

AIR HISTORICAL BRANCH

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The R.A.F. raid on the

MOEHNE DAM, 16th/17th May 1943

Text of two German official reports
on the raid and its effects.

Translated by:-

Air Ministry, A.H.B.6.

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Report No. 1. From the Regierungspräsident, ARNSBERG, WESTPHALIA, to

the Minister for Home Affairs. Dated 24th June, 1943.

In the night of May 16th/17th 1943 an air raid warning was sounded at 00.23 hours. At about 00.30 hours - 00.45 hours the Moehne Dam, which was protected by six 2cm. Anti-Aircraft guns, was attacked by enemy aircraft with large calibre bombs. There was no balloon barrage and the attack was carried out from a very low level. A number of bombs fell into the reservoir immediately in front of the Dam, thereby weakening the structure and probably causing a number of fissures. A further bomb hit the Dam itself and aided by the pressure of the contained water mass made a breach 76 metres wide and 21-23 metres deep. It is now impossible to ascertain whether this breach was caused by the bomb itself, or whether the original hole was later enlarged by the escaping water.

An immense floodwave poured through the Dam into the Moehne and Ruhr valleys. The main wave, carrying about 6,000 cubic metres of water at a height of 8 metres (up to Neheim), reached a speed of more than 6 metres per second. Below Lake Hengstey it still had a speed of 3 metres per second and then slowly spent itself. At 07.30 hours, 1,500-2,000 cubic metres per second were still flowing through the Dam.

The warden of the Dam, Oberfoerster Wilkening, had a direct line to the exchange at Soest and a tieline to the Dam itself and the man on duty there. This line was tested every night according to instructions and was found on the night in question to be in perfect order. During the raid, however, the terminus at the Dam was destroyed by a direct hit and this put the main line to Soest out of order. After wasting precious minutes trying to get through to Soest, Oberfoerster Wilkening finally ran to the station of the Ruhr-Lippe Railway and got through from there via Koerbecke. According to a statement by Post Office officials, this call was received between 01.10 and 01.15 hours. Between 01.30 and 01.35 hours a second report, warning of an impending flood catastrophe, was received. Before that nothing was known here of the two calls of the Oberfoerster.

The Post Office was hindered in its work by the fact that the electric light had failed and candles had to be used. Officials tried to ring through to Neheim via Menden. They were unsuccessful, because the line Soest-Menden, or more probably Menden-Neheim, was already under water. Exact details cannot be established now. The vehicle and driver, on duty for just such an emergency, were unable to transmit the warning further downstream, since the roads had already been flooded with incredible speed.

The enemy air raid lasted until 03.23 hours despite A.A. fire, but no further damage was caused.

According to instructions laid down, Regierungsdirektor I (Niewiesoh) had gone to the Town Hall as soon as the low-flying aircraft indicated a serious attack on the town of Arnsberg near the dam. He got to his post at 00.30 hours and satisfied himself that all the emergency services were operating according to plan. When the report from Soest of the damage to the Moehne Dam was received at 00.50 hours, he immediately ordered the Police at Neheim to be notified and then the Police stations in the towns further downstream. The warning was actually received in Neheim before the arrival of the floodwave, but since, owing to the air raid warning, most people were in their shelters, it was almost impossible for the police to warn the population effectively and in time.

As I was on duty in Berlin at the time, the Regierungsdirektor, after ordering the warning to be passed on, notified my deputy of the occurrence. He then requested immediate help from the Army. After doing that, he went to the Dam to inspect the damage on the spot. The troops which had been asked for arrived in Neheim at 05.00 hours although they had had to arrange transport first. The police reinforcements which we had asked for also turned up quickly.

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The party arrived at the Dam at 01.20 hours and found the telephone destroyed as reported. They tried to issue warnings from the neighbouring Moehneseeerassen Hotel, but were unable to get through. The waterworks engineer, who was one of the party, then asked to be taken to the flooded areas. This took some time, since by then most of the recognised roads had been cut. They finally arrived at Neheim at about 03.00 hours and found the Council assembled in a high-lying building which had become the headquarters of the rescue services. All the local officials and the Deputy Gauleiter arrived almost immediately. Everything possible had been done, and the organisation was running as smoothly as could be expected.

As soon as I myself returned from my duty journey, I, in conjunction with the Reich Defence Commissioner, took all measures that became necessary, as the situation developed.

If, in the course of investigation, the question of the efficacy of the warning system is raised, the following observations should be noted.

Whatever the warning system employed, material damage could not have been minimised except in a very small way, such as for example the driving of cattle on to high ground. Houses, factories and installations could not have been moved, although a small number of valuables might have been evacuated. The very regrettable loss of human lives could hardly have been avoided in the danger zone because of the size of the breach and the tremendous speed with which the dammed-up water was released. The casualties in areas further removed from the scene of the catastrophe were, in the circumstances, unavoidable, but had the warning system been speedier some lives may have been saved. Any shortcomings in the warning system must be attributed to the failure of the competent authorities to give us correct information as to the possible effects of enemy bombs. Had we been informed that there was a possibility of the enemy using bombs of such weight, we should have realised that the existing warning system was inadequate and our technicians would have concentrated on devising a more effective system. Alternatively, the danger area could have been evacuated for the duration of the war.

Immediately after the catastrophe, I went into the matter with a Post Office engineer, who made the suggestion that a cable should be embedded in the structure of the Dam itself, which would, in the event of that structure being affected or agitated, automatically transmit a warning. This would be immediate and all human error would be cut out. The details are not ready yet, as there are difficulties with the supply of materials and laying of the wires. Meanwhile, local warning systems have been installed at all dams in such a way that the population would, in an emergency, have sufficient time to save themselves. The development of a perfect system is having constant consideration.

Report No. 2. From the Regierungspräsident, Arnsberg, to the Minister
of Labour. Dated 22nd June, 1943.

Results of the raid

Damage to river and riverbeds: The bed of the Moehne and the Ruhr is silted up below Neheim and has moved in many places, the river having changed its course slightly. The Moehne, from the Dam to where it flows into the Ruhr, and the latter up to 1.5 km. below that point, will have to have its banks completely reconstructed. Below Neheim, in the "Ohl", large gravel banks have been formed and are cutting off the valley. They hinder the drainage of the floodwaters and are the reason why large areas of the Moehne valley are today still flooded. The so-called Mill - or Upper Canal, which branches off from the Moehne above Neheim and supplies water to a number of industrial concerns and to the hydro-electric installation of the firm F.W. Brockelmann, is completely silted up. Works dependent on this water supply are therefore idle.

Damage to Hydro and Electric Installations: On the Moehne, the power station Moehnesee - capacity 120,000 kVA (kilovolt-amperes) - has been completely destroyed, including the compensating reservoir. All large machinery, with the exception of a transformer which was recovered 100 m. downstream, has disappeared. The small power station situated further south is so heavily damaged that it will probably be impossible to repair it again. Heavy damage has also been caused to the water-works at Schulte in Guenne, Hennecke in Himmelpforten and those of the VEW with a transformer station in Niederense and of the firm of Brockelmann in Neheim. The buildings and plant of the small power station Moehnesee have remained intact. In the Ruhr valley, the power station of the water-works at Echthausen has escaped structural damage, but the weir and mechanical installations have been destroyed. At Wickede, weirs have been destroyed at the local power station, the Soest water-works, and the Vereinigte Stahlwerke (Steel Works), and also at the local power station at Froendenberg, where large portions of the banks of the Upper Canal have caved in. The dam of the water-works at Gelsenkirchen in Langschede has been similarly destroyed. The Hengsen weir of the Dortmund water-works and the power installation Westhofen of the same company have also been badly damaged. In all these cases, works of great economic importance are involved.

The dams of the Ruhrverband on the Hengsteysee, by the Stiftmuehle between Hengstey and Harkotsee and the power installations on the Harkotsee have also been damaged due to mud, silt and the undermining of its structure.

The water-gauge installations at Neheim, Froendenberg, Echthausen and Villingst have suffered fairly heavy damage.

The following damage was caused to overhead and underground electric cables:

100 kV Overhead cable	Unna-Neheim	destroyed for 3 km.
25 kV	" " Froendenberg-Neheim	" " 3 km.
10 kV	" " Niederense-Honningen	" " 2 km.
10 kV	" " Echthausen-Bremen	" " 2 km.
10 kV Underground	" Niederense-Volbringen	" " 1 km.

25 kV Overhead cable Neheim-Moehne power station is destroyed in a number of places, altogether for about 2 km.

All the lines mentioned above have now been repaired. Supplies of electric power have been resumed with the exception of the line Neheim-Moehne power station, which is still under repair.

The local circuits at Guernse, Niederrense, Neheim-Huesten I, Vosswinkel and Echthausen have also suffered considerably, the stations in their area having been damaged and silted up.

Damage to water-works and purification plant: The water-works of the town of Neheim-Huesten, situated in the Moehne valley, which served the whole town district of Neheim, have been completely destroyed. A second works, further downstream has also been put out of action. That part of the town which is affected is being supplied from Huesten by means of a temporary pipeline, laid above ground.

The water-works along the Ruhr, i.e. Gelsenkirchen, Hamm and Dortmund as well as those at Hagen, Witten and Bochum have already been reopened, after flood damage had been repaired, and are now in a position to supply, quantitatively, the most urgent needs of the area. As the quality is uncertain, chlorination has been ordered, and the population told to boil all water before use. The water-works supplying the towns of Soest and Gelsenkirchen have both been put out of action.

Of the purification plants, those at Neheim and Froendenberg have been rendered unserviceable.

Damage to railways: The main line Hagen-Kassel is heavily damaged between Neheim and Wickede and slightly damaged between Wickede and Froendenberg. The lines were in places completely undermined and at Wickede both rails had been lifted bodily off the embankment and washed on to a lower-lying field. Traffic has been resumed for local trains since the 8th June and for express trains since the 11th June. The southern part of the station at Froendenberg and the branch line to Menden have been completely wrecked. On the line from Wetter to Witten, one rail has been undermined in parts.

The narrow gauge railway Ruhr-Lippe has not been able to resume operations on the Moehne valley line. The rails from about 1.5 km. above the station at Niederrense to the Mossfelde estate some way below have been washed away or covered in mud.

Damage to bridges and roads: All road and narrow-gauge railway bridges have been destroyed in the Moehne valley. The work of reconstruction has been taken in hand. In the Ruhr valley, the following damage has been reported: The road bridge by House Fuechten is threatened by high water but not damaged otherwise. The two at Neheim have completely disappeared. Of the ferro-concrete bridge, not even the piles have remained. The upper part of the iron bridge has been washed 100 m. downstream and deposited in the river bed. Of the railway bridge above Wickede the flood bridge and that over the upper canal have been destroyed and the bridge over the Ruhr heavily damaged. At Wickede the road bridge has been completely destroyed, likewise the road and the railway bridge of the Froendenberg-Menden line. The flood-bridge at Longschede has been destroyed and the foot bridge is threatened by high water and damaged. The road bridge in Giesecke is slightly damaged, that over the Mill channel more heavily. The road bridges at Schwerte and Westhofen are also threatened by high water and damaged. One of the supporting pillars of the railway viaduct over Lake Harkort has collapsed.

The damage to roads varies from the appearance of pot holes to the complete destruction of the road bed and surface. The worst damage occurred to a stretch of road in Wickede.

Damage to industrial undertakings: Numerous industrial installations have been hard hit as a result of the attack. In many cases materials, buildings and machinery have been swept away by the floodwaters or damaged extensively by mud. Also they have been hindered indirectly by the damage to electric and water supplies. Worst hit of all were the firms situated in the lower Moehne valley around Neheim.

The camp for workers from the East, which had been erected for the Neheim industries at a cost of nearly a million marks, has completely disappeared. A number of factories further downstream have been damaged too and have had to suspend production, but I have not included them in my survey, since their damage consists less of that caused to buildings, as loss of tools, machinery and stocks of material. I will however mention the steel works at Hagen-Kabel and the steel works Harkort-Eicken in Wetter. In both cases the smelting ovens and rolling mills were working at full pressure when the disaster occurred and damage was so heavy that it cannot yet be assessed.

Damage to dwelling houses: The local Councils have reported the following damage:

COUNCIL	Destroyed	Heavy damage	Medium damage	Slight damage
Arnsberg	40	9	20	117
Soest	37	20	30	98
Iserlohn	2	28	48	48
Total	79	57	98	263

The largest areas of devastation are in Neheim and Wiokede, where many houses were so completely washed away, that only the remains of the lower walls can be seen to show where they stood. Some houses have been only half carried away whilst many are still intact apart from the roof, which has disappeared. Most of the houses in question were massive structures with double walls. On the other hand, in Niederrhein some quite flimsy wooden buildings have withstood the flood waters and are intact right up to the second floor.

Agricultural damage: The "Kreisbauernführer" (local farmer leaders) report the following agricultural damage:

In Kreis Arnsberg 386 hectares of arable land and about 100 hectares of park, horticultural or woodland were flooded, making a total of about 486 hectares.

20% of the wheat, barley and corn crop is totally destroyed, and of the rest only a maximum harvest of 30% can be expected. The root crop has been completely destroyed. 40 hectares of arable land have been laid waste through loss of the top soil.

In Kreis Soest 280 hectares are completely and 153 hectares partially destroyed, as well as about 4 hectares of woodland.

In Kreis Iserlohn, one farm was completely and one partially destroyed.

According to present estimates, the following losses of livestock were suffered:-

KREIS	Horses and Cattle	Pigs
Arnsberg	155	51
Soest	245	360
Iserlohn	86	115
Total	486	526

Moehne Dam, the available reservoir space has been halved. The result will be that the additional supply of water to the Ruhr will have to be curtailed. The quality of the water will be adversely affected and consumption, unless supplies can be got from other sources such as the Lippe, will have to be cut down, even for industrial consumers. It will depend largely on the speed with which repair work can be carried out and also on the weather during the autumn, to what extent industrial - in part war industrial - production will be affected.

Influence on town and country planning: It would seem desirable, when restoring damaged and destroyed property, to pay due attention to improvement and planning. Actually the planning of the area hit by the disaster left much to be desired. A fact preventing large scale replanning is, that it is necessary to restore traffic and production as quickly as possible. The railway authorities who had planned to improve the line from Hagen to Kassel, have therefore been forced to abandon the scheme and merely restore the line to its previous condition. It will however be possible to introduce new plans in some cases where road and town planning can be carried out. It is, for example, planned to rebuild totally destroyed farm houses in different form and move them entirely out of the reach of flood waters, whilst the town area of Neheim in the valley of the Moehne can be completely replanned. In the latter case factories would, of course, have to be rebuilt in their old locations, since the wastage of remaining buildings and foundations could not be entertained at present. Two other factors would also have to be considered - whether, by moving the Moehne bed, a more favourable channel could be found, thus gaining valuable industrial land; and whether a better route could be found for the Niederense-Soest road, if the upper bridge on the Moehne in the town area were rebuilt. At the same time the question of a revision of the route taken by the narrow-gauge railway Neheim-Niederense and its connections with the Neheim factories will have to be dealt with. In order to clarify the position, I intend to hold a conference of all the authorities concerned. I shall report the result of these talks in due course.

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