO's management - in the evening - and requested that the request for an investigation be withdrawn. It had been said outright: "We are afraid of a new Kings Bay!" (The Kings Bay case led to a government crisis in 1963 after a mining accident on Svalbard). I was presented with this by the association leaders but refused to withdraw the claim and sent out a press release about this. NRK's (Norges Rikskringkasting-Main news channel) reporter Bjørn Nilsen was then working on oil documentaries and stories and wanted an interview with myself, with Arbeids Tilsynest leaders and with Norwegian Hydro with a focus on Skånevikdykket. In early 1979, shortly after the television programs were broadcast, there was new attention surrounding the accident, which led to divers in LO's oil association NOPEF being summoned to the attorney general's office in Oslo for a statement on the investigation from Arbeids Tilsynet. When the divers in LO said the same as us in YS and rejected the report, the Liberal Party's Odd Einar Dørum took up the matter in the Storting and asked Minister of Local Government Arne Nilsen whether the divers' demands for re-examination should be complied with. The answer was yes, and EUV (the Investigation Committee for Fatal Accidents in Working Life) (which was established after Kings Bay!) lawers and bureaucrats were given the case. We divers from both associations were summoned to EUV in May 1979. NOPEF wanted a total reconstruction of the dive. We thought it was sufficient to read the reports given by the sheriff by everyone involved in the operation. Later, several diving doctors were questioned by the committee. - The meetings took place at the Atil offices in Oslo and consisted of, among others, Børre Pettersen, "Father of the Working Environment Act", then chairman of Atil.

A particular pension case.

In the autumn of 1979, while we from NOEMFO were waiting for an official report, we called Rikstrygdeverket (now NAV-Social department) requesting a pension for Hoover's bereaved family. The prompt reply was, "There's an injury report here from Brown and Root gathering dust, but no application has been forthcoming". I told about the accident, what we had reacted to, that the accident was under investigation, and thought the widow should be entitled to a pension. "Do you represent her?" asked Rikstrygdeverket, second occupational injury office. "Yes," I followed up, "if you do not process the case within a week, we will go out with the whole scandal in the newspapers". Five days later, the National Insurance Administration called and announced that the widow and any children (she was alone with two children) had been granted a survivor's pension from 01 February 1978, applicable from one week before the accident occurred. They requested if we knew what the diver earned and where the nearest Norwegian foreign service mission for dissemination was located? We had no idea, not even the widow's name, and asked Rikstrygdeverket to check with Brown and Root. Not a document, not an application submitted other than a telephone call in what must be Norwegian history's fastest processing of a pension case. Why? Who was "We" who the head of the Labor Inspectorate indicated was afraid of a new Kings Bay?

We had requested the EUV rapport for years.

We had to wait in vain for years for a report from EUV until NOEMFO ceased to be an association in 1984. There followed a long silence about Skånevik. In 1985, I met Odd Einar Dørum, and he regretted that his proposal in the Storting had been in vain. - In vain? No, he had received an investigation report several years before, which upheld Atil's original conclusion. I called

Atil, who rejected the request for disclosure of the report. They referred to the Ministry of Labor, which refused to send anything other than a few lines from the conclusion that supported Atil: "EUV finds that the investigation has been carried out in a satisfactory manner". It was not until 1989 that I obtained the report from Atil. The report was dated May 1982, two years before NOEMFO closed down. The investigation report had been submitted to the management of Atil for approval, who had previously called the leadership of a trade union, late in the evening trying to stop the demand for further investigation!

The Rapport indicated why it had been kept buried.

The report showed why it was essential to keep it hidden for those who had demanded an investigation. We had asked the committee to go carefully through everything the sheriff had received from testimony about blood and lack of bailouts to be able to conclude what had happened and what Atil had failed to investigate and mention. This had not been done. Although this report did note failure in hot water supply, communication failures and "irregularities with breathing gas supply", the mention of the dispensed emergency gas supply shows how false the report is. The dispensation is mentioned here for the first time after the accident by the public sector. They were forced to take it up, and the report states that the doctors had said that reserve gas at that depth would only have lasted "for about two seconds." Eminent, highly respected doctors strongly deny ever having said this. An investigation committee should have calculated the simple calculation itself. And found that the emergency gas would have lasted for at least two if not three minutes, as it said about the emergency gas in the safety report that Atil had received from Taylor and Hydro for approval several months before the dive. This report was not mentioned at all in EUV's report. With the emergency gas with him out of the bell, David Hoover could have had adequate breathing gas to be able to call out about the emergency situation and enough to have been able to return the 8-10 meters back to the diving bell to save himself.

"Bright, red frothy blood from David's mouth and nose" in Kohl's and Cook's reports, and everything that happened and was reported in the information available indicates a gas cut and smothering of Hoover. Choking, as in gas smothering, gives such findings of bleeding as the divers in the bell reported. Autopsies performed on corpses after suffocation and smothering, following a prolonged struggle to breathe, show such bleeding into the inner ear. CO2 poisoning does not cause such bleeding as Hoover had and usually is present after smothering. This information I have from a veterinary professor and the Norwegian Food Safety Authority who said that pigs CO2-poisoned before slaughter do not have bleeding from their respiratory tract.

Was the fatal accident in Skånevik a negligent murder where Arbeids Tilsynet was complicit and did everything to keep this hidden? Much more can be said about this and other catastrophic accidents where either the divers themselves have been unjustifiably blamed for their own deaths or where all investigations have been dropped by not illegally reporting the cases to the police as the fatal accidents at Ekofisk in 1974.

I was informed by Tone Kjeldsberg from the Ministry of Labor & Social Affairs. That EVU (the Investigation Committee for Investigations of Fatal Accidents in Working Life) was established following the Kings Bay accident in the early 60s and closed down "in the early 80s" after EUV had completed the Skånevik accident. I would also like to mention that in 2002 I testified about this and other fatal accidents to the Lossius Commission, which the Ministry of Labor set up to investigate the

pioneer diving period between 1966-1990. For five hours, I testified about what I knew about the un-investigated fatal accidents in 1974, where the British diver's Peter Kelly and Gary Shields died at Ekofisk. Kelly, by having pure helium added to the mask in the diving bell, Shields by gas cuts out of the diving bell. In addition, I testified about what I knew and had experienced regarding the Skånevik accident. None of this was mentioned in the final commission report, where Atil is praised for its role as a supervisory body. The commission attacked me for criticizing Atil. Nor do these illegalities appear in the trials and judgments in Norway and Strasbourg. Norway has not been convicted of offences, violations of how fatal accidents are to be investigated by supervision and the police and reported to the public prosecutor for assessment of prosecution. The police and the Public Prosecutor in Rogaland informed me that they had never been notified of the accidents that occurred1974. What has happened in diving in Norway is much more severe than what has come to light. We received a rejection of a recommendation to Arbeid's department to apologize to the Hoover family in the USA. Jan Chr. Warloe, Bergen, September 2016

Peter Kelly was autopsied in 1974 by a Norwegian diving doctor and a pathologist. They found "black organs" as a result of oxygen deficiency when breathing pure helium. When the same doctors, together with the English diving doctor Ian Calder, said after the autopsy of David Hoover that they did not see signs of oxygen deficiency, Hoover had red, healthy organs (because he received oxygen until the last breath). Note that Ian Calder said in NRK's 2013-2014 Brennpunkt documentary about Skånevik that they had assessed their error regarding the cause of death as "not a gas cut, but CO2 poisoning". I have raised this with current chief pathologist Inge Morild at Haukeland Hospital, where both Peter Kelly and David Hoover autopsies were performed. He agreed with my assessment of how it became possible to erroneously draw the conclusion of CO2 poisoning in the Labor Inspectorate's final report in 1978.

After the accident in 1978, I asked Atil several times for insight into what was approved diving plans, etc., from Taylor and Norwegian Hydro, but received no such insight beyond what Atil said about the accident to State Attorney Simmones in Hordaland, who had dropped the case. When NRK Brennpunkt requested the same documents in 2014, they also received the Safety Manual that the companies had given Atil in 1977 before receiving approval for diving. Here, it was stated the bailout capacity for the dive to 316 m should be at least three minutes. Taylor had stainless steel high pressure rated bailout bottles fabricated that could provide such capability. Still, it was these bailout bottles Taylor and Hydro asked Atil for a dispensation to drop the day before the fatal dive on 7 February. Instead of demanding a complete stop, not only for the lack of alternative an alternative emergency gas supply to the divers while out of the bell, but also for constantly failing hot-water supply to the divers, and according to the Safety Manual; also the intermittent and inferior supply of premix breathing gas to the divers. Atil incomprehensibly allowed diving to continue without these dangerous conditions being rectified. Jan Chr. Warloe, Bergen, 02 July 2021.

Jan Warlo replied when asked if, In reality, Hoover's death's causation is definitely identified today or is there still some room for dispute? "Good question. The authorities have remained silent about this case, amongst several other divers deaths and accidents cases that occurred during the seventies reeking of deception and lies, even after officially submitted warnings and

protests from myself and others - i.e. Peter Kelly and Gary Shields in 1974, cases never investigated or given any explanations or excuses for. Cover-ups are their speciality!"