

PVC
~~MAY 31 1967~~

JUN 1 1967

5/26/67

INQUIRY OF "NEAR MISS" ACCIDENT - HENRY PLANT

Attending: C. B. Cooper; C. R. Flynn; J. W. Rowe; R. L. Ehle; G. P. Smith;
D. E. Noder, Maintenance Foreman; A. J. Skutt, PVC Production
Foreman; J. L. Kingen, Dryer Operator; T. W. Lou and Larry
Botoletto, Maintenance men.

May 23, 1967, at 0900, two maintenance men were working on a gear reducer that was leaking at compartment #2 on Spray Dryer #2. They attempted to pull the gear box but were not successful. One removed bolts from rotary valve face plate and one had gone for cardboard to place over opening, when the timer opened the damper to compartment #2 and covered one maintenance man with Resin blown out the rotary valve opening. The Dustex rotary valve was locked out in control room. The Maintenance Coordinator had informed the Production Foreman of work that would be done, however, it was not known that the rotary valve would have to be removed.

Conclusions:

1. Job could not be completed as assigned. This was the first time a Dustex rotary valve had been removed since PVC operations were started.
2. If Production Foreman or Dryer Operator had known that rotary valve was to be removed, they probably would have thrown switches to timing box which would have let air by pass this equipment.
3. In the future, when MWO's require that work be performed on manufacturing equipment, the area Shift Foreman will sign the MWO, and the operator of the equipment initial the MWO.
4. The Maintenance Men involved had worked on gear reduction units before and realized the entire unit needed to be removed when the plate holding the gear reduce to the rotary valve could not be broken loose.

This is the first inquiry of a "Near Miss" accident and the start of a program which will be continued at the Henry Plant.

cc: Those in attendance
J. L. Nelson
Dennie Dowell/
A. Vittone
W. L. Cato

NGC 01489

REDACTED

B. F. Goodrich Chemical Company

pvc

Inter-Organization Correspondence

To Denny Dowell--J.L. Nelson--A. Vittone--
R. Scott--George Pow--Walt Cato
Location Cleveland--Akron

Date May 12, 1967

From Henry Plant

MAY 15 1967

Subject Near miss accident,

At 0110 hours, Friday, May 5, 1st class operator received a puncture wound to the inner bicep of the right arm when hit by the Lenape manhead of poly #34, a lo-supe polymerizer. The wound was of a nature to require 27 sutures, but since the striking force was somewhat dull the wound did not bleed. After the Doctor had closed the wound, was returned to work in order that a close observation could be kept should complications arise.

The accident was a direct cause of failure to follow manufacturing specifications procedure, which stated to close the recovery valve and break the vacuum with air. Operator was completing the recovery of the poly. He had pulled the vacuum down to 25 inches. Procedure then called for the inspection port (figure #2) to be opened and the bottom valve (figure #3) in this line to be opened to bring the poly to atmospheric pressure. After reaching atmospheric pressure the Lenape locking closure could be released and the manhead opened. For some time some operators had apparently been short-cutting this procedure by breaking the vacuum by means of pressuring the poly with nitrogen by first releasing the locking mechanism, but leaving it rest loosely in the curved channel (figure #1), or releasing the locking closure completely. Thus, when the vacuum was broken the Lenape cover would rise approximately $\frac{1}{2}$ of an inch if loose, or float gently at the first indication of pressure, and the pressure gauge would also indicate 0 pressure.

NGC 01490

REDACTED

By reconstructing the events in this case, apparently the locking device was released during the vacuum condition of the poly, then with the nitrogen pressure causing the lid to raise slightly, it apparently reseated sufficiently by means of the O-Ring to cause a build up of nitrogen pressure. As indicated by figure 6 in the attached photo the locking mechanism was in this approximate position. It is evident that

did not observe the pressure gauge at this time, because the pressure recording chart later showed a build up of 24 lbs. of pressure on the poly. With the locking mechanism resting on the very edge of the locking lug, he reached with his right arm directly over the manhead to release the locking mechanism. This could not have been done had the locking mechanism been in the curved portion of the lug.

(Number 1) (We have demonstrated that the Lenape closure cannot be opened with pressure on the poly, but it would have been possible for the handle to be almost open during the vacuum period and resting on the end of the locking lugs #4.)

As he released the manhead, a loud noise first reported as an explosion was heard through out the poly building. The first assumption was that an explosion had occur but this proved a fallacy, as there was no smoke, HCL fumes, or no visible evidence charring in the poly. Also the nitrogen release through the poly manhead would have precluded the possibility of ignition at that time.

The handle (number 5) struck the operator on the inner bicep of his right arm, and the lower locking lug (number 4) struck the right edge of his hard hat just above the right ear. The suspension of his hard hat was popped loose and the hat was thrown into the pipes above. The operator was thrown onto his side about 8 feet from the poly.

was taken to the Doctor's office for treatment. Strangely, the wound bled not at all, probably because of the sudden force and the dull rounded edge of the handle (number 5) which drove into the bicep, and closed off capillaries.

NGC 01491

REDACTED

was on his last midnight shift prior to a long week end. However, the Doctor stated he saw no reason that he could not work on the succeeding day unless bleeding should begin or pain be too intense. reported the occasion of neither of these on Saturday, and did return to work at his scheduled time on Wednesday, May 10.

This injury most easily could have been prevented by properly following the manufacturing specifications for the operation. In another manner, by merely looking at the pressure gauge on the poly, a 24 lb. pressure could easily have been ascertained.

A meeting was held with all shifts immediately upon their report to completely explain the accident and further cover the possibility of dire consequences of short cutting any portion of the manufacturing specification.

Everyone in the plant is quite cognizant of the fact that we were quite probably only inches away from a possible fatality.

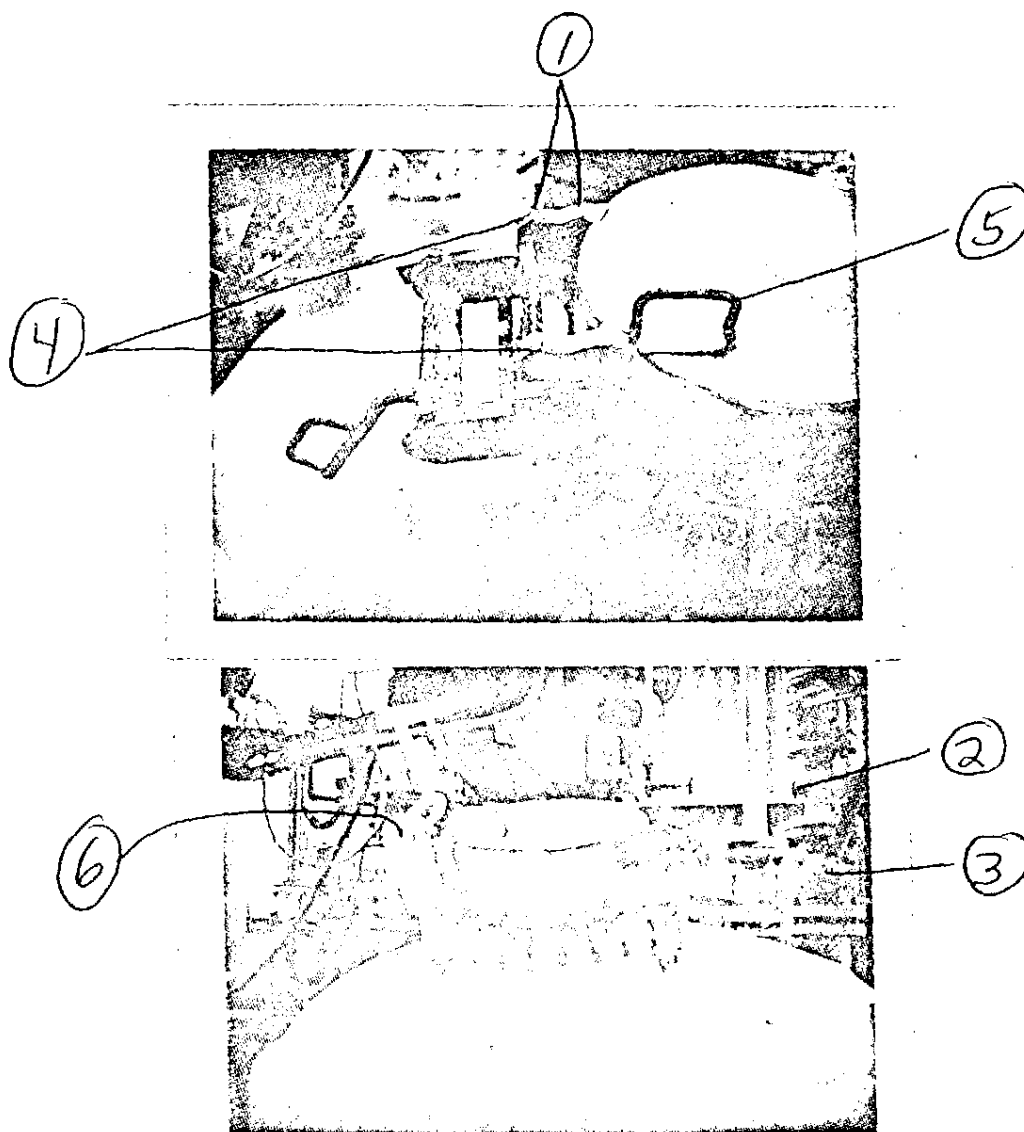
Don Laible
Ray Ehule

DGL:mm

Encs. Denny Dowell--2

Encs. J.L. Nelson--A. Vittone--R.Scott--George Pow--Walt Cato--1

NGC 01492



NGC 01493

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To	Date 5-5-67
Location	From
Subject ADDENDUM TO REPORT	

This method of opening manhead is not safe and the inspection plate removal to break vacuum with the ~~atmospheric~~ atmosphere from the room should be used.

Because:

This accident and investigation of said learner a strong possibility that pressure may have caused this, instead of explosion. I hope with further investigation we may find out the exact cause. However it did point out to us the wrong procedure we were using.

T. A. McElroy

BFG-10144

Denme: This addendum was made to the accident report at 0820 on the morning of the accident.

REDACTED

HNRY 013 R CLER CLER 05 05 VCK 1146 010

DENNIE DOWELL
JOHN NELSON - A. VITTON

HAD A SERIOUS NEAR MISS ACCIDENT THIS MORNING ON THE 12-8 SHIFT. OPERATOR WAS COMPLETING THE RECOVERY OF POLY 34, A LOW SOPE POLY. HE SAYS HE HAD PULLED THE VACUUM DOWN TO 20-25 INCHES. WITH THE VACUUM ON THE POLY, HE TURNED THE HANDLE ON THE LENAPE CLOSURE UPWARD. THIS RELEASES THE PRESSURE ON THE CLOSURE. HE THEN OPENED THE NITROGEN VALVE TO BREAK THE VACUUM. THE OPERATORS WATCH THE PRESSURE GAUGE ON THE POLY AND WHEN IT GETS BACK TO ATMOSPHERIC, THEY THEN PUSH THE HANDLE OFF THE END OF THE LENAPE LUGS. THEY ALSO NOTICE THAT AS THE VACUUM IS RELEASED, THE MANHEAD EASES UPWARDS PERHAPS 1/4 OF AN INCH. THIS MORNING THE OPERATOR SAYS HE DID NOT LOOK AT THE PRESSURE GAUGE BUT NOTICED THE MANHEAD EASE UP THEN WITH HIS RIGHT ARM DIRECTLY OVER THE MANHEAD, HE PROCEEDED TO MOVE THE HANDLE OFF THE END OF THE LUGS. AS HE DID THIS, THERE WAS A LOUD NOISE AND THE MANHEAD FLEW OPEN WITH CONSIDERABLE FORCE. THE UNDERSIDE OF THE OPERATOR'S ARM WAS RAKED BY THE EDGE OF THE MANHEAD AND CUT RATHER BADLY. HE WAS THROWN BACK TO THE FLOOR ABOUT 8 FEET AWAY. THE SIDE OF HIS HARD HAT WAS STRUCK AND THE HAT WAS FOUND IN THE PIPE UP ABOVE.

THE POLY BUILDING FOREMAN, TED MCGHIEY, FIRST CALLED THE DOCTOR AND SENT THE OPERATOR TO HIS OFFICE. THE DOCTOR PUT ABOUT 25 STITCHES IN HIS RIGHT ARM.

HE RETURNED TO WORK. THE DOCTOR STATED THIS MORNING THAT HE WOULD BE ABLE TO WORK IF THE INJURY DID NOT PAIN HIM TOO GREATLY. THE MAN IS GOING ON HIS LONG WEEKEND AND DOES NOT HAVE TO REPORT UNTIL WEDNESDAY AFTERNOON. ON THIS BASIS, WE ARE CALLING THIS A NEAR MISS BUT IT COULD STILL BE POSSIBLE A LOST TIME ACCIDENT.

AT THE TIME, BECAUSE OF THE LOUD NOISE, IT WAS FELT THAT AN EXPLOSION HAD OCCURRED AND THE FOREMAN INDICATED THIS ON HIS REPORT. UPON INVESTIGATION, HOWEVER, THERE WAS LITTLE EVIDENCE TO BEAR THIS OUT. NO SMOKE OR HCL FUMES WERE EVIDENT AND NO CHARRING IS VISIBLE IN THE POLY. WE FEEL THAT THE POLY WAS PRESSURED WITH NITROGEN AND THAT THE HANDLE WAS RIGHT ON THE OUTER EDGE OF THE LENAPE LUGS AND THE OPERATOR WAS ABLE TO PUSH IT OFF WITH PRESSURE IN THE POLY. WE HAVE DEMONSTRATED THAT THE LENAPE CLOSURE CANNOT BE OPENED WITH PRESSURE ON THE POLY BUT IT WOULD HAVE BEEN POSSIBLE FOR THE HANDLE TO BE ALMOST OPENED DURING THE VACUUM PERIOD AND THEN FOR THE ABOVE ACCIDENT TO HAVE OCCURRED.

WE NOW SEE THAT THIS PROCEDURE IS DANGEROUS AND WE ARE IMMEDIATELY CHANGING IT SO THAT THE OPERATOR WILL REMOVE THE INSPECTION PLATE AND OPEN THE POLY TO ATMOSPHERIC PRESSURE ONLY. ALTHOUGH WE WILL BLEED AIR INTO THE POLY INSTEAD OF NITROGEN, THIS IS THE TRIED AND TRUE METHOD OF BLEEDING VACUUM OFF THE POLYS AND WE BELIEVE IT IS PROBABLY BETTER THAN WHAT WE WERE DOING.

RAY EHNLE

NGC 01496

JUL 21 1967

Dennis
Dewell

B. F. GOODRICH CHEMICAL COMPANY

Inter-Organization Correspondence

To: C. R. Flynn

Date: July 20, 1967

Henry Plant

From: C. E. Kemp

Subject: Near Miss Accident from Improper Electrical Lock-out

In the recent investigation of electrical connection failures in the poly building a very hazardous error was discovered: A Maintenance electrician was working on the No. 1 poly agitator disconnect switch without having the starter locked out in the control room!

The maintenance man had locked out by mistake the wrong piece of equipment.

The production foreman had signed in the maintenance work order without accompanying the maintenance man to the control room starter or to the start button at the poly.

Confusion and doubt about the intended meaning of the Electrical Lock-Out procedure was discovered among the supervisors involved.

Maintenance personnel are being instructed to lock out equipment only when accompanied by the foreman responsible for the equipment.

The sole purpose of this note is to emphasize the need and confirm our intention to tighten our safety program.

C. E. Kemp

CEK:sfm

cc: C..B..Cooper
C. R. Flynn - 4
J. P. Piers
M. W. Ross
G. P. Smith
Safety Dept.
W. W. Walk
J. W. Rowe
All Maint. Foreman
C. V. Male
J. G. Davidson

NGC 01497

Inter-Organization Correspondence

From: P.A. DeWitt

NGC 01498

ALL PLANTS SHOULD CHECK BONDING STRAPS ON LENAPE MANHEADS AS SOON AS POSSIBLE.

Dennie L. Dowell
11-1-67

J. L. Nelson
Cleveland Office

October 27, 1967
C. R. Flynn

Static Spark on Lenape Manhead - Henry Plant

Here is the information I have concerning the static spark observed on the Lenape manhead opening. Following is a direct quotation from the foreman who was on shift at the time in the Poly Building:

"The Lo-scope operator had just finished recovering the poly. I happened to be there at the time he was ready to open the lid. Just as the lid was about 1/2 way open, there was a small arc or spark that jumped between the lower hinge on manhead. At the same time of the spark there was a pop or snap that could be heard. We tried opening and closing the lid two or three times after that, but could not produce the spark again."

The incident happened on the 12-8 shift and the foreman contacted Jim Francis, our PFC coordinator, about 0745. Jim got an electrician to look at this immediately. The electrician also tried opening and closing the manhead and to be absolutely safe, they replaced the ground strap. They checked the system over electrically and could find nothing wrong. The ground strap, which was removed, showed some greenish discoloration but it was checked later in the shop for continuity and appeared to be O.K.

Since the foreman was present when the spark was observed, I have to believe that it actually occurred. We suspect that perhaps the strap was not bolted tightly but we have no proof of this. We have had maintenance inspect the ground straps on all Lenape manheads in the Poly Building to make certain they were all tightened properly.

I am enclosing two pictures of the manhead in question. The pictures were taken after the new ground strap was installed.

We don't have a great deal of information to offer other than the fact that this occurred. We intend to follow up and take some measurements to see whether or not we can measure any static buildup across the manhead. If you have any further suggestions or if I can supply you with any additional information, please feel free to ask.

CRF:vck

Enc.

cc: C. B. Cooper
J. P. Piers
J. J. Palkovic
G. P. Smith
Dennis L. Dowell

NGC 01499

OCT 30 1967

C. R. Flynn
vck

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

RECEIVED

To ~~Dennis Redlin~~ *DENNIS L. DOWELL* Date July 16, 1968 JUL 22 1968
 Location Cleveland From Donald G. Laible, Henry Plant DEP
 Subject Incident of experience value. Near miss to -7/14/68 081

Operator-Helper with 5 months experience, received a slight contusion to the inner bicep of his right arm when the hose of the high pressure lance burst suddenly with a slight tearing of the hose about two inches above the quick coupling.

... was beginning to lance Poly #28, and had the hose and quick coupling connect under his right arm. He had received no water when first closing the trigger, and had already released it, when he felt the water stream strike his inner right bicep. The only discoloration was a slight reddening of the area on the inner bicep.

A Plant Manager's Board of Inquiry was held at 0900 hours on 7/16/68 with the following in attendance:

C.B. Cooper	J.D. Francis
J.J. Palkovic	T.A. McGhiey
J.W. Gressler	D.C. Redlin
D.G. Laible	

It was determined that the coupling on the hose had general rusting on the Hansen fitting which caused the pressure build-up on the hose close to the coupling. This hose had evidence of being weakened in this area, possibly from repetitious lance extension changing while holding the lance improperly.

The following recommendations were presented for study and compliance:

1. Emphasize that Helpers use proper procedure when changing extensions in order that kinking of the hose near the coupling shall not occur.
2. Investigate possibility of Stainless Steel Fittings on the Hansen hose couplings since rusting has been persistent in these areas at Henry.
3. Install an additional hook near each high pressure hose rack to prevent kinking near the coupling.
4. Consideration given to installing a section of hose (1 1/8 inch Radiator Type) approximately three feet long at the section near the coupling over the high pressure hose to better protect the lance operator near the coupling.
5. Check with other plants to see if all are using the Hansen series 4 HK quick coupling and if any consideration has been given to a screw type fitting instead of the quick coupling.

*Distributed
July 29, 1968
D.G.S.*

Donald G. Laible

DGL:mm

CC: J.L. Nelson
 R.D. Scott
 E.H. Harrington
 G. Pow
 W.E. Brodine
 W.L. Cato

1. I question the rust buildup actually causing excessive pressure - weakened hose was probably the real cause
2. We must maintain proper inspection and preventative maintenance on HP

NGC 01500

REDACTED

SUPERVISOR'S REPORT OF ACCIDENT INVESTIGATION

1. NAME OF INJURED		PLANT	
2. JOB CLASSIFICATION		DEPT.	AGE
3. EXACT LOCATION OF ACCIDENT (BE SPECIFIC)		5537	21
		APPROXIMATE EXPERIENCE IN THIS CLASSIFICATION	
		15 months	

4. DATE OF ACCIDENT	HOUR	☒ A.M.	WEATHER CONDITION
7-11-68	0815	☐ P.M.	Clear & Hot
5. DESCRIBE THE INJURY - DAMAGE OR LOSS		LOST TIME	

6. DESCRIBE THE ACCIDENT (BE SPECIFIC, GIVE COMPLETE DETAILS)	☐ YES	☒ NO
---	------------------------------	--

Base on air balance shifter (Right)
 Kelpie was starting to shift gears only 28 on putting finger over the trigger getting up while from forward hole his finger left trigger simultaneously the trigger broke at 28 fitting that caused the shifter to move and cause the side of air.

7. EMPLOYEE'S ACKNOWLEDGEMENT

8. UNSAFE CONDITION	SPECIFICALLY, WHAT WAS UNSAFE ABOUT THE VEHICLE, MACHINE, TOOL, EQUIPMENT OR PREMISES? (IF ANSWERED, SEE BE WHY, IN YOUR OPINION, DID UNSAFE CONDITION EXIST? (CHECK ITEM OR USE LINE "C")	
	Here was unsafe and the quick coupler was full on the end of hose and stopped while from putting 2000 was put on it. "Pump was putting out 2000 lbs. pressure" at that time.	
	A. ☐ NOT RECOGNIZED AS UNSAFE CONDITION	B. ☒ HIDDEN DEFECTS
C. ☐		

9. UNSAFE ACT	SPECIFICALLY, WHAT DID ANYONE DO, OR FAIL TO DO, THAT LED TO THIS ACCIDENT? (IF ANSWERED, SEE ITEM NO. 10 BELOW)

10. REASON FOR UNSAFE ACT	WHAT SPECIFICALLY, IN YOUR OPINION, WAS REASON FOR UNSAFE ACT? (CHECK ITEM OR USE LINE "I")	
	A. ☐ DISREGARD OF INSTRUCTIONS	E. ☐ NOT CONVINCED ABOVE ACT UNSAFE
	B. ☐ FAILURE TO UNDERSTAND INSTRUCTIONS	F. ☐ INATTENTION
	C. ☐ DID NOT KNOW THE NEEDED METHOD	G. ☐ INDIFFERENCE (LACK OF INTEREST)
	D. ☐ UNSKILLED	H. ☐ MENTAL OR PHYSICAL CONDITION (EXPLAIN)
	I. ☐	

11. CORRECTIVE ACTION	WHAT SPECIFIC ACTION HAVE YOU TAKEN TO CONTROL THE ABOVE UNSAFE ACT, UNSAFE CONDITION, AND REASON?
	What is installing a pump hose and the pump hose it will protect on and if I should ever happen again.

12. DATE OF THIS REPORT	IS JOB METHOD ADEQUATE?	☒ YES	☐ NO	IF "NO" ATTACH EXPLANATORY MEMO
7-11-68		SIGNED		
REVIEWED AND APPROVED BY	J. A. McMillan IMMEDIATE SUPERVISOR			
John Feltman 7-11-68 C. J. Cooper 7/11				

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

RECEIVED
JUL 16 1968

To Dennie L. Dowell

Date July 15, 1968

Location Cleveland

From Donald G. Laible
Henry Plant

DEPT 5475

REDACTED

Subject Report of Near Miss Accident, 7/11/68 1915 hours to

Operator-Helper PVC with eight months experience, was overcome with vinyl chloride vapors near the open manhead of Poly # 16, while washing down the poly with DM Water through the manhead. He was carried to the fire escape landing and revived almost immediately by fresh air. The pneolator was brought from the laboratory and oxygen was administered for a short time. He rested for awhile and was referred to the plant nurse for further examination.

He was examined by the plant doctor on 7/12/68 and returned to work on his normally assigned shift at 1600 hours on July 12.

A Plant Manager's Board of Inquiry was held at 1530 hours on July 12 with the following in attendance:

C. B. Cooper

C. R. Flynn

J. J. Palkovic

K. L. Musselman

G. P. Smith

D. G. Laible

Shift foreman Musselman explained the details of the incident. He was in foreman's office when operator reported that had passed out. When Musselman arrived at the third floor landing fire escape, had been revived. A pneolator was brought from the laboratory for administering oxygen.

The poly had been recovered satisfactorily and shortly after the manhead was opened, was washing down the poly with a DM water hose. He passed out and was helped to the third floor landing by operator

This was the first occasion with regard to the pearl polys of any operator helper coming in contact with excessive VCL vapors.

General Foreman Palkovic reported that tests were run on 7/12/68, and that after the proper recovery of a poly there is enough residual VCL in the poly to cause some vapor escape as the poly is being washed down.

Recommendations:

1. A memorandum was issued this date calling for evacuation of the polys by use of an evacuation hose prior to washing down.
2. Additional evacuation hoses of a short length properly identified for this purpose only will be provided.

ADDENDUM:

It was later discovered this day that is unable to readily distinguish the odor of vinyl chloride. He can detect vinyl acetate which is used only in copolymer manufacture. A flask sample of VCL could not be identified by odor by. Further research brought up a previous incident concerning when he was struck on the cheek unidentifiably while washing down a paste poly on 3/10/68. It is now felt that he may have been struck on the cheek by the valve handle of the DM Water hose, while dazed from VCL fumes. It has been brought to the attention of the need for complete procedural following in any association with VCL in the future.

cc: J. L. Nelson

R. D. Scott

J. J. Palkovic

E. H. Harrington

W. E. Brodine

G. Pow

C. B. Cooper

W. L. Cato

C. R. Flynn

I RECOMMEND THAT ALL
OF OUR PVC PLANTS EVALUATE
RECOMMENDATION #1

NGC 01502

7/19/68 Dennis L. Brown

MEMORANDUM FROM THE TECHNICAL DEPARTMENT

No. PC1-4-6

To: J. J. Palkovic

Date: 7-12-68

Subject: Poly Evacuation

1. Immediately following opening the manhead and prior to washing down, each Poly will be evacuated for a period of 5 minutes, using the evacuation hose.
2. The above procedure will be followed for the purpose of removing excessive fumes from the manhead area.
3. This procedure will apply for all polys - pearl, paste or Lo Sope.
4. The above evacuation will not apply to later evacuation for entry.

Active Tech Memos: PC1-4-2 item 4, PC1-4-5..

N. L. Kuchenmeister

NLK/mr

cc/ Normal Distribution

NGC 01503

REDACTED

Handwritten: 100K plus accident **SUPERVISOR'S REPORT OF ACCIDENT INVESTIGATION**

1. NAME OF INJURED		PLANT	
2. JOB CLASSIFICATION		DEPT. AND P.R. NO.	AGE
3. EXACT LOCATION OF ACCIDENT (BE SPECIFIC)		APPROXIMATE EXPERIENCE IN THIS CLASSIFICATION	
4. DATE OF ACCIDENT		HOUR	WEATHER CONDITION
5. DESCRIBE THE INJURY - DAMAGE OR LOSS		☐ A.M. ☐ P.M.	LOST TIME
6. DESCRIBE THE ACCIDENT (BE SPECIFIC, GIVE COMPLETE DETAILS)		☐ YES ☒ NO	
7. EMPLOYEE'S ACKNOWLEDGMENT			

8. UNSAFE CONDITION	SPECIFICALLY, WHAT WAS UNSAFE ABOUT THE VEHICLE, MACHINE, TOOL EQUIPMENT OR PREMISES? (IF ANSWERED, SEE BELOW)
	WHY, IN YOUR OPINION, DID UNSAFE CONDITION EXIST? (CHECK ITEM OR USE LINE "C")
9. UNSAFE ACT	A. ☒ NOT RECOGNIZED AS UNSAFE CONDITION
	B. ☐ HIDDEN DEFECTS
10. REASON FOR UNSAFE ACT	C. ☐
	WHAT SPECIFICALLY, IN YOUR OPINION, WAS REASON FOR UNSAFE ACT? (CHECK ITEM OR USE LINE "I")
11. CORRECTIVE ACTION	A. ☐ DISREGARD OF INSTRUCTIONS
	E. ☐ NOT CONVINCED ABOVE ACT UNSAFE
12.	B. ☒ FAILURE TO UNDERSTAND INSTRUCTIONS
	F. ☐ INATTENTION
	C. ☐ DID NOT KNOW THE NEEDED METHOD
	G. ☐ INDIFFERENCE (LACK OF INTEREST)
	D. ☐ UNSKILLED
	H. ☐ MENTAL OR PHYSICAL CONDITION (EXPLAIN)
	I. ☐
	WHAT SPECIFIC ACTION HAVE YOU TAKEN TO CONTROL THE ABOVE UNSAFE ACT, UNSAFE CONDITION, AND REASON?
	IS JOB METHOD ADEQUATE? ☐ YES ☒ NO IF "NO" ATTACH EXPLANATORY MEMO
	DATE OF THIS REPORT
	SIGNED
	IMMEDIATE SUPERVISOR
	REVIEWED AND APPROVED BY

NGC 01504

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To	G.P. Smith	Date	9/23/68
Location	Henry Plant	From	Safety Department

RECEIVED
SEP 24 1968
DEPT.

Subject Near Miss--Vinyl Chloride Escape

A vinyl escape occurred from a 2" drain line on the #2, 100 series recycle storage tank east of Building 731 at 1515 hours on Thursday, September 19, 1968. The 2" drain line separated from an extension of the bottom drain valve and flew 30 feet. The gas alarm was sounded, the bottom chain valve was closed, and the area was clear of vinyl in approximately 30 seconds. No injury resulted.

J.J. Palkovic, General Foreman PVC, and J.W. Gressler, Safety Inspector, were inspecting a recent modification of the drain line. A 24" pipe extension with an elbow had been added to the drain line on this date to divert water directly to the sewer. While inspecting the new installation the drain valve on the #2 recycle storage tank was opened by Palkovic and then closed. Palkovic and Gressler then proceeded to the #1 recycle storage tank. Palkovic then opened the drain valve and all water drained. They then returned to the #2 recycle tank to finish draining the water. Upon opening the drain valve a sudden thrust of back pressure caused the pipe extension and valve to unthread itself rapidly. When the pipe and valve were thrown, a large amount of vinyl vapors were released to the atmosphere before the chain operated bottom valve could be closed from the north side of the tank. This was complicated due to the fact that the chain was not swinging freely and was wrapped around a pipe support.

While Palkovic was closing the chain valve Gressler turned in the building gas alarm. The gas alarm sounded for approximately 30 seconds and then was silenced upon Palkovic's instructions.

Five minutes later the all clear was sounded.

NGC 01505

The unsafe conditions that existed were as follows:

1. The elbow should not have been installed on the extended pipe. The proper procedure of draining the tank was followed. The proper safety rules and plant policies were being followed.
2. The chain should not have been wrapped around a pipe support.
3. The recycle tank did not have an excess flow check valve in the drain line.
4. Existing drain line was corroded.
5. All fittings were threaded.

The following recommendations have been made:

- ①. Install an excess flow check valve.
- ②. Elbows on both #1 and #2 recycle tanks have been removed.
- ③. All chain valve chains will be inspected to assure that they are not obstructed.
- ④. Replace drain line with stainless steel.
- ⑤. Back weld pipe fittings.

John W. Gressler
Safety Inspector

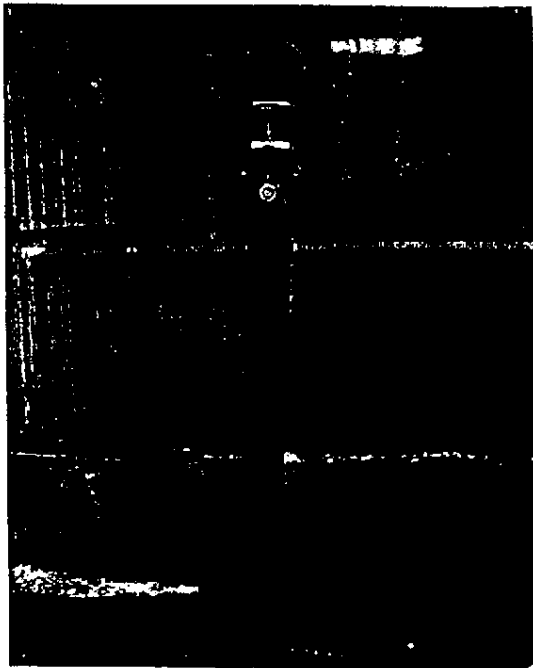
JWG:mm

CC: J.R. Nelson--R.D. Scott
E.W. Harrington
D.L. Dowell ✓
G. Pow
W.E. Brodine
W. Cato
C.B. Cooper
C.R. Flynn
J.J. Palkovic
Safety (3)
File (2)

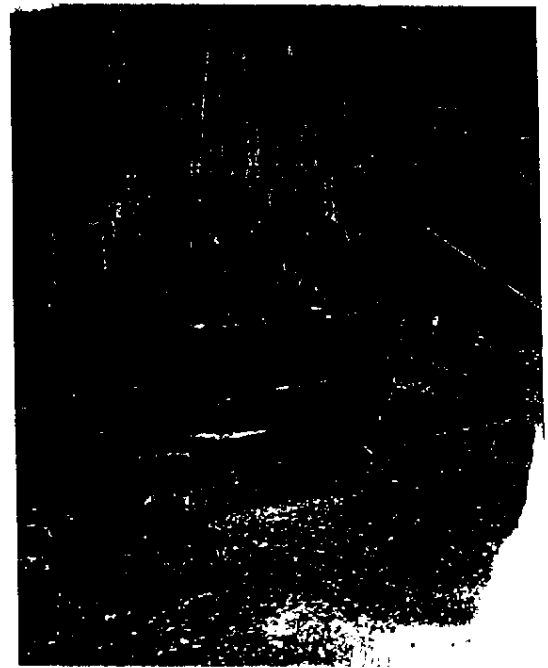
Pennie L. Powell
9/25/68

NGC 01506

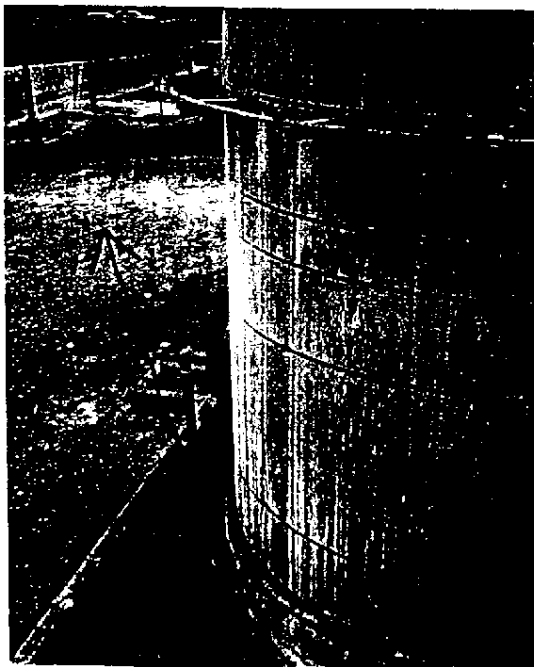
PICTURES TAKEN AFTER REPAIRED



1. This is the piece of drain pipe that was added. The circle is where the elbow was located.



2. This is the piece of pipe that unthrew itself and flew 30 feet.



3. This is the chain that was wrapped around the pipe support. This is also the valve that was used to close the bottom drain. Arrow shows path and final location of pipe.

January 4, 1969

NARRATIVE REPORT OF ACCIDENT AT HENRY PLANT, DECEMBER 27, 1968

On Friday, December 27, at 10:22 AM, while they were attempting to put IPP Catalyst into a polymerizer from a two gallon, stainless steel, portable, charging bottle, the bottle ruptured injuring three people. A foreman, Ted McGhiey, had a bad cut on the inside of his left thigh and his left arm badly cut and shattered just below the shoulder. McGhiey was taken to St. Margaret's Hospital at Spring Valley, where he died about 2:30 P.M. while undergoing emergency surgery.

a charging operator, had his left hand seriously injured. The index and second finger on this hand were removed by a surgeon at St. Francis Hospital in Peoria.

a charging operator, had a facial cut on his left jaw and a scratch on the left side of his face near his nose.

A portable, stainless steel, charging bottle, about 5½ inches in diameter and 22 inches long, was being used because the regular charging bottle was being moved to a more convenient location. Portable charging bottles have been used regularly to add short stops to polymerizers, and also to add catalyst to Low Sope charges. They have occasionally been used to add IPP Catalyst to Pearl polymerizers. These charging bottles are mounted on two-wheel carts along with a standard Nitrogen cylinder which is used to blow the contents of the charging bottle to the polymerizer. The charging bottles are not equipped with pressure relieving devices. Catalyst or short stop is sucked into the charging bottle, the charging bottle connected with a rubber hose to the polymerizer, and its contents forced into the polymerizer with Nitrogen being supplied through a standard pressure regulator. The catalyst in this case was a 20% solution of IPP in Hexane.

were working together to put the catalyst into No. 1 polymerizer. This catalyst bottle had been thoroughly cleaned the previous day and, after being cleaned, had been used to put catalyst into several polymerizers. On the morning of the 27th, the proper amount of catalyst (slightly more than 1 gallon) was weighed out and pulled into the bomb through the hose connected to the bottom. The charging bottle was connected to the polymerizer and the Nitrogen regulator valve opened to pressure it. The valve to the polymerizer was then opened. Up to this point, everything appeared to be normal. who was operating the Nitrogen regulator valve, believes that there was about 500 lbs. pressure on the cylinder before use. He noticed that the cylinder pressure was dropping very rapidly and that gas was escaping from the weep holes to the Nitrogen regulator body. The delivery pressure to the catalyst bottle was about 180 lbs. Since the delivery pressure was dropping much faster than normal, Ted McGhiey, the foreman, was called over to assist. When the delivery pressure was about 110 lbs., the valve to the polymerizer was shut off, this cylinder disconnected, and Nitrogen cylinder No. 2 connected. At this time, the pressure in the polymerizer was about 105 lbs. Cylinder No. 2 had about 700 lbs. pressure in it. The valve to the polymerizer was opened and mentioned to the foreman that they had better hurry and get the catalyst into the polymerizer before it blew up.

both remember that the charging bottle and hose to the polymerizer were warm at that time. They estimated the temperature at about 110°F.

NGC 01508

was opening the Nitrogen regulator on cylinder No. 2 and calling off the pressure on the delivery gauge. He remembers that the pressure was about 200 lbs. when the catalyst bottle ruptured. The catalyst bottle fragmented. At this time, the people and equipment were in the approximate positions shown on the attached diagram. McGhiey, were knocked to the floor. was pushed about 10 feet but does not remember falling. There were no injuries to other people in the area, except a slight scratch on the left leg of

The time spent in First Aid training at this plant was proven effective by the very efficient handling of the emergency by several employees. The large artery in McGhiey's left arm was completely severed and the doctor believes that only the quick application of pressure kept him from bleeding to death. The first ambulance arrived quickly and McGhiey was sent to St. Margaret's Hospital with two employees holding the pressure points on his arm and leg. had the back of his left hand seriously injured and several puncture wounds on the inside of both arms. He was escorted to the plant dispensary where the plant nurse attended him till the plant doctor arrived. He was given a shot to relieve the pain and taken in an ambulance to St. Francis Hospital in Peoria. The plant nurse went in the ambulance with him. was taken by ambulance to St. Margaret's Hospital in Spring Valley.

A Safety Inspector then took several pictures of the scene of the accident. In the meantime, witnesses were asked to dictate their information and comments so that we would have an accurate record while it was still fresh in everyone's mind. At this time, we thought that the catalyst tank had ruptured due to a failure of the Nitrogen regulator causing over-pressuring.

We then began collecting information and trying to determine exactly what had happened. The evidence now indicates that rapid decomposition of the catalyst occurred. We believe that Vinyl Chloride got back into the charge bottle through the connecting hose and polymerized, providing heat and the violent decomposition of the catalyst. There is no evidence of corrosion inside the charging bottle. The inner surfaces are bright and clean. Also, there is no evidence of short stop contamination in the bottle. The Nitrogen regulator being used was a Matheson, Model 9-580. The glass on the low pressure gauge was broken and the needle bent. This regulator has been examined by representatives of the Matheson Co. and found to be in good working order. The regulator on cylinder No. 1 was found to have a ruptured diaphragm. Mr. Okladek, Matheson representative, stated that under no operating conditions should either regulator be able to supply more than 250 lbs. pressure. The catalyst tank being used was rated at 400 lbs. psi pressure. A sample of Nitrogen from both cylinders has been tested and has been found to be approximately 99% Nitrogen. A sticky material which was found on many parts in this area after the explosion has been analyzed. It appears to be very low molecular weight Poly Vinyl Chloride, containing about 36% Chloride. Metallurgical tests will be run on the metal from the ruptured catalyst tank.

The investigation is continuing and a complete report, with pictures and exhibits, will be issued soon. The facts which we have at present indicate that the Vinyl Chloride leaked back into the catalyst bottle, causing a rapid and violent decomposition of IPP, shattering the charge bottle. The total time which the catalyst was in the bottle has been estimated at approximately 5 minutes. At the present time, we have discontinued using these portable charging bottles and will not resume using them for any purpose until revisions have been completed to make them safe.

C. B. COOPER, Plant Manager
Henry, Illinois, Plant

CBC

cc: D. L. Dowell
J. L. Nelson - R. D. Scott
E. W. Harrington
W. E. Brodine
W. L. Cato
George Pow
C. R. Flynn
G. P. Smith
File

NGC 01510

CONCLUSIONS:

1. The direct cause of the vessel rupture was overpressure, likely in the range of 700 to 1000 psig. This was caused by vinyl chloride vapor entering the vessel, condensing with heat liberation. This in turn elevated the temperature of the catalyst solution to localized decomposition of the IPP solution. At this point rapid, self-decomposition of the solution occurred. At a temperature of approximately 158°F. instantaneous decomposition of the IPP occurred. This latter temperature is theorized from physical data. Witnesses reported temperatures at about 110 F. (skin temperature) shortly before the rupture.
2. The procedure of using this portable vessel for charging catalyst was a temporary method while maintenance was being scheduled on the normal vessel. This technique has been used in the past without difficulty. Operators involved in this operation knew the proper procedure and were using approved methods in this case.
3. The failure of the nitrogen regulator on the first cylinder initiated the sequence of events culminating in the eventual rupture of the vessel.
4. Although this technique had been utilized in the past, the inherent possibilities of such a sequence of events had not been foreseen prior to this event.
5. The use of such portable vessels, either for shortstopping or catalyst charging, has been temporarily discontinued.
6. Engineering is currently working on a new design for two portable vessels to be used only for shortstop charging. This vessel will also have pressure relief.
7. Considerable investigation has been done regarding the characteristics of IPP solutions. The Catalyst make-up and handling system has come under scrutiny. In addition to some procedural changes, we are recommending these equipment changes:
 - a) Bulk handling of hexane. A D.J. is underway.
 - b) A new upright catalyst freezer for solution storage in the Poly Building. A D.J. is underway.An M. A. has also been approved for study of a more dilute solution of IPP (15%).
8. The Henry plant had a record of no lost time injuries for all of 1968 until December 27. This emphasizes the point that despite continual safety programs, a good safety record and ratings not the least decrease in accentuation of our safety attitudes and programs can ever be tolerated.
9. The events immediately following the accident illustrate very strongly that the time spent in First Aid training was proven effective. Since this accident we have relooked at our First Aid training and are in the process of updating the program.

IV. Review of IPP-Hexane Solutions

Al Berens has done considerable investigation in this area which has been reported in recent letters with date line of January 13, 1969, and February 14, 1969.

He confirms that 20% solutions do not undergo strong exothermic decomposition at sample temperatures below 25°C. (77°F.). We have observed this, also, noting practically no decomposition below 90°F. At this temperature for a prolonged period, some bubbling will occur. Berens notes that from about 130°F. to 149°F., decomposition becomes quite rapid with appreciable generation of heat. Sudden decomposition (nil half-life) occurs at a temperature about 158°F.

At normal ambient temperatures, we have found that the solution poured over a large surface area will decompose and evaporate without any evidence of ignition or explosive violence. This is not a plant procedure, however. In cold weather the IPP will crystallize before decomposition or evaporation and is then hazardous on warm-up of the crystals.

Al Berens has also conducted these same experiments with IPP-Hexane solutions saturated with VCl. With about 10 - 15% VCl solutions, he noted polymerization adds very little to the exothermic effect (less than 0.25 BTU/minute per pound of solution).

Al Berens has also demonstrated that the primary triggering cause was neither the heat of polymerization nor the heat of the IPP decomposition. My own figures verify his calculations. For instance, the bomb has been calculated as 500 cu. inches or 2.16 gallons. The recipe in use involved 9.1 lbs. of solution which is 1.49 gallons. This leaves 0.67 gallons free space. When the VCl vapors entered the bomb they would be condensed, and in so doing the heat of vaporization would raise the temperature of the bomb by the equivalent sensible heat. Recalling the testimony, if we say the vessel temperature was 115°F. just before rupture, this calculates out to about 2.0 lbs. of VCl condensed. The free space would allow about 4.8 lbs. before hydrostatic.

When the system reached this temperature, we then get into the rapid, self-accelerating decomposition. These calculations also demonstrate the rupture was not due to a hydrostatic situation after condensation.

Calculations were made to estimate the theoretical pressure in the vessel at the time of rupture. Assumptions used were:

- a) IPP decomposes yielding gaseous products at the ratio of 3.8 mols per mol of IPP.
- b) None of the catalyst entered the poly during the first attempt.
- c) 2.0 lbs. of vinyl chloride condensed.
- d) When condensing Vinyl chloride raised the liquid temperature to 115, assume localized heating sites and then rapid rise to about 158° causing instantaneous decomposition.
- e) Assume heat of polymerization of 0.25 BTU/minute - 1b. of solution.

Using these factors and recipe quantities, it has been calculated that a pressure in the range of 800 to 1000 psi would be attained.

J. P. Piers

JPP/mr

NGC 01513



B.F. Goodrich Chemical Company

A DIVISION OF THE B.F. GOODRICH COMPANY

GENERAL CHEMICALS PLANT · HENRY, ILLINOIS

On May 4, 1965 at 10:30 a.m., a tank truck load of 2700 gallons of sulfuric acid was being unloaded at the truck unloading station of our tank farm. The acid is unloaded by pressuring regulated factory air at approximately 35 to 40 lbs. psi, into the tank truck, and the sulfuric acid flows through a 2 inch rubber hose approximately 12 feet in length, into lines leading to our tank farm storage. This rubber hose is supplied and carried on the tank truck. The regulator valve for the factory air was positioned close to the inlet of the tank farm lines.

The acid hose broke about ten minutes after air pressure was applied, in such a time that full pressure had not been reached. Estimated pressure at this time was 25 psi. A two inch slit opened in the hose about four feet from the truck valve. This sprayed acid approximately 7 to 8 feet into the air in such a manner that it was impractical to reach the air pressure regulator valve.

Our tank farm operator had just left a position near the hose to answer the telephone which rang in the tank farm pump house. The acid truck driver was positioned on the other side of the hose, and some spraying acid did strike him on both arms between the wrists and elbows and some also in his hair. However, our operator would have been in the direct path of the acid had the break occurred as little as a minute sooner.

Our tank farm operator was able to reach the air valve by circling around the pipe rack support, and wearing a face shield and rubber gloves was able to shut off the air supply. Approximately 400 gallons of sulfuric acid was lost on the concrete pad of our tank farm, before the air pressure was shut off.

This was the National Cartage Company's first experience of a hose breaking in this manner after pressure had been applied and the pumping actually starting.

Corrective action was instituted immediately should any similar occurrence ever arise. Our air line valve was relocated to a position 25 feet away from the truck unloading hose. In our new procedure both our tank farm operator and the driver are instructed to be at this location when actual air pressure is applied. Along with this action we have modified our installation and we now use instrument air supply instead of factory air. It is somewhat lower in pressure and a regulator is not required since its pressure is maximum at around 36 psi. The use of instrument air should greatly aid us in preventing water condensation which had previously caused freezing conditions in our air line in winter at some times when the air was not in use.

On May 25, 1965 our first tank truck load of sulfuric acid was unloaded, and the new procedure met with the approval of all personnel involved. It required approximately 10 minutes more of unloading time than the previous method.

Don Laible
Safety Inspector

NGC 01514

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

pvc

To K. L. Lindhurst
Location Cleveland

Date 9/13/66
From Donald G. Laible

REDACTED

Subject Disabling Injury--

--8/20/66

EP: 0

On August 20, 1966, at 03:30 A. M.,

Second Class Chemical

DC

Operator, sustained an injury to his eyes which caused hospitalization and an absence of four days.

While preparing to add the content of a plastic container of 2.11 lbs. of dry hydrated lime to the open manhead of a 3300 gallon Polymerizer, the operator lost his grip on the plastic container. As the container slipped to the floor, he bent suddenly to catch it in mid-air. The container hit the floor and the lime puffed behind his safety glasses and into his eyes. He went to the eye bath and flushed his eyes with water. He was taken into the dispensary and later sent to the hospital for further treatment since he suffered a superficial corneal burn to his right eye. He was confined to the hospital for one day and returned to work after an absence of four days.

In this pearl charging operation containers of lime and phosphoric acid are added to buffer the water through the open manhead into 250 gallons of water and with the agitator off. The present containers used are rectangular plastic containers, 6 inches width on the side, 8 inches deep and with a circular mouth $4\frac{1}{2}$ inches in diameter. The operator wears gloves, and a face shield is available in the pigment room for use.

This accident could have been prevented by the operator having worn a face shield or had he turned his head aside instead of reaching in an attempt to catch the container.

It is hoped that in the near future this method of buffering will be eliminated. In the interim, containers with handles for easier handling are to be secured, and a face shield has been affixed to the cart which carries the buffering agents

Donald G. Laible

Safety Inspector

CC: C. B. Cooper
W. W. Scull
File

NGC 01516

W. L. Wilson
~~W. L. Wilson~~

B. F. GOODRICH CHEMICAL COMPANY

Inter-Organization Correspondence

To: C. B. Cooper

Date: October 19, 1967

Henry Plant

From: E. W. Wilson

Subject: Near Miss Accident Report

A Plant Manager's Safety Meeting was held at 2:00 P.M. on October 18, 1967, to review the near miss accident to a construction electrician during the morning. Those in attendance at this meeting were C. R. Flynn, G. P. Smith, R. L. Ehle, J. W. Rowe, M. D. Tawney, E. J. Green, and E. W. Wilson.

As part of the Paste Expansion construction electricians were setting up to pull a new electrical feeder through existing underground duct from the manhole below sub-stations #4 and #5 to the pad west of sub-station #6. They were attempting to do this by inserting fish tapes from both ends of the duct. There was some confusion about the duct openings at the west window in the manhole because the drawing showed a reverse section detail of the duct bundle out in the run between the sub-stations whereas the window included another row of ducts above this bundle which stubbed up into the high voltage disconnect switch section for sub-station #5.

They were attempting to locate the proper duct by having a person at sub-station #6 yell into the pipe so that the person in the manhole could pick out the proper opening. With cable extending out of these ducts it was impossible for the construction electrician to get his ear close enough to the bank of the duct to ascertain the proper one. The electrician in the manhole selected one of the upper ducts as being the correct one leading to the pad from where his partner was yelling. When he inserted his fish tape into this duct it was fed up into the 4160 volt section of the sub-station where it finally connected between phases and dropped the sub-station #5 circuit breaker and the main plant circuit breaker.

This happened at 11:06 A.M. The plant electricians shut off all other high voltage feeder breakers except #1 and #2 which are in a different structure. They then checked to find out what the actual cause of the trouble was. Following this they re-set the main breaker plus breakers #3, #6, and #7. Total time elapsed to accomplish this was approximately 13 minutes.

The trip flags were showing on feeder breaker #5 but plant personnel was certain that the unit in trouble was sub-station #4. So an attempt was made to re-set circuit breaker #5. When this failed to energize the unaffected sub-station both #4 and #5 breakers were held open until the trouble was cleared. After the trouble was cleared both circuit breakers were closed and at this time it was determined that the sub-station that was in trouble was actually sub-station #5. This placed all the electrical system back on the line at 11:36 A.M. These last two sub-stations supplied the power for our poly building. During this down-time, production had to partially vent 10 polys on the pearl side.

In review it appears that the construction people failed to use a blower they had for identifying the proper conduit. As a side issue it was later determined that they had failed to obtain a vessel entry permit to enter the manhole but this was not directly related to the accident. The construction foreman admits he was confused. He did not attempt to obtain clarification from the Goodrich Field Engineer. The Goodrich job procedures were normal for this type of work except for the failure to obtain the vessel entry permit. The relations between the construction foreman and Goodrich Field Engineer are excellent.

Additional observations are as follows:

1. The 5 KV cables in the manhole look similar to the 600 volt feeders so that there was no warning to the electrician that he was putting the fish tape into a high voltage conduit bank.
2. Original construction failed to properly blank off the open ends of the conduit where they stub up into the high voltage disconnect switch enclosure. This was clearly called for on the original drawings and is considered good practice by all electrical contractors.
3. The failure to get back on the line in a reasonable period of time has to be blamed on lack of identification at the sub-stations.
4. A small mark on the west end of sub-station #5 included a #4 which apparently was written there at the time of manufacture or shipping. This mislead our maintenance people as to the true number of the sub-station. This marking must be obliterated.
5. Another problem noted was that the high voltage circuit breakers were temporarily tagged by marking on a piece of masking tape instead of permanent name tags.
6. Another factor that created confusion with getting back on the line involved volt meters and ammeters at the sub-station being in the off position, with the switches for these meters located some 18" below the devices they were controlling.
7. A major complaint on getting the sub-station back on the line concerned poor communication between the high voltage switch station and the low voltage sub-station. Not only the distance involved but, also, that the line of site was obscured by large clouds of steam issuing from the cooling tower pump turbine. Not only did this hinder communications but made walking between the two points very unsafe.
8. Another major complaint made by the electrical maintenance people involved the inordinate number of sidewalk superintendents they had to contend with. This hindered their efforts to get back on the line to a considerable extent.

EWW:sfm

cc: A. Vittone
J. L. Nelson/D. Dowell
K. E. Burch
C. E. Kemp
Those Attending

E. A. Wilson
E. W. Wilson

Hennie L. Powell
10/17/77

NGC 01518

HNRY 005 N CLER 10 19 VCK 1140 010

DENNIE DOWELL

REPORT OF NEAR MISS ACCIDENT - HENRY PLANT

AT APPROXIMATELY 11:06 A.M. ON OCTOBER 19, A CONSTRUCTION ELECTRICIAN WORKING FOR LEITER ELECTRIC, SHORTED OUT THE POWER IN THE ENTIRE PLANT. HE WAS PUSHING A STEEL TAPE THROUGH A FEEDER CONDUIT FROM A MANHOLE AT THE NORTHEAST CORNER OF THE DRYER BUILDING, BUILDING 732. THE TAPE WAS SUPPOSED TO GO TO A NEW SUBSTATION FOR THE CONCENTRATOR EXPANSION. THE NEW SUBSTATION WAS LOCATED WEST OF WHERE THE MAN WAS WORKING AND NORTH OF BLDG. 732. THE ELECTRICIAN PUSHED THE TAPE INTO THE WRONG CONDUIT AND IT WENT INTO ONE OF TWO 4160 VOLT SUBSTATION DISCONNECT SWITCHES FOR THE POLY BUILDING. THIS SUBSTATION WAS ONLY A FEW FEET SOUTH OF WHERE THE MAN WAS WORKING. THE TAPE WENT INTO THE SWITCH BOX, LOOPED AROUND SEVERAL TIMES AND FINALLY TOUCHED A HOT WIRE AND SHORTED. THE SHORTED TAPE DID NOT TRAVEL BACK ALONG THE TAPE BUT SHORTED TO THE BOX BEFORE BURNING OFF THE TAPE AND THROWING THE MAIN BREAKER. SUBSEQUENT DISCUSSION BROUGHT OUT THE FACT THAT

- A) DRAWINGS WERE PROPER BUT MIGHT HAVE BEEN MORE CLEAR
- B) THE ELECTRICIAN DID NOT USE THE STANDARD PROCEDURE FOR MAKING CERTAIN HE HAD THE RIGHT CONDUIT, THAT IS BY BLOWING AIR THROUGH THE TUBE. THEY HAD A COMPRESSOR AVAILABLE WHICH THEY USED PREVIOUSLY TO DRY OUT THE TUBES.
- C) THE DRAWINGS SHOWED THE UNUSED CONDUIT WERE SUPPOSED TO HAVE CAPS ON THEM. THESE WERE NOT INSTALLED ON THE ORIGINAL CONSTRUCTION JOB.

AFTER DETERMINING WHAT HAD HAPPENED AND THAT NO ONE WAS INJURED, THE ELECTRICAL CREW PUT THE POWER BACK ON THE RUBBER CHEMICALS PART OF THE PLANT AFTER 13 MINUTES. AFTER THE TAPE HAD BEEN PULLED OUT AND THE DISCONNECT SWITCH CHECKED OVER, POWER WAS PUT BACK ON THE PVC ARE AFTER 30 MINUTES - CORRECTION: SHOULD READ 30 MINUTES.

THE PVC PRODUCTION CREW BEGAN VENTING SOME POLYS IN ORDER TO COOL THEM AND MAINTAIN PRESSURE AFTER ABOUT 20 MINUTES. AFTER POWER WAS BACK ON, ALL AGITATORS WERE ABLE TO BE RESTARTED. TWO CHARGES, WHICH HAD ONLY BEEN GOING FOR ONE HOUR OR TWO HOURS, WERE RECOVERED. NINE OTHER PEARL CHARGES WERE KEPT GOING, AS WERE SIX LOW SOPE CHARGES. IT APPEARS THIS MORNING THAT NO OFF-GRADE POLYMER WILL RESULT.

C. R. FLYNN

NGC 01519

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To R. D. Scott—J. L. Nelson—
E. W. Harrington, W. E. Brodine,
Location D. L. Dowell, W. L. Cato, G. Pow

Date May 17, 1968

From Donald G. Laible
Henry Plant

Submission to
Subject Doubtful Cases Report for Eye Injury to Charles Dietsch, Production Foreman

On April 25, 1968, at ⁰⁸⁰⁰~~1000~~ hours, Production Foreman PVC, 5525-0057, reported to the plant nurse at the dispensary, that his right eye was bothering him. He stated that around 4:30 a.m. he had been cleaning a rupture disc assembly, while wearing his glasses, but that apparently a piece of polymer had struck his right eyelid. The eye was closely examined but no foreign body was found in the eye, but the right eye was slightly inflamed. He was given Metaphen & Butyn Sulfate ointment to place in the eye prior to going to bed. It was checked with the plant doctor's office at that time, that the doctor was not in his office, and would not be back in town before noon. Dietsch was advised to call the doctor later in the afternoon if the eye appeared painful.

He worked his normal shift on Friday, morning April 26, but did experience discomfort, and reported to the plant doctor, Dr. Tochalauski on Friday morning and was treated for a corneal abrasion, and again no foreign body could be found in the eye. The employee was scheduled off work, on his long weekend from Friday at 8 a.m. until 4 p.m. Wednesday, May 1st. Dr. Tochalauski continued the treatment of butyn Sulfate, with the recommendation that a patch be worn over the eye for 24 hours.

Dietsch appeared at the plant on Monday morning, for the purpose of picking up his pay check, and at this time did see the nurse in the dispensary. He was wearing dark glasses, and reported that the eye felt much better, but that since he had scheduled to be out of town on Tuesday, if it did not appear completely better that he would see Dr. Tochalauski on Wednesday.

He experienced some discomfort on Tuesday evening, so Dietsch did return to see Dr. Tochalauski on Wednesday morning. At that time an appointment was made for consultation with Dr. Henry Boldt, an ophthalmologist in Peoria for Wednesday afternoon. The doctor in Peoria at that time could find no foreign body in the eye, but at that time instituted new medication, in the form of aureomycin drops. He was to return to see Dr. Boldt at 11 a.m. on Thursday. Dietsch worked a part of his shift on Wednesday evening, but left at 8 p.m. due to the discomfort. The diagnosis reported from Dr. Boldt, on Thursday was a corneal abrasion with some erosion, that the medication in the form of drops would be bothersome, and that he must not work on Thursday evening, as both eyes should be rested. He again saw the doctor on Friday morning, and was cleared to return to work on Friday May 3.

Past history of the injured Charles Dietsch, discloses the following information: In May of 1966 Dietsch sustained an injury to his right eye, when hit in the eye with a sharp stick, while mushroom hunting in the woods, and apparently a piece of wood stuck in the cornea.

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To	Date
Location	From D. G. Laible Henry
Subject Page 2—Submission to Doubtful Cases report for Eye injury to Charles Dietsch, Production Foreman.	

At this time in 1966, Dietsch was treated by Dr. Tochalauski, who was also his family doctor. Scar tissue from that injury is still visible on the cornea.

It is the opinion of Dr. Tochalauski, that the severe conjunctivitis which Dietsch has experienced following only an apparent blow to the eyelid, might not have occurred had it not been for the old injury and resultant scar. Dr. Boldt was also advised of the prior injury, and concurs that the lengthy period of discomfort and treatment may be as a result of the prior injury and residual scar.

These facts are submitted in their entirety for consideration by the doubtful cases committee. The time in question for the purposes of consideration are only the hours between Wednesday May 1, and the shift of Thursday May 2nd, since the injured, would have been able to work had he been scheduled on April 27, 28, 29 and 30th.

Donald G. Laible
Henry Plant



SUPERVISOR'S REPORT OF ACCIDENT INVESTIGATION

1. NAME OF INJURED		PLANT	
Chuck Dietzsch		Henry	
2. JOB CLASSIFICATION		DEPT. AND P.R. NO.	AGE
Production Foreman		5525 0057	31
3. EXACT LOCATION OF ACCIDENT (BE SPECIFIC)		APPROXIMATE EXPERIENCE IN THIS CLASSIFICATION	
PVC office		2 YEARS	
4. DATE OF ACCIDENT	HOUR	WEATHER CONDITION	
4-25-68	0430 ☒ A.M. ☐ P.M.	Clear - Cool	
5. DESCRIBE THE INJURY - DAMAGE OR LOSS		LOST TIME	
Contusion on top right eye lid		☐ YES ☐ NO	
6. DESCRIBE THE ACCIDENT (BE SPECIFIC, GIVE COMPLETE DETAILS)			
Chuck stated, "I was cleaning a rupture disc assembly by stripping the resin buildup off with a screwdriver and hammer. The disc assembly was lying on the floor and it had it braced with my foot, while chipping a chunk of resin flew up under my safety glasses and struck the top of the eyelid."			
7. EMPLOYEE'S ACKNOWLEDGMENT			
Chuck Dietzsch			
SPECIFICALLY, WHAT WAS UNSAFE ABOUT THE VEHICLE, MACHINE, TOOL, EQUIPMENT OR PREMISES? (IF ANSWERED, SEE BELOW)			
8. UNSAFE CONDITION	N/A. Although the work method was bad, the piece being worked on should have been on a bench and should have been secured.		
	WHY, IN YOUR OPINION, DID UNSAFE CONDITION EXIST? (CHECK ITEM OR USE LINE "C")		
	A. ☒ NOT RECOGNIZED AS UNSAFE CONDITION B. ☐ HIDDEN DEFECTS C. ☐		
SPECIFICALLY, WHAT DID ANYONE DO, OR FAIL TO DO, THAT LED TO THIS ACCIDENT? (IF ANSWERED, SEE ITEM NO. 10 BELOW)			
9. UNSAFE ACT	N/A. Again this man is a foreman and should not have been doing this job in the first place.		
WHAT SPECIFICALLY, IN YOUR OPINION, WAS REASON FOR UNSAFE ACT? (CHECK ITEM OR USE LINE "I")			
10. REASON FOR UNSAFE ACT	A. ☐ DISREGARD OF INSTRUCTIONS	E. ☒ NOT CONVINCED ABOVE ACT UNSAFE	
	B. ☐ FAILURE TO UNDERSTAND INSTRUCTIONS	F. ☐ INATTENTION	
	C. ☐ DID NOT KNOW THE NEEDED METHOD	G. ☐ INDIFFERENCE (LACK OF INTEREST)	
	D. ☐ UNSKILLED	H. ☐ MENTAL OR PHYSICAL CONDITION (EXPLAIN)	
	I. ☐		
11. CORRECTIVE ACTION	WHAT SPECIFIC ACTION HAVE YOU TAKEN TO CONTROL THE ABOVE UNSAFE ACT, UNSAFE CONDITION, AND REASON?		
	This particular job was originally set to be done by the maint. shop. We will revert to the original setup and insure that this is done.		
12. DATE OF THIS REPORT	IS JOB METHOD ADEQUATE?		IF "NO" ATTACH EXPLANATORY MEMO
5-6-68	☐ YES ☐ NO		
REVIEWED AND APPROVED BY		IMMEDIATE SUPERVISOR	
C. B. Cooper 5-7-68		John J. Palkovic	

NGC 01522