REPORT OF GAS AND DUST EXPLOSION IN MINE NO. 6, SPLASH DAM COAL CORPORATION, SPLASHDAM, VIRGINIA, JUNE 13, 1932

By

J. F. Davies,
District Engineer

and

H. B. Humphrey,
Assistant Mining Engineer

DEPARTMENT OF COMMERCE
BUREAU OF MINES

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INTRODUCTION

A gas and dust explosion occurred about 8:30 a.m., Monday, June 13, 1932, in the No. 6 mine of the Splash Dam Coal Corporation, Splashdam, Virginia. The explosion was practically confined to the No. 6 main entry, and resulted in the death of the 10 men who were in the mine; of these one was killed outright by violence, 3 had severe burns, 3 slight burns and 3 were evidently killed by afterdamp alone.

The Norton Station of the Bureau of Mines was notified by telephone about 9 a.m., by the secretary of the Virginia Coal Operators' Association, Mr. C. B. Neel, and shortly after by the district state mine inspector, Mr. D. E. Stanton. The Norton Safety Station rescue equipment was taken to the mine immediately in the Bureau trucks driven by J. F. Davies and E. H. Hodgson, arriving at 11:30 a.m.

Recovery work had been started at once by mine officials, but had been found defective by State Inspector D. E. Stanton on his arrival at 11:10 a.m; changes in methods were made and, with the co-operation of the representatives of the State, the mining company, the Virginia Coal Operators' Association, and the Bureau, all the bodies had been recovered by 3 p.m., June 14. Ventilation had been sufficiently restored by Wednesday, the 15th, so that the official investigation could be made. H. B. Humphrey of the Bureau arrived

by auto from Washington about 4 p.m., June 14. The official investigation was made on June 16, in which J. F. Davies, E. H. Hodgson, and H. B. Humphrey, of the Bureau of Mines, assisted. Air and dust samples were taken on June 17.

PREVIOUS EXPLOSIONS

On March 24, 1927, gas from a crack in the roof over a long wall in No. 5 mine was ignited by an open light and 8 men injured and burned. Standing water prevented the spread of this explosion. The gas accumulated because of a short-circuiting of the air in starting a new wall face.

Since that time, there have been reports of occasional ignitions in these mines without violence or severe injuries.

LOCATION

Mines 5 and 6 of the Splash Dam Coal Corporation are located at Splashdam, Dickenson County, Virginia.

The mine tipple is served by a siding of the C. C. & O. or Clinchfield Railroad, connecting at St. Paul, Virginia, with the N. & W. Railroad.

COMPANY OFFICIALS

The general officers were:

Barnes Gillespie,	President (deceased),	Tazewell, Va.
J. W. Gillespie,	Vice President,	Tazewell, Va.
George J. Walker,	General Manager,	Lebanon, Va.
P. F. Brown,	Engineer,	Drill, Va.

The officials at Splashdam were:

G. K. Beavers,	Mine Superintendent
O. C. Dowdle,	Inside Foreman and Fire Boss (deceased)

EMPLOYEES AND PRODUCTION

Mines 5 and 6 are operated under one management, with a single general staff. The two mines employ about 165 men and produce about 800 tons per working day. Mine No. 6 employs 20 company men and 60 loaders, all on day shift. The output from this mine was about 350 tons a day. Previous to the explosion, the mine was working two or three days a week.

THE MINE

Both mines have drift openings; there is one inside connecting entry, which is closed by a board stopping to provide separate ventilation. Mine No. 6 is opened by a double entry system 1,500 feet from the portal to the 1st north cross entry, where it becomes a triple entry system for 1,500 feet more to the face. However, there is a break at the rock fault where the 3rd entry is not connected. As far as the 1st north, the No. 6 main haulway is used for intake and the air course for the main return to the fan.

The Coal Bed:

The Splashdam bed worked at this mine is a hard, bright, bituminous coal. The bed is flat-lying, broken by slight faults and undulations due to the Russell Fork fault by which it is exposed at this point. The roof is a sandy shale and the floor is clay underlain by sandstone. The coal is from 40 to 44 inches thick, with a single rock parting of about 1-1/2 inches.

Coal Analysis:

The average analysis of the coal from the Splashdam bed, as given in Technical Paper 365, "Analyses of Virginia Coals", is as follows:

	Per Cent
Moisture	2.4
Volatile matter	29.3
Fixed carbon	62.7
Ash	5.6
Sulphur	.8

The ratio of volatile matter to total combustible, or volatile plus fixed carbon, is .318. To render dust of this kind of coal inert and to prevent propagation of an explosion in case no gas is present will require at least 61 per cent of incombustible in the dust. Of this amount the moisture and ash content of the coal provide approximately 8 per cent.

Coal Preparation:

The coal from both No. 5 and No. 6 mines is prepared by screening at the tipple, and loaded into railroad cars on three loading tracks. Screens are of the shaker type, producing slack, 1-1/4-inch, 2-1/2-inch, 5-inch, and larger lump sizes. About 50 per cent is also shipped as "run of mine". A dry cleaning process is used to remove slate by a machine operating on the principle of a jig.

DUST

Dust from this coal, when suspended in the air, is explosive. From the evidence of propagation and coking, dust played the major part in this explosion. The haulage roads were heavy with dust from coal spilled and broken up on the tracks. The two track cleaners were loading out this fine material from the 1 north parting at the time of the explosion. The entry faces and rooms were also dusty. The "very dusty roads" were mentioned in the last State inspection report, posted in the foreman's office outside the mine on May 11, 1932.

Table 1.- Analyses of dust samples, Mine No. 6, Splash Dam Coal Corporation, Splashdam, Va.

Sample No.	Kind	Location	Per cent 20 mesh: Thru 20 mesh	Thru 100 mesh	Thru 200 mesh	Analysis as rec'd.: Total comb., per cent	Moisture, per cent	Ash, per cent	Total inherent comb., %	Apparent wetness *	Remarks
D1a	Rib & roof	6 main at 5 crosscut inby 1 E pick-up	63	25	13	77.6	3.4	19.0	22.4	Dry	Dust brushed from surface
1b	Road	do.	56	7	2	73.7	6.5	19.8	26.3	"	do.
2a	Rib & roof	6 main 200' in 5 x-c from 1 E	58	38	19	65.9	4.9	29.2	34.1	"	do.
2b	Road	do.	65	20	17	75.2	3.3	21.5	24.8	"	do.
3a	Rib & roof	2 S. at 1 E switch	67	39	27	72.9	5.1	22.0	27.1	"	do.
3b	Road	do.	56	17	2	78.5	5.6	17.9	21.5	"	Some coke particles
4a	Rib & roof	6 main 500' inby 1 N	63	38	14	68.6	3.5	27.9	31.4	Damp	Dust Brushed High in Sand
4b	Road	do.	69	20	15	63.1	4.3	32.6	36.9	"	Dust Brushed Track up grade
5a	Rib & roof	1 N at side track	78	42	30	67.5	2.5	30.0	32.5	Moist	Dust Brushed High in Sand
5b	Road	do.	81	23	14	50.6	1.8	47.6	49.4	"	do. Track up grade
6a	Rib & roof	6 main just inby 1 N	68	58	31	59.3	13.7	27.0	40.7	Wet	do.
6b	Road	do.	78	28	21	54.1	6.8	39.1	45.9	"	do.
7	Track cleanings	Car loaded at 1 N switch	82	32	11	46.9	6.0	47.1	53.1	Dry	Loaded at 1 N switch
8a	Rib & roof	6 main 5 x-c outby 1N	74	39	21	67.3	12.9	19.8	32.7	Moist	Brushed from surface
8b	Road	do.	65	24	14	67.4	11.2	21.4	32.6	"	do.

* This applies to the dust as it appeared when in place.

Table 1 shows the location at which the 15 dust samples were taken; the kind of dust, as rib and roof, or road; the approximate analyses of the samples; the fineness of the dust;and the apparent wetness or dryness when taken. The mine was much wetter from condensed moisture at the time of sampling than at the time of the explosion. Normally, the mine is dry. The locations at which the dust samples were taken are shown on the map by "D-1", etc. The individual dust analysis report sheets are included in the appendix.

No sample had an incombustible content high enough to prevent propagation. Road samples D-1b and D-2b from beyond the flame area in No. 6 main were very low, and the explosion could easily have been propagated in this section with a favorable start. Samples 5a and 5b in 1 north show that besides the standing water a rather high incombustible content was present in the dust,which operated to stop the spread into 1 north. Sand was plentiful along this track, as well as in 6 main, where sample 4b was taken. The material loaded in the car at 1 north and 6 main parting was explosive, but had a higher incombustible content than the ordinary surface dust, as might be expected in such cleanings.

METHOD OF MINING

The double-entry, room-and-pillar method of mining was used. About 300 tons of coal per day were taken in advance and 50 tons from pillar extraction. About 25 years is the estimated life of the mine.

All coal except small stumps is undercut by Goodman Lorain shortwall machines, with 6-1/2-foot cutter bars. It is shot with permissible explosive, fired by fuse and detonators. All coal is hand-loaded.

Rooms are 24 feet wide and are carried from the entry to the opposite air course. A row of posts 4 feet apart and 30 inches from the rail is set in rooms, with a safety post at the face. On pillar slabbing a post is set for each car length cut.

Ventilation and Gases:

The mine was rated as non-gassy by the Virginia Department of Mines, although gas was known to be present, ignitions had occurred, and a lax fire-boss examination was made as a precaution. No record was kept of these examinations.

A Jeffrey disc fan, 6 feet in diameter, operates exhausting at the mouth of the main air course. The water gauge is unknown, but the volume was 33,800 cubic feet per minute as measured on June 16. This is probably more than the normal circulation before the explosion, as the air was not being carried to all sections, some doors not yet having been replaced. The fan is driven by a patent-composition rope drive from a 15-horsepower, 220-volt, alternating-current motor.

The mine was ventilated, as indicated on the map, by a continuous current, with the active advance faces on the last end before return to the fan. Ventilation was interrupted by "shorting" the air past idle sections and by shutting down the fan when the mine was idle. Although air was reported as "fair", only a small part of the total intaking air could have reached the active faces, the major part being lost through leaking doors and stoppings. Stoppings were variously pack wall, plastered with clay, brick, or board.

The fact that the fan was not damaged was due to the non-propagation of the explosion through the air course. To prevent the likely destruction of the fan in the event of another explosion, it

should be removed from its present position and set outside and out of line of the opening and protected by explosion doors or similar means.

Measurements and samples were taken of the return air currents after ventilation had been restored in the affected area. The locations of these samples (and the sample number) are shown on the map by "A". The analyses and descriptions of these samples are given in Table 2, and the official laboratory report sheets are included in the appendix.

During later recovery of the faces of the east entries off 1 north, some accumulations of methane were encountered, formed during the time ventilation was cut off.

Table 2.- Analyses of air samples, Mine No. 6, Splash Dam Coal Corporation, Splashdam, Va.

Sample No.	Laboratory No.	Location	Analyses CO_2	O_2	CH_4	N_2	Air, cu. ft. per minute	Methane, cu. ft. per 24 hours
A1	55851	6 main A.C. full ret. inby 1 south	.07	20.88	.15	78.90	14120	30500
A2	55852	Face 1 east off 2 south	.15	20.71	.59	78.55		
A3	55853	Face 2 south heading - 100' inby x-c	.28	20.34	1.22	78.16		
A4		1 E pick-up - return from 2 E	Bottle broken				3240	
A5	55838	6 main left a.c. below 1 E partial ret.	.10	20.89	.03	78.98	3240	1400
A6	55840	6 main left a.c. above 1 E partial ret.	.11	20.91	.09	78.89	4200	5500
A7	55839	Full return at fan	.17	20.68	.23	78.92	33775	111850

Sample A-1 was taken of the main return inby 1 south. The measurement of 14,000 cubic feet of air at this point indicated a leakage of 19,000 feet through the main stoppings. The methane content was .15 per cent, or about 30,500 cubic feet per 24 hours.

Sample A-7 at the fan showed .23 per cent methane, or 111,850 cubic feet in 24 hours. This, apparently, indicated the draining off of accumulations of methane from different parts of the mine, causing a variable gas content in the return.

Sample A-2 from the face of 1 east off 2 south showed .59 per cent methane, and sample A-3 from 2 south showed 1.22 per cent. These were taken after the fan had been running continuously since recovery was started and, probably, represent essentially the normal working atmosphere in these faces under the most favorable conditions. The air intaking to 1 east faces contained about .10 per cent methane, according to sample A-6. Sample A-1 indicates that 30,500 cubic feet of methane per 24 hours was being taken through the 2 south section, and samples A-2 and A-3 appear to show that considerable methane was being produced in that section; therefore, with the fan shut down for 12 hours (as occurred) enough methane would have been liberated to fill a considerable length of entry with an explosive mixture unless natural ventilation continued the coursing of the air.

Haulage:

The track gauge is 42 inches. Rails are mostly 30-pound size, with some 40-pound on main haulage. In rooms, 20-pound rails are used. Clearance is not well maintained and debris is allowed to pile up between the rails and the ribs. The entries are brushed to give a height of about 5 feet. Air courses and rooms are not brushed.

There are 105 drop-bottom type steel cars of 1-1/2-ton capacity. Two 4-ton Goodman and one 6-ton General Electric combination cable-reel and trolley locomotives are used. The trolley wire is unguarded and extends to within 100 feet of the entry faces. Power is generated at 275 volts, direct current, supplied to the line at the outside and by a feed wire carried over the trolley wire. Main-line track has both rails bonded, with cross bonds at 200-foot intervals. Cross-entry tracks have only one rail bonded.

Lighting:

Carbide lamps were used by all men in the mine. Where gas was suspected on fire-boss inspection, a flashlight was carried.

Machinery Underground:

Besides the haulage locomotives and the cutting machines, there were two 15-horsepower, stationary, Fairbanks-Morse centrifugal pumps. Also, there was a mounted portable air compressor, gear-driven by a 15-horsepower motor.

Power:

Electric power is purchased from the Appalachia Power Company at 2300 volts, alternating current. A substation at the portal contains three Westinghouse transformers, each rated at 55 K.V.A., which reduce the voltage to 207, alternating current. A 150-kilowatt Westinghouse synchronous converter changes this to 275 volts, direct current, for mine use.

A similar installation of slightly larger capacity in an adjoining shed serves No. 5 mine. The two substations are connected to take care of a heavy load in either mine. The buildings are rough wood and sheet-iron sheds, and the installations are unguarded.

There are no section switches underground.

The explosion broke the trolley wire outside the portal, knocking out the circuit breaker in the substation. The near corner of the shed was also torn off, but this had no effect on the installation.

Explosives:

Miners shot the faces with three holes as a rule, using permissible Peerless Union FLPL 1-1/8 x 8-inch explosive. From 1 to 2 sticks are used to a hole, and they were supposed to be tamped with paper dummies filled with road dirt. Fuse and No. 6 detonators were used in firing..

Brushing was done by the rock or drill crew. Single holes were fired, using pellet powder. Any large rocks were broken by drilling and shooting with 40 per cent dynamite.

The main explosives magazine is located on the hillside not more than 200 feet from the tipple. It is a wooden structure where as much as 2500 pounds of explosives are stored at a time. A separate shed about 100 feet away is used for storing detonators.

A small wooden building, 500 feet from the mine portal, is used as a distributing magazine. Here two days' supply of detonators and explosives are kept together and issued to the miners as they go on shift. Miners carry explosives in sacks, and detonators in fiber containers holding ten each. A recent practice had been adopted, on recommendation of the district inspector, of storing explosives and detonators in separate holes in the rib, in break-throughs back from the face.

It was said that when the compressor left the face of No. 6

main when the brushing hole had been loaded, there were five sticks of pellet powder in a carton on the compressor truck in a space between the motor and the compressor. This powder had burned, traces being found near the rib and door in 1 east pick-up. The singed remains of the carton were found farther inby in 6 main. No signs were found on the truck or the machinery mounted on it of the powder having been burned there. From the evidence, it was judged that this powder was blown into the air and ignited by the explosion. Several sticks of 40 per cent DuPont Red Cross dynamite and a cap crimper were found in a pile against the rib at 1 east 2nd north pick-up. One and one-half sticks had been burned. The presence of this explosive was unexplained.

Drainage:

The small amount of water made by the mine is pumped to the surface through boreholes by two centrifugal pumps. Several hundred feet of 1 north inby 6 main are covered several inches deep by standing water. These and other pools are controlled by bailing at intervals. The main return airway for some distance from the fan is deep in water, seriously reducing the area available for travel of the air. However, just previous to the explosion, this had been pumped out while several main stoppings were rebuilt.

Rock-Dusting and Watering:

No rock-dusting has been done in this mine, and no watering is done to allay dust.

CONDITIONS IMMEDIATELY PRIOR TO THE EXPLOSION

The fan was shut down Thursday night, run from early Friday morning to Saturday noon, and was "down" till Monday morning, except for the period between 2 and 5 p.m., Sunday.

* Compressor truck at time of explosion was in 6 main opposite 2 south. See detailed map.

At about 6:45 a.m., Monday, June 13, the fan was started before 11 men went into the mine to perform jobs which were necessary or had been left for an idle day. The inside foreman, who acted as fire boss, went in. A rock crew, consisting of a driller, his helper, and a company man, Dewey Wampler, took a motor and the compressor outfit to the face of 6 main, and drilled a brushing hole. The fire boss returned to 2 south, where two brattice men were waiting for instructions. These men had come in with the rock crew. Two track cleaners brought a motor and two cars to 1 north parting and started to clean track. A pump man and two bailers took a motor and some cars, secured brattice lumber in the mine yard, and brought it in. The pump man got off at 1 north and walked in to the pump at the head of that entry. The bailers took the lumber to 2 south at 1 east, outby the curtain, unloaded it, and went into 6 east off 1 north. The company man, Wampler, left the face of 6 main after the hole was drilled and loaded. He passed the fire boss at 2 south and saw the brattice men near by. At the parting to 1 north, he passed the two track cleaners, and found the dust cloud so thick it choked him and made the lights a dim red. He reached the outside and waited in an old drift opening around a curve to see the superintendent about further duties in No. 5 mine. The fire boss gave his Baby Wolfe safety lamp and a flashlight to the bailers as they came out of 2 south, to take with them into 6 east. He then started outside. The driller and his helper had evidently, in the meantime, shot the hole in the face of 6 main and come back to 2 south switch. Here another hole was drilled to provide greater clearance. When the explosion occurred, the fire boss was about 900 feet from the portal, the drill helper was completing the hole in the rib in 6 main at 2 south, the driller had gone into 2 south presumably to get a rock hammer left at the 1 east

switch, and the two brattice men were in 6 main inby the drill helper or in 1 east off 2 south. The explosion occurred about 8:30 a.m.

The flames of the explosion burned leaves for almost 300 feet outby the portal. The fire boss was killed by violence, and the track cleaners by severe burns and suffocation. The drill helper was badly burned above the waist, his lower half protected by the empty car beside him, and fell in his tracks. The driller died immediately from slight burns and suffocation. The two brattice men were burned about the head, but crawled to a point in 2 south air course before being overcome. The pumper and two bailers were in no danger, as an extensive pool of water stopped the explosion from passing up 1 north. They came out, as shown by clear footprints in dust left by the explosion, and died at once on reaching the parting at 6 main.

Had they stayed at 1 east, or broken through into No. 5 mine, they probably would have been saved. Had they been equipped with self-rescuers, they might have been able to pass through the gases and reach the outside.

RESCUE AND RECOVERY WORK

The superintendent, Mr. G. K. Beavers, was about 2,000 feet from the portal when the explosion occurred. He called the general manager, Mr. G. J. Walker, at Lebanon, Virginia, and then went into No. 5 mine and brought out the three men working there who knew nothing of the explosion until told; he then put a crew to work placing canvas curtains in the crosscuts between the main haulageway and the main return. These were found to be ineffective by District Inspector Stanton and J. F. Davies of the Bureau, on their arrival.

After studying the map and conferring with Mr. Beavers, it

was decided to rebuild the brattices with wood and plaster them with clay. Inasmuch as the fan was not damaged and the main haulage was on the intake, the restoring of ventilation and progress into the mine was rapid.

The first body, that of the fire boss, was found about 900 feet inby the portal of the mine. This body was very badly mutilated and burned. Bodies two and three, which were the motorman and brakeman who were cleaning roads, were found about 1,400 feet inby the portal of the mine; these bodies were burned. Bodies four, five, and six were found about 75 feet inby the mouth of the first north; these men were undoubtedly overcome by carbon monoxide after traveling for a distance of 2,000 feet. The rescue party, after satisfying themselves that no dangerous gases were coming out of the 1st north, proceeded up the main heading to a distance of about 1,700 feet from the portal. At this point it was necessary to direct the fresh air up the air course on the left and use the main haulage for the return air. This procedure slowed up the work considerably, as the roof in the left-hand entry had not been brushed and was very low. It was necessary to travel the air course for a distance of 350 feet, which enabled the rescue party to get to the 1st east pick-up. At this point carbon monoxide was encountered bleeding off the 1st east pick-up air course. For a time the fresh air was short-circuited through a crosscut to the main heading, where one of the drillers' bodies was found. At this point, realizing it would require some time to clear this condition, it was agreed to withdraw the men to the outside for a short rest while this was being done. However, a curtain was erected in the 1st north, to deflect more air into this section to speed up the clearing.

On re-entering the mine, the main heading was explored to the

face and found to be free of carbon monoxide. The rescue party then proceeded to explore the 2 south heading. Body number eight, the driller, was found about 150 feet in the 2 south haulageway. Proceeding up the 2 south haulageway, carbon monoxide was again encountered about 200 feet in. The party retreated to the main heading and erected a canvas brattice across the heading which deflected the fresh air into the 2 south and cleared it in a few minutes. The two missing bodies were found in the 2 south main air course.

MINE CONDITIONS AFTER THE EXPLOSION

The official underground investigation was made by representatives of the mining company, the State Mining Department, the U. S. Bureau of Mines, and interested Virginia mine officials. The principal damage to the mine found was the blowing-out of stoppings and doors. The force and flame of the explosion apparently picked up in violence from 1 north to the outside. Inby from 1 north to the 5th crosscut from 1 east pick-up, there is evidence of flame in 6 main heading; coke and light soot streamers being found which show movement toward the face. The flames, soot, and coke swept into 2 south and passed under the curtains to the face of the heading slowly and with no violence. Expansion and possibly pools of water reduced the force of the explosion in 1 north; doors were blown out in the east entries off 1 north, as far as 6 east, but no other damage was done.

From the evidences of force and flame observed, and the information gained of the movements of the men, the most probable cause of the explosion appeared to be an ignition of gas at some point in 2 south, which was strengthened and propagated by the dust cloud in 6 main. Possibly the

gas was liberated by the shot fired in the face of the 6th main and was carried slowly along the air course, then into the 2 south and 1 east off 2 south and ignited by an open light worn by the driller or a bratticeman; possibly the concussion of the 6 main shot started a methane accumulation in the face of 1 east off 2 south or in the face of 2 south to move to places where open lights caused the ignition.

No evidence of a gas ignition previous to the dust explosion was seen, except possibly the condition of the drill helper who was burned above the waist standing between a car and the rib. Two other possible points of origin were gas in 1 east off 2 south and dust in 6 main at 1 north. At any of these points, an open light must have been the source of ignition.

STATE INSPECTOR'S CONCLUSION

The State mine inspector's conclusions were not available.

SUMMARY OF EVIDENCE AS TO THE CAUSE, ORIGIN, AND PROPAGATION OF THE EXPLOSION

Appreciable quantities of gas had been encountered in the 1st east off 2 south, which necessitated the use of a line brattice for about 40 feet. However, its use had been discontinued for several days prior to the explosion, as the gas had greatly decreased. During the official inspection, and as shown by the samples taken, gas in appreciable quantities was found in the 1 east and the 2 south faces.

The fan had been down for a period long enough for gas to accumulate in explosive mixtures in several faces, particularly 2 south and 1 east off 2 south.

In all probability, no inspection was made for gas beyond the curtains in 2 south.

The air was not actively circulated past the faces of 2 south or 1 east, and the circulation was weak in the haulway.

An accumulation of gas in the faces of 1 east and 2 south might have moved slowly into the return airway and rooms to the right of 2 south. Aided by leakage through the curtains, this accumulation might have reached an explosive stage in the haulway by the time the driller entered. Such a condition could have expended flame into 6 main and ignited the dust. The 6 main is on return air from 2 south to a point near 1 north, and it is likely that this region was filled with a

mixture of dust and gas capable of propagating an explosion and already in suspension. The resulting force would be as found, increasing toward the outside and diminishing toward the face. The main air course did not carry the explosion, as it was protected by standing water and fallen slate. The long stretch of standing water in 1 north, as well as expansion into the east entries, prevented the propagation in this direction. In 1 east pick-up, the expansion was so rapid that violence stopped at the second crosscut. In 6 main, expansion helped to reduce the violence. In 2 south, the coking indicates a dying out of violence.

MEN KILLED IN EXPLOSION

1.	O. C. Dowdle,	Inside Foreman and Fireboss
2.	Elmer Null,	Track Cleaner
3.	Cecil Stump,	Track Cleaner
4.	N. D. Honaker,	Pump Man
5.	Roy Garrett,	Bailer
6.	Clyde Matney,	Bailer
7.	Delbert Willis,	Drill Helper
8.	Dave Adams,	Driller
9.	Drew Wallace,	Ventilation Man
10.	Roy Sproles,	Ventilation Man

RECOMMENDATIONS

In order to prevent a recurrence of a similar disaster, the following recommendations are offered. The most urgent features have been discussed with the company officials.

1. The fan should be operated continuously at least 12 hours previous to the beginning of any shift.

2. Every open accessible part of the mine should be thoroughly and carefully examined for gas before anyone but the fire boss be permitted to enter.

3. The findings of such inspections should be entered in a

ook kept on the surface for this purpose only. This report should be counter-signed by the foreman before any men are allowed to enter the mine.

4. Only a standard size, magnetically-locked, approved safety lamp should be used, if a flame safety lamp is used as a gas detector.

5. When accumulations of gas are found, such place or places should be cleared of standing gas by directing the ventilating current, and no person should be permitted on the return side while this is being done.

6. Approved portable electric cap lamps should be used exclusively by all men underground.

7. A "no-smoking" rule should be put into effect and strictly enforced.

8. No trolley or power lines should be installed nearer than 300 feet of any working face or pillar.

9. Every working place should be inspected for gas at least twice during each working shift, in addition to the pre-shift inspection.

10. The ventilating current should be split so as to provide as much fresh air as possible to the active working places without its having to pass through robbed or abandoned areas. This could be done by driving another air course to connect with the 2nd air course of the 6th east which extends inby the 1st north. A better method would be by sinking an air shaft.

11. Any workings, active or otherwise, which are not effectively and continuously ventilated should be sealed.

12. Only permissible explosives should be used, fired electrically, and preferably after all men but the shot firer are out of the mine.

13. Only incombustible material should be used for stemming, preferably clay secured outside the mine, or possibly rock dust.

14. Every open, accessible part of the mine should be rock-dusted at least as far as the last open crosscut, and the rock-dusting should be maintained so that the non-combustible content shall be 65 per cent or more at all times.

To increase the safety and efficiency of the mining operations, these further recommendations are made on points which representatives of the Bureau of Mines have found to be important in the prevention of mine accidents.

Ventilation:

1. At least weekly, the air should be measured at the last open crosscut of each working entry and a record made in a book kept for this purpose, to indicate any unusual conditions arising in the ventilation of the mine.

2. The main return air course, where constricted by the accumulation of water or falls, should be cleared and kept open to avoid loss of ventilating efficiency.

3. The main return air course should be connected through the rock fault to avoid placing return air on the haulway.

4. Stoppings should be tightly constructed of incombustible material.

5. The barricade between Mines No. 5 and No. 6 should be replaced with an air lock with two doors of substantial fireproof construction, to serve as a second escapeway from the mines, with rock dust barriers on either side of the air lock.

6. The fan should be removed to a position out of direct line of the opening, and protected either by explosion doors or by a wall of weak construction. The substitution of a fan with reversible setting is recommended in place of the disc fan.

Haulage and Machines:

7. All open-type and non-permissible electric machinery should be installed or operated in pure intake air. Only permissible-type electrical machinery should be permitted on other than pure intake air.

8. Topping of cars should be restricted to avoid excessive spilling of coal on the track. With frequent cleaning, this will reduce the amount of dust formed.

9. Electrical switches should be provided for separate sections of the mine, so that power can be cut off idle sections; they should ~~and~~ ~~which will~~ automatically cut out in case of an overload.

10. Trolley lines should be guarded at least where men pass under or near them and, if possible, wherever they are less than 6-1/2 feet above the rail.

11. Suitable clearance should be maintained free of obstructions along haulways on the side away from the wire.

Explosives:

12. The storage magazines should be of standard fireproof construction, and removed to a safe location where protection will be provided by the hillsides and suitable barricades.

13. Not more than one day's supply should be kept in the distributing magazine.

14. Consideration should be given to the employment of shot firers to shoot all holes when other men are out of the mine.

15. No man should be permitted to ride a man-trip carrying either explosives or detonators.

General:

16. A strict check-in-and-out system should be put into effect.

17. All employees should be trained in first aid, and at least ten men should be trained in the use and care of oxygen breathing apparatus.

18. First-aid equipment should be available and maintained in usable condition, at the surface and at suitable points in the mine, preferably not over 1,500 feet from any working face.

19. The substations on the surface should be provided with warning signs and a grating or door to prevent the entrance of unauthorized persons. Fire extinguishers of the carbon-tetrachloride type should also be kept at hand.

The above recommendations apply equally to Mines No. 5 and No. 6, since they are, in substance, one mine.

SUBSEQUENT SAFETY ACTIVITIES

Previous to the explosion, safety meetings had been held, which no doubt helped to reduce the accident hazards in the mine.

The officials and men have joined in an active and progressive spirit to make future work in the mines as safe as may be done; meetings held since the explosion have been devoted to educational discussions of natural hazards and those due to current practices. Improved rules and regulations are to be formulated, based on experience and the recommendations of those consulted, and the points brought out in these meetings. Bureau representatives were present at one meeting by invitation.

ACKNOWLEDGMENT

The writers hereby express their sincere appreciation for the courtesies, assistance, and cooperation given by the officials of the Splash Dam Coal Corporation, and particularly desire to commend Mr. George J. Walker for his promptness in instituting safety measures and educational activities tending toward greater safety.

Respectfully submitted,

Joseph F. Davies

JOSEPH F. DAVIES,
District Engineer

H. B. Humphrey

H. B. HUMPHREY,
Assistant Mining Engineer

Approved:

_____

A P P E N D I X

Form 6—137

U. S. BUREAU OF MINES

E—DESCRIPTION OF MINE

(1) State Virginia (2) County Dickenson (3) Town Splashdam (Post office.)

(4) Mine sample of dust (Material—for coal give classification.) (5) Coal field ..... (6) District .....

(7) Mine Plashdam #6 (a. Name.) (b. Kind of opening—if shaft give depth.) (c. Height of opening above sea level.)

(d. Distance and direction from town.) (e. Sec., T., and R., if necessary.) (f. Railroad connections.)

(g. Shipping point.) (h. State if wagon mine or prospect and give distance from shipping point.)

(8) Coal bed Splashdam (a. Name.) (b. Geologic system.)

(c. Formation.) (d. Dip, degrees.) level (e. Strike, direction.)

(9) Mining system room and pillar (Long wall, room and pillar, panels, etc.) (10) Undercutting machine (Hand or machine.)

(11) Explosives permis. pellet & Dyn. (a. Used for coal.) (b. Used for roof or floor.)

(12) Operator Splashdam Coal Corp., Splashdam, Va. (Name and address.)

(13) Sales agent same (Name and address.)

(14) Output per day 300 (Average—gross or net tons.) (15) Maximum day's output 500 (During past year.) (16) Last year's output 70,000 (Gross or net tons.)

(17) Output from advance workings, per cent 85 (At present.) (18) Lifetime of mine 25 (Years—estimated.)

(19) Run-of-mine, per cent 50 (Of output shipped.) (20) Is coal screened? yes (21) Type of screens shaker

(22) Type of washer none (23) Per cent of coal washed 0

(24) Maximum size washed ..... (25) Sizes produced slack 1¼" 2½" 5" lump (Washed coal.)

(26) Sizes produced ..... (Of coal not washed.) (27) Is coal picked? car (State whether on car or belt.)

(28) Per cent of coal coked ..... (At mine.) (29) Sizes coked ..... (Screenings, crushed, washed, etc.)

(30) Type and number of ovens ..... (31) Remarks ..... (For any additional information indicate after subject by mark X if additional information is given here.)

(32) Can Nos. 1710, 06915, 96724, R-998, P502, 16, W-113, A-3, A183, B617, B-69, 247, & P-209, (Give Nos. of all samples forwarded.) 84172, 846

(33) Laboratory Nos. A 81740 to A 81754 incl. (Laboratory to be indicated by below corresponding can number.)

(34) Mine sampled at 8 (Number.) points, by J.F.Davies (Collector.) Norton, Va. (Office.) 6/16/32 (Date.), 19

Above information copied from Card A by McDermott on 6/22/32, 19

8—6373

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81740

Sample of rib dust (through 20-mesh screen). Can No. 1710

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine at 5th x-c inby 1st E. pick up.on 6 main.

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 218.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc. Collector Davies

	Air-dry Loss 2.3	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	1.1	3.4		
	~~Volatile matter~~ Comb	79.5	77.6	80.4	(a)
	Fixed carbon				
	Ash	19.4	19.0	19.6	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	on 20 mesh Carbon		126.0	36.6	
	thru 20 mesh Nitrogen		218.0	63.4	
	total wt. of sample Oxygen		344.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	49.0
through 100 mesh	24.6
through 200 mesh	13.3

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

a This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81741

Sample of road dust (through 20-mesh screen). Can No. 06915

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main at 5th x-c inby 1 E pick up

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 223.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc. Collector F. E.Cash

Air-dry Loss 5.4	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis: Moisture	1.2	6.5		
~~[illegible]~~ Comb	77.9	73.7	78.8	(a)
Fixed carbon				
Ash	20.9	19.8	21.2	
	100.0	100.0	100.0	
Ultimate Analysis:		Grams	Per cent	
Hydrogen				
on 20 mesh Carbon		174.0	43.8	
thru 20 mesh Nitrogen		223.0	56.2	
total wt. of sample Oxygen		397.0		
Sulphur				
Ash				
Calorific value determined: Calories				
British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	26.7
through 100 mesh	6.8
through 200 mesh	2.3

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

a This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81742

Sample of rib dust (through 20-mesh screen). Can No. 96724

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town SPlashdam

Location in mine 6 main - 200' inby 5th X-c from 1 E.

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 163.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc. Collector J.F. Davies

Air-dry Loss 3.7	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis				
Moisture	1.2	4.9		
~~Volatile matter~~ Comb	68.5	65.9	69.3	(a)
Fixed carbon				
Ash	30.3	29.2	30.7	
	100.0	100.0	100.0	
Ultimate Analysis				
Hydrogen		Grams	Per cent	
on 20 mesh Carbon		118.0	42.0	
thru 20 mesh Nitrogen		163.0	58.0	
total wt. of sample Oxygen		281.0		
Sulphur				
Ash				
Calorific value determined				
Calories				
British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	61.3
through 100 mesh	37.8
through 200 mesh	18.5

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81743

Sample of road dust (through 20-mesh screen). Can No. R 998

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 200' inby 5th X-c from 1 E on 6 main

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 227.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

	Air-dry Loss 2.2	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	1.1	3.3		
	~~Volatile~~ Comb	76.9	75.2	77.8	(a)
	Fixed carbon				
	Ash	22.0	21.5	22.2	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	on 20 mesh Carbon		125.0	35.5	
	thru 20 mesh Nitrogen		227.0	64.5	
	total wt. of sample Oxygen		352.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	43.3
through 100 mesh	19.8
through 200 mesh	16.5

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

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11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81744

Sample of rib dust (through 20-mesh screen). Can No. P 502

Operator Splashdam Coal Corp. Mine Splashdam #6

State Va. County Dickenson Bed Splashdam

Town SPlashdam

Location in mine 2nd south at No. 2 room

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 135.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

		Air-dry Loss 3.7	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture		1.5	5.1		
	~~Volatile matter~~ Comb		75.6	72.9	76.8	([a])
	Fixed carbon					
	Ash		22.9	22.0	23.2	
			100.0	100.0	100.0	
Ultimate Analysis	Hydrogen			Grams	Per cent	
	Carbon	on 20 mesh		66.0	32.8	
	Nitrogen	thru 20 mesh		135.0	67.2	
	Oxygen	total wt. of sample		201.0		
	Sulphur					
	Ash					
Calorific value determined	Calories					
	British thermal units					

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	58.0
through 100 mesh	38.6
through 200 mesh	26.9

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81743

Sample of road dust (through 20-mesh screen). Can No. 16

Operator Splashdam Coal Corp. Mine Splashdam #6

State Va. County Dickenson Bed Splashdam

Town Splashdam

Location in mine 2nd south at No. 2 room

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 202.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector J.F. Davies

		Air-dry Loss 2.5	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture		1.1	3.6		(a)
	Volatile matter ~~xxxxxxx~~ Comb		80.6	78.5	81.5	
	Fixed carbon					
	Ash		18.3	17.9	18.5	
			100.0	100.0	100.0	
Ultimate Analysis	Hydrogen			Grams	Per cent	
	Carbon on 20 mesh			157.0	43.7	
	Nitrogen thru 20 mesh			202.0	56.3	
	Oxygen total wt. of sample			359.0		
	Sulphur					
	Ash					
Calorific value determined	Calories					
	British thermal units					

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	56.4
through 100 mesh	17.2
through 200 mesh	1.7

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

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Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81746

Sample of rib dust (through 20-mesh screen). Can No. W-113

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 1 north at side track

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 167.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

	Air-dry Loss 2.4	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	1.1	3.5		
	~~Volatile matter~~ Comb	70.3	68.6	71.1	(a)
	Fixed carbon				
	Ash	28.6	27.9	28.9	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	on 20 mesh Carbon		97.0	36.7	
	thru 20 mesh Nitrogen		167.0	63.3	
	total wt. of sample Oxygen		264.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	59.3
through 100 mesh	38.1
through 200 mesh	14.4

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

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11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. road — Lab. No. A 81747

Sample of road dust (through 20-mesh screen). — Can No. A 3

Operator Splashdam Coal Corp. — Mine Splashdam #6

State Va. — County Dickenson — Bed Splashdam

Town Splashdam

Location in mine 1 north at side track

Method of sampling Std — Gross weight, lbs. 292.

Date of sampling 6/16/32 — Date of Lab. sampling 6/21/32 — Date of analysis

For B. of M. section Mine Acc — Collector Davies

	Air-dry Loss 3.4	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	.9	4.3		
	Volatile matter ~~xxxxxxx~~ Comb	65.3	63.1	65.9	(a)
	Fixed carbon				
	Ash	33.8	32.6	34.1	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	an 20 mesh		132.0	31.1	
	Carbon				
	thru 20 mesh		292.0	68.9	
	Nitrogen				
	total wt. of sample		424.0		
	Oxygen				
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	44.8
through 100 mesh	20.2
through 200 mesh	14.7

Area from which sample was taken (sq. ft.)

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

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11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81748

Sample of rib dust (through 20-mesh screen). Can No. A 183

Operator Splashdam Coal Corp Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine main - 100' outby fault

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 216.

Date of sampling 6/18/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

		Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Air-dry Loss 1.4					
Proximate Analysis	Moisture	1.1	2.5		
	~~Volatile~~ Coal	68.5	67.5	69.2	(a)
	Fixed carbon				
	Ash	30.4	30.0	30.8	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	Carbon		62.0	22.5	
	Nitrogen		216.0	77.7	
	Oxygen		278.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

on 20 mesh

thru 20 mesh

total wt. of sample

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	66.4
through 100 mesh	42.2
through 200 mesh	29.7

Area from which sample was taken (sq. ft.) _____

Date, 6/25/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81749

Sample of road dust (through 20-mesh screen). Can No. B 617

Operator Splashdam Coal Corp. Mine Splashdam #6

State Va. County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main, 100' outby fault.

Method of sampling _____ Gross weight, lbs. _____ Net weight, gms. 445.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc. Collector J. F. Davies

		Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Air-dry Loss 1.1					
Proximate Analysis	Moisture	.7	1.8		
	~~Volatile~~ Comb	51.2	50.6	51.5	(a)
	Fixed carbon				
	Ash	48.1	47.6	48.5	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
on 20 mesh	Carbon		102.0	18.6	
thru 20 mesh	Nitrogen		445.0	81.4	
total wt. of sample	Oxygen		547.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	53.5
through 100 mesh	23.4
through 200 mesh	13.8

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81750

Sample of rib dust (through 20-mesh screen). Can No. B 69

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main at 1 north

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 111.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

	Air-dry Loss 12.6	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	1.3	13.7		
	~~Volatile matter~~ Comb	67.8	59.3	68.7	(a)
	Fixed carbon				
	Ash	30.9	27.0	31.3	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	on 20 mesh Carbon		52.0	31.9	
	thru 20 mesh Nitrogen		111.0	68.1	
	total wt. of sample Oxygen		163.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	67.6
through 100 mesh	57.6
through 200 mesh	31.4

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 31751

Sample of road dust (through 20-mesh screen). Can No. 247

Operator Splashdam Coal Corp. Mine Splashdam #6

State Va. County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main at 1 north

Method of sampling _____ Gross weight, lbs. _____ Net weight, gms. 337.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector J. F. Davies

		Air-dry Loss 5.9	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture		5.9	6.3		
	Volatile matter Comb		57.5	54.1	58.0	(a)
	Fixed carbon					
	Ash		41.6	39.1	42.0	
			100.0	100.0	100.0	
Ultimate Analysis	Hydrogen			Grams	Per cent	
	on 20 mesh Carbon			94.0	21.8	
	thru 20 mesh Nitrogen			337.0	78.2	
	total wt. of sample Oxygen			431.0		
	Sulphur					
	Ash					
Calorific value determined	Calories					
	British thermal units					

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	56.1
through 100 mesh	27.8
through 200 mesh	21.4

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81754

Sample of road dust (through 20-mesh screen). Can No. P 209

Operator Splashdam Coal Corp Mine Splashdam #6

State Va. County Dickenson Bed Splashdam

Town Splashdam

Location in mine point of loading - track cleanings - straight east, 6 main

Method of sampling regular Gross weight, lbs. _____ Net weight, gms. 354.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

	Air-dry Loss 5.4	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture	.6	6.0		
	~~Volatile matter~~ Comb	49.6	46.9	49.9	(a)
	Fixed carbon				
	Ash	49.8	47.1	50.1	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	~~Carbon~~ on 20 mesh		78.0	18.1	
	~~Nitrogen~~ thru 20 mesh		354.0	81.9	
	~~Oxygen~~ total wt. of sample		432.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	66.8
through 100 mesh	31.6
through 200 mesh	11.4

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81752

Sample of rib dust (through 20-mesh screen). Can No. 84172

Operator Splashdam Coal Corp Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main at 5th X-c outby in.

Method of sampling _____ Gross weight, lbs. _____ Net weight, gms. 145.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Acc Collector Davies

		Air-dry Loss 11.7	Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Proximate Analysis	Moisture		1.3	12.9		
	~~Volatile matter~~ Comb		~~76.2~~	~~67.3~~	~~77.2~~	(a)
	Fixed carbon					
	Ash		22.5	19.8	22.8	
			100.0	100.0	100.0	
Ultimate Analysis	Hydrogen			Grams	Per cent	
	Carbon	on 20 mesh		50.0	25.6	
	Nitrogen	thru 20 mesh		145.0	74.4	
	Oxygen	total wt. of sample		195.0		
	Sulphur					
	Ash					
Calorific value determined	Calories					
	British thermal units					

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	66.5
through 100 mesh	39.2
through 200 mesh	21.1

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

Form 261

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 81753

Sample of road dust (through 20-mesh screen). Can No. 846

Operator Splashdam Coal Corp. Mine Splashdam #6

State Virginia County Dickenson Bed Splashdam

Town Splashdam

Location in mine 6 main at 5th X-c outby 1 N.

Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 189.

Date of sampling 6/16/32 Date of Lab. sampling 6/21/32 Date of analysis _____

For B. of M. section Mine Asc Collector J.F.Davies

		Coal (Air dried)	Coal (As received)	Coal (Moisture free)	Coal (Moisture and ash free)
Air-dry Loss 10.1					
Proximate Analysis	Moisture	1.3	11.2		
	Volatile matter ~~xxxxxxxx~~ Comb	75.0	67.4	76.0	(a)
	Fixed carbon				
	Ash	23.7	21.4	24.0	
		100.0	100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	Carbon on 20 mesh		101.0	34.3	
	Nitrogen thru 20 mesh		189.0	65.3	
	Oxygen ~~xxxxxxxx~~ total wt. of sample		290.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

	Cumulative per cent.
Screen test, through 20 mesh	100
through 48 mesh	50.0
through 100 mesh	24.0
through 200 mesh	13.6

Area from which sample was taken (sq. ft.) _____

Date, 6/24/32 (Signed) H. M. Cooper, *Chemist.*

U. S. GOVERNMENT PRINTING OFFICE: 1930

[a] This figure is the ratio of volatile combustible to total combustible.

11—9383

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 946 Laboratory No. 55851

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Mining Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine 20' outby 2nd x-c 6 main A.C. opp. cst canvas on st. E.

Method of sampling v.b. Date sampled 6/16/32 Hour

Velocity 353 Area 10 X 4 Quantity 14120

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/30/32

Laboratory No.	55851 946		Ethane (C_2H_6)		
Carbon dioxide (CO_2)	0.07		Hydrogen sulphide (H_2S)		
Oxygen (O_2)	20.88		Unsaturated hydrocarbons (C_2H_4, etc.).		
Hydrogen (H_2)					
Carbon monoxide (CO)			Sulphur dioxide (SO_2)		
Methane (CH_4)	0.15				
Nitrogen (N_2)	78.90				
Total	100.00				

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Remarks:

Date 7/9/32 (Signed) William P. Yant, Chemist.

Form 213 11—8890 GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 949 Laboratory No. 55852

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Mining Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine Face of 1st east hdg. off 2nd south main

Method of sampling v.b. Date sampled 6/16/32 Hour

Velocity Area Quantity face

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/30/32

Laboratory No.	55852 949		Ethane (C_2H_6)		
Carbon dioxide (CO_2)	0.15		Hydrogen sulphide (H_2S)		
Oxygen (O_2)	20.71		Unsaturated hydrocarbons (C_2H_4, etc.).		
Hydrogen (H_2)					
Carbon monoxide (CO)			Sulphur dioxide (SO_2)		
Methane (CH_4)	0.59				
Nitrogen (N_2)	78.55				
Total	100.00				

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Remarks:

Date 7/9/32 (Signed) William P. Yant,
Chemist.

Form 213 11—8390

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 950 Laboratory No. 55853

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Mining Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine Face - 2nd S. main

Method of sampling V.B. Date sampled 6/16/32 Hour

Velocity Area Quantity Face

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/30/32

Laboratory No.	55853 950		Ethane (C_2H_6)		
Carbon dioxide (CO_2)	0.25		Hydrogen sulphide (H_2S)		
Oxygen (O_2)	20.34		Unsaturated hydrocarbons (C_2H_4, etc.).		
Hydrogen (H_2)					
Carbon monoxide (CO)			Sulphur dioxide (SO_2)		
Methane (CH_4)	1.22				
Nitrogen (N_2)	78.16				
Total	100.00				

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Remarks:

Date 7/9/32 (Signed) William P. Yant, Chemist.

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GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 941 Laboratory No. 55838

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine 6 E main A.C. at breakthru below 1 E

Method of sampling V.b. Date sampled 6/16/32 Hour

Velocity Area Quantity 3420

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/20/32

Laboratory No.	55838 941	Ethane (C_2H_6)	
Carbon dioxide (CO_2)	0.10	Hydrogen sulphide (H_2S)	
Oxygen (O_2)	20.89	Unsaturated hydrocarbons (C_2H_4, etc.).	
Hydrogen (H_2)			
Carbon monoxide (CO)		Sulphur dioxide (SO_2)	
Methane (CH_4)	0.03		
Nitrogen (N_2)	78.98		
Total	100.00		

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Remarks:

Date 7/9/32 (Signed) William P. Yant, Chemist.

Form 213 11—8890

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 932 Laboratory No. 55840

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Mining Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine 6 E main A.C. at breakthru above 1 E pick up

Method of sampling V.b. Date sampled 6/16/32 Hour

Velocity Area Quantity 4300

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/20/32

Laboratory No.	55840 932		Ethane (C_2H_6)		
Carbon dioxide (CO_2)	0.11		Hydrogen sulphide (H_2S)		
Oxygen (O_2)	20.91		Unsaturated hydrocarbons (C_2H_4, etc.).		
Hydrogen (H_2)					
Carbon monoxide (CO)			Sulphur dioxide (SO_2)		
Methane (CH_4)	0.09				
Nitrogen (N_2)	78.89				
Total	100.00				

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Remarks:

Date 7/9/32 (Signed) William P. Yant, Chemist.

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GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
BUREAU OF MINES

GAS ANALYSIS REPORT

Bottle No. 951 Laboratory No. 55839

Sample of Mine air

Mine Splashdam Operator Splashdam Coal Mining Co.

State Va. County Dickinson Township

Town (distance and direction from, and railroad) Splashdam

Name of coal bed Splashdam Sec. , T. , R.

Location in mine Full return at fan

Method of sampling V.b. Date sampled 6/16/32 Hour 6 p.m.

Velocity 535 Area 65 Quantity 34775

Barometer: Inside Outside

Corrected to sea level: Inside Outside

Bulbs: Wet Dry Humidity %

Collector J.F.Davies Mailed 6/17/32 Received 6/20/32

Laboratory No.	55839 951		Ethane (C_2H_6)		
Carbon dioxide (CO_2)	0.17		Hydrogen sulphide (H_2S)		
Oxygen (O_2)	20.68		Unsaturated hydrocarbons (C_2H_4, etc.).		
Hydrogen (H_2)					
Carbon monoxide (CO)			Sulphur dioxide (SO_2)		
Methane (CH_4)	0.25				
Nitrogen (N_2)	78.92				
Total	100.00				

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Remarks:

Date 7/9/32 (Signed) William P. Yant, Chemist.

Form 213 11—8890 GOVERNMENT PRINTING OFFICE

LETTER REPORT OF MINE EXPLOSION
AT
SPLASHDAM MINE

On June 13, 1932 about 8:30 A. M. a mine explosion occurred in Splashdam mine #6 at Splashdam, Virginia, killing 10 company men employed on a day that the mine was not loading coal.

This mine is operated by the Splashdam Coal Corporation. The officials are:

General Manager & Purchasing Agent	George J. Walker
Mine Superintendent	G. K. Beavers
Inside Foreman and Fire Boss (Deceased)	O. C. Dowdle
Mining Engineer	P. F. Brown

At 9:00 A. M. on the morning of June 13, 1932 the writer was informed by Mr. J. F. Davies, District Engineer of the Bureau of Mines, of the explosion. All of the Norton Station equipment was loaded into the two trucks and taken to Splashdam. Upon arrival Mr. J. F. Davies and myself reported to Mr. G. K. Beavers, Mine Superintendent, and Mr. D. E. Stanton, Virginia District Mine Inspector who had charge of the recovery work, Mr. A. G. Lucas, Chief of Virginia State Department of Mines, arrived a few minutes after our arrival.

STORY OF EXPLOSION & RECOVERY:

The Splashdam #6 Mine has been operating three days a week. On days that coal was not being shipped day men were employed to do some cleaning of haulage ways, shooting of rock, pumping of water, and building of doors and brattices.

June 13, 1932 was an idle day and 10 men were in the mine. When Mr. G. K. Beavers approached the mine about 8:30 A. M. and was about 2000 feet from the mine portal he noticed fire and debris coming out of the portal of #6 mine. The flame extended out of the portal and burned tree tops three hundred feet away. Mr. Beavers, after informing Mr. Walker (General Manager) at Lebanon, Virginia, entered the adjoining #5 mine and brought the three men who were

working in there to the outside. After these men were safe he assembled a crew of men and proceeded into #6 mine, building canvas brattices as they advanced. Mr. D. E. Stanton arrived by the time the brattice crew had advanced about 1300 feet. He inspected the brattices that had been built and decided they were ineffective and ordered all men to the outside. Mr. A. G. Lucas (Chief of Virginia State Department of Mines), Mr. J. F. Davies (District Engineer of the Bureau of Mines), and the writer arrived at this time.

After studying the map and conferring with Mr. Beavers it was decided to rebuild the brattices with wood and plaster them with clay. Inasmuch as the fan was not damaged and the main haulage was on the intake, the restoring of ventilation and progress into the mine was rapid.

The first body, that of the fire-boss, was found about 900 feet inby the portal of the mine. This body was very badly mutilated and burned. Bodies two and three, which were the motor man and brakeman who were cleaning roads, were found about 1400 feet inby the portal of the mine. These bodies were burned. Bodies 4, 5, and 6 were found about 75 feet in the mouth of the First North. These men were overcome by carbon monoxide after traveling for a distance of 2000 feet. These men came from an area that was not affected by the explosion. There is no doubt but these men could have been saved had they broken down a brattice and traveled out the #5 mine, or would have just had patience and waited for a couple of hours where they were. The rescue party, after satisfying themselves that no dangerous gases were coming out of the First North proceeded up the main heading to a distance of about 1700 feet from the portal. At this point it was necessary to direct the fresh air up the air course on the left and use the main haulage for the return air. This procedure slowed up the work considerably, as the roof in the left hand entry had not been brushed and was very low. It was necessary to travel the

air course for a distance of 350 feet which enabled the rescue party to get to the First East Pick-up. At this point carbon monoxide was encountered bleeding off the First East Pick-up air course. For a time the fresh air was short circuited through a cross cut to the main heading where one of the drillers bodies was found. This was the section where the remaining bodies were found. At this point realizing it would require some time to clear this condition it was agreed to withdraw the men to the outside for a short rest, while this was being done. However, a curtain was erected in the First North to deflect the air into this section to assist in the clearing of this section.

In the morning upon entering the mine it was found to be clear of carbon monoxide to the face of the main heading. The rescue party then proceeded to explore the Second South Heading. Body number 8, the other driller, was found about 150 feet in the Second South haulageway. Proceeding up the Second South haulageway carbon monoxide was again encountered about 200 feet in the Second South haulageway. The rescue party retreated to the main heading, erected a canvas brattice across the main heading which deflected the fresh air into the Second South heading and in a few minutes it was clear of carbon monoxide. The two missing bodies were found in the Second South main air course.

No definite conclusion has yet been reached as to the origin.

LOCATION:

This mine is located at Splashdam, Dickenson County, Virginia, and is served by the Clinchfield Railroad. It is a drift mine and is operated in what is known as the Splashdam seam of coal which averages 42 inches in thickness.

About 165 men are employed, 25 surface men, 90 loaders, and 50 company men. There is an average daily production of 300 tons.

#4 Letter Report of Mine Explosion at Splashdam Mine.

The mine is a drift mine having two openings, one for a haulageway and one used for an airway.

MINING:

Room and pillar method is used for mining the coal. Coal is undercut with Good man cutting machines. Coal is hand loaded.

VENTILATION:

The mine is ventilated by a six foot Jeffrey disc fan, exhausting and belt driven by a 15 H. P. Electric motor. The ventilation is one continuous current.

The mine is rated as non-gassy by the Virginia State Department of Mines.

HAULAGE:

Haulage is done by electric locomotives, none of which are of a permissible type. One main haulage ten-ton motor with trolley and three gathering motors equipped with both trolley and reels.

Forty-two inch track gauge is used, equipped with 40 pound rails on haulage headings and 30 pound rails on side headings.

Steel constructed cars with drop bottoms are used.

All equipment underground is electrically driven and of a non-permissible type. 250 volt direct current is used. Equipment underground consists of one ten-ton, one six-ton, and two four-ton locomotives, compressor, drill, two Good man cutting machines and two pumps.

EXPLOSIVES:

Peerless permissible, Pellet powder, and 40% dynamite are used.

Miners use permissible, fired by fuse and number six detonators.

Holes where permissible is used are tamped with any dirt about the face, which is mostly bug dust.

Holes where Pellet powder or 40% dynamite is used is tamped with rock drillings. All tamping is done with a wooden stick.

Explosives, fuse, and detonators are distributed to miners on the surface prior to the working shift.

FIRST-AID AND MINE RESCUE:

No first-aid material is kept underground. A stretcher and a small amount of first-aid material is kept on the surface. No apparatus or rescue equipment is kept at this mine.

On June 15, 1932 I assisted J. F. Davies and H. B. Humphrey in collecting air and dust samples.

We sectionalized the mine on the map and collected the samples at such points that if methane gas is found in the samples the section generating the gas could easily be detected.

Dust samples were collected within and outby the explosion area.

At present time work is being done to restore ventilation of the mine by the building of permanent stoppings.

These observations were made during the recovery work and the time spent under ground gathering air samples and dust samples.

Very truly yours,

E. H. Hodgson

E. H. Hodgson
Senior Safety Instructor

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WESTERN UNION

NEWCOMB CARLTON, PRESIDENT — J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS
DL = Day Letter
NM = Night Message
NL = Night Letter
LCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa. 1932 JUN 13 AM 9 27

PB197 11 GOVT COLLECT=NORTON VIR 13 911A

UNITEDSTATES BUREAU OF MINES=

4800 FORBES ST PGH=

EXPLOSION REPORTED AT SPLASHDAM VIR NO DETAILS AVAILABLE

ENROUTE NOW=

DAVIES.

MINUTES IN TRANSIT
FULL-RATE 16 | DAY LETTER

DELEGATE OF TELEPHONES TELEG...

BUREAU OF MINES PITTSBURGH, PA. JUN 14 1932 RECEIVED

Recd 10:25 AM 6/13

N 5 00 MA EE
BTT 931A
ok chgs.

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

STANDARD FORM No. 14A
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

GOVERNMENT PRINTING OFFICE 11—9107

DESIRED

IF MESSAGE IS TO WASHINGTON, D.C., SEND COLLECT

OTHERWISE CHARGE U. S. BUREAU OF MINES Pittsburgh (Station)

	Night Message
	Night Letter
X	Fast Day Message

Sent by J. J. Forbes,
Title Supr. Engr., Sfty. Div.,
Place Pittsburgh, Pa.
Date June 14, 1952 JJF:FF

Mr. D. Harrington,
U. S. Bureau of Mines,
Washington, D. C.

Davies wires one o'clock this morning three bodies still missing, open light mine, pellet powder used, some gas liberated, probable cause either blasting or gas pocket.

Forbes.

Phoned W.U. 10 a.m., 6/14/52 by F.F.

Confirmation
CC-Files

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WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

1932 JUN 14 PM 12 38

DUPLICATE OF TELEPHONED TELEGRAM

JB196 16 COLLECT GOVT=HAYSI VIR

US BUREAU OF MINES=

PGH=

BUREAU OF MINES PITTSBURGH, PA. JUN 15 1932 RECEIVED

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER
78	

ALL BODIES RECOVERED VENTILATION TEMPORARILY RESTORED THROUGH OUT CASE NOT YET DEFINITELY DETERMINED INVESTIGATIO

THURSDAY=

DAVIES.

N 45 00 MA CNT

B 08 R4P med

MA

Rec'd 1:45 PM 6/14

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

STANDARD FORM No. 14A
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

GOVERNMENT PRINTING OFFICE 11—9107

DESIRED

IF MESSAGE IS TO WASHINGTON, D. C., SEND COLLECT

	Night Message
	Night Letter
X	Fast Day Message

OTHERWISE CHARGE U. S. BUREAU OF MINES Pittsburgh (Station)

Sent by J. J. Forbes

Title Supr. Engr., Sfty. Div.,

Place Pittsburgh, Pa.

Date June 14, 1932 N JJF:FF

Mr. D. Harrington,
U. S. Bureau of Mines,
Washington, D. C.

Davies wires from Haysi, Virginia, all bodies recovered, ventilation temporarily restored throughout, cause not yet definitely determined, investigation Thursday.

Forbes

Phoned W. U. 2 p.m., 6/14/32 by J.J.

Confirmation
GG-Files

STANDARD FORM No. 14A
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

GOVERNMENT PRINTING OFFICE 11—9107

IF MESSAGE IS TO WASHINGTON, D. C., SEND COLLECT

	Night Message
	Night Letter
X	Fast Day Message

OTHERWISE CHARGE U. S. BUREAU OF MINES Pittsburgh (Station)

Sent by J. J. Forbes

Title Supr. Engr., Sfty. Div.,

Place Pittsburgh, Pa.

Date June 15, 1932 JJF:FF

Mr. D. Harrington,
U. S. Bureau of Mines,
Washington, D. C.

Davies wires explosion reported Splashdam, Va., no details available.

He is now enroute Splashdam.

Forbes.

Phoned W. U. 11:50 a.m., 6/15/32 by F.F.

Confirmation
GC-D.Harrington
Files

STANDARD FORM No. 14A
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

GOVERNMENT PRINTING OFFICE 11—9107

DESIRED

IF MESSAGE IS TO WASHINGTON, D. C., SEND COLLECT

OTHERWISE CHARGE
U. S. BUREAU OF MINES Pittsburgh (Station)

	Night Message
	Night Letter
X	Fast Day Message

Sent by J. J. Forbes,
Title Supr. Engr., Sfty. Div.,
Place Pittsburgh, Pa.
Date June 13, 1932 JJF:FF

Mr. D. Harrington,
U. S. Bureau of Mines,
Washington, D. C.

Associated Press reports seven men caught today behind explosion in Splashdam Coal Corporation mine located about thirty five miles from Norton. No further word from Davies.

Forbes.

Phoned W. U. 1:40 p.m. by F.F., 6/13/32

Confirmation
CC-D.Harrington
Files

CLASS OF SERVICE

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WESTERN UNION

NEWCOMB CARLTON, PRESIDENT J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS
DL = Day Letter
NM = Night Message
NL = Night Letter
LCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

1932 JUN 13 PM 1 41

JB256 15 COLLECT GOVT=HAYSI VIR 13 1051

NEWS BUREAU OF MINES=

PGH=

EXPLOSION SPLASHDAM COAL CORPORATION NUMBER SIX MINE WITH TEN MEN ENTOMBED HODGSON WITH ME=

DAVIES..

HAYSI ..

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER
31	

DUPLICATE OF TELEPHONED TELEGRAM

BUREAU OF MINES PITTSBURGH, PA. JUN 14 1932 RECEIVED

No. 4500 MH

By UC 146P

Rec'd 2:50 PM 6/13

WESTERN UNION MESSENGERS ARE AVAILABLE FOR THE DELIVERY OF NOTES AND PACKAGES.

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

1201 S

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa. 1932 JUN 13 PM 7 54

PB1096 11 COLLECT GOVT=NORTON VIR 13 727P

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER

UNITEDSTATES BUREAU OF MINES=

DUPLICATE OF TELEPHONED TELEGRAM

PGH=

SIX BODIES RECOVERED FOUR MEN YET MISSING RECOVERY

PROCEEDING SATISFACTORILY=

DAVIES.

ask pe6849 - cl. keep.

No MA 4500	THB
UQ 8049	Med

BUREAU OF MINES PITTSBURGH, PA. JUN 14 1932 RECEIVED

MA

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

File

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

1201 S

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa. 1932 JUN 14 AM 8 31

HNA 12 24 COLLECT GOVT=TDSX SPLASHDAM VIR 14 106A

NUTES IN TRANSIT	
FULL-RATE	DAY LETTER

US BUREAU OF MINES=

DUPLICATE OF TELEPHONED TELEGRAM

PGH=

THREE BODIES YET MISSING OPEN LIGHT MINE PELLET POWDER CAUSE UNKNOWN SOME GAS LIBERATED PROBABLY CAUSE EITHER BLASTING OR GAS POCKET SECTION DRY=

DAVIES.

BUREAU OF MINES PITTSBURGH, PA. JUN 15 1932 RECEIVED

No. NA 4500	To GWT @ Wlt	
B TR	mail	..FLT 106A.
		pk BD

Rec'd 9:40 AM 6/14

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

Gas Explosion of June 14, 1932
Mine of Splashdam Smokeless Coal Corporation,
Splashdam, Va.
10 entombed, 6 known fatalities.

Bodies Of Six Men Killed In Virginia Mine Recovered

SPLASHDAM, Va., June 15 (AP).—Bodies of six men, killed in an explosion in the mine of the Splashdam Smokeless Coal Corporation here yesterday were brought out of the mine and identified late last night.

Rescuers expected to reach the bodies of four more within before morning. All the men were married and all except [illegible] families.

The Pittsburgh, (Pa.) Morning Post, June 14, 1932

MINE WIDOWS SEEK DEATH.

One Drinks Kerosene, Another Jumps in River at Norton, Va.

NORTON, Va., June 18 (AP).—Two women left widows by the Splashdam Mine explosion, which took the lives of ten miners this week, made futile attempts after the funerals of their husbands to take their own lives. One drank kerosene and another jumped in a river, but prompt relief measures saved both.

Close examination of the mine revealed that the damage was not as extensive as had been expected. Permanent rock brattices were blown out, but none of the equipment was damaged. Coal dust, and not gas, is believed by experts to have caused the explosion.

The New York, (N.Y.) Times, June 19, 1932

Gas Explosion of June 14, 1932
Mine of Splashdam Coal Corporation,
40 mi. from Norton, Va.
10 entombed, 3 known fatalities.

TEN BELIEVED KILLED IN MINE

Three Bodies Found, Seven Other Men Missing.

BLUEFIELD, W. Va., June 13.—(AP)—Bodies of three miners were recovered and seven others were reported missing following an explosion today in the Splashdam Coal Corporation mine, 40 miles from Norton, Va.

Rescue crews sent to the mine from Norton reported the interior badly wrecked by the blast which they attributed to a pocket of gas.

Only 150 feet inside the mine, a drift-mouth operation, they recovered the first body, that of Oscar Battle, the fire boss.

Digging aside debris, they recovered the bodies of Delbert Quillen and drew Wallace, a few feet further into the mine.

The rescue workers said they had abandoned hope for seven men still missing and believed they had been crushed to death if they were not killed by the blast.

The mine ordinarily would have employed a crew of 56 men, but today was an "off day" and only 10 men, the mine's cutters and slate men, were at work.

The Pittsburgh (Pa.) Post-Gazette, June 14, 1932 AOH

many friends, and his death brought sorrow to many homes where he had been known during the past thirty years. But he died as he might have wished, active to the end.

SORROW

Continued from page 1

them, worked in relief shifts, as persistently as the deadly black damp that followed and harrassed them. Until the inspectors have completed their task, officials were not able to make any statement as to the cause of the explosion.

In the shadow of their tragedy, Splash Dam is thankful that Monday was not a work day. Only ten men were in the mine when the explosion occured, there to do repair work, clean up and other emergency jobs. If the explosion had occured on a work day, more than an hundred men would have been in the mine, and perhaps a large majority of them killed by the explosion or the deadly gas that followed in its wake.

The explosion was heard at 8:30 sounding much like a huge dynamite explosion, a long tongue of fire, estimated variously at from 50 to 150 feet, shot out of the mine opening, and the fate of the ten men, the only ones in the mine, was sealed. Five other men were working in the adjoining and connecting No. 5 mine. But they did not hear or feel the explosion, and knew nothing of it until others came in to warn them.

The Splash Dam mine is owned by Tazewell county capital, with George J. Walker as manager, and was opened in 1918. It is located in Dickenson county, near Haysi, on a branch of the C. C. & O railroad. Though operated for the past 14 years, with knowledge that there was a tracing of gas at times, the operation has been so cautious in its ventilation that its record has been unusually good except for an explosion five or six years ago, when several men were burned, including Mark Nidifer, formerly of Norton, who was foreman there at the time