

TO	C. BAYARD	FIELD POINT OR DEPT. & BLDG. NO. PLAQUEMINE	DATE YOUR LETTER
FROM	M. BRECKENRIDGE	FIELD POINT OR DEPT. & BLDG. NO.	DATE THIS LETTER 2-25-92

SUBJECT

REPETITIVE INCIDENT TYPE 10A
TOXIC CHEMICAL RELEASE
RUPTURE DISC FAILURE

SUMMARY

ON JANUARY 5, 1992 AT APPROXIMATELY 0450 HOURS, THE RUPTURE DISC ON AUTOCLAVE V-34 FAILED. THE FAILURE OF THE RUPTURE DISC RESULTED IN A RELEASE OF 788 POUNDS OF VINYL CHLORIDE MONOMER. ALL APPLICABLE ENVIRONMENTAL AND EMERGENCY RESPONSE AGENCIES WERE CONTACTED.

BOARD OF REVIEW

A BOARD OF REVIEW WAS HELD ON JANUARY 5, 1992. THE FOLLOWING PEOPLE WERE PRESENT:

C. BAYARD	PLANT MANAGER	L.J. CONNERLY	RESIN FOREMAN
T. J. GUILLOT	PROD. COORD.	M. THOMPSON	SR. ENV. SPEC.
J. LEA	DAY FOREMAN		

A BOARD OF REVIEW WAS HELD ON JANUARY 6, 1992. THE FOLLOWING PEOPLE WERE PRESENT:

C. BAYARD	PLANT MANAGER		CON. OPR. SPEC
T.J. GUILLOT	PROD. COORD.	H. CATOIR	PROD/MAINT COORD
M. COMEAUX	SAFETY FOREMAN	D. PREJEAN	SAFETY ASS'T.
M. THOMPSON	SR. ENV. SPEC.		OPERATOR TECH.
J. RICHARDS	PROCESS ENG.	I. W. PARKER	RESIN FOREMAN
J. LEA	DAY FOREMAN		

NARRATIVE

BELOW IS THE SEQUENCE OF EVENTS ON JANUARY 5, 1992 PRIOR TO THE RUPTURE DISC FAILURE ON AUTOCLAVE V-34 AND SHORTLY THEREAFTER.

- AT APPROXIMATELY 0440, CONSOLE OPERATOR NOTICED PRESSURE RISING ON V-34 (WHICH WAS DEGASSING). V-31 WAS IN REACTION AND WAS NO LONGER EXPERIENCING WEIGHT LOSS. MR. ASKED REACTOR AREA OPERATOR TO CHECK THE DEGAS HEADER. HE ALSO STOPPED HEATING THE JACKET OF V-34.
- AT 0445, INFORMED MR. THAT HE HAD SWITCHED FROM 3F6B TO 3F6A DEGAS FILTER. MR. NOTICED THE PRESSURE ON V-34 STARTED GOING DOWN FROM 130 PSIG. THE DEGAS WEIGHT STARTED DROPPING FROM APPROXIMATELY 25,734 POUNDS.
- AT 0448, MR. OBSERVED THE WEIGHT IN V-34 HAD STOPPED FALLING. IT WAS 24,700 POUNDS. THE PRESSURE WAS APPROXIMATELY 113 PSIG. MR. INFORMED MR. HE HAD LOST DEGAS ABILITY AGAIN.

- . AT 0450 AFTER CHECKING THE 316 DEGAS HEADER FOR A PLUG ON THE THIRD LEVEL OF THE REACTOR AREA, MR. ; CAME DOWN TO THE SECOND LEVEL TO CHECK THE LOCAL PRESSURE ON V-31 AND V-34. WHILE WALKING TOWARD V-34 HE SAW THE RED BALL INDICATOR ON V-34 COME OUT AND HEARD THE RUPTURE DISC BURST. MI INFORMED THE CONTROL ROOM THAT THE RUPTURE DISC HAD BURST ON V-34. THE EMERGENCY ALARM WAS THEN ACTIVATED FROM THE CONTROL ROOM. PUT CONDENSER BYPASS COOLING WATER ON V-34 AT THAT TIME.
- . AT 0451, SAW THE LOCAL PRESSURE INDICATION ON V-34 DROPPING TO 100 PSIG. HE SWITCHED RUPTURE DISCS AND A-2 WAS ADDED TO THE AUTOCLAVE. THE PRESSURE CONTINUED TO DROP.
- . AT 0452, THE PRESSURE WAS 61 PSIG.
- . AT 0453, A-2 WAS ADDED TO V-31. IT WAS NOT EXPERIENCING A PRESSURE RISE.
- . AT 0454, AN "ALL CLEAR" WAS GIVEN.
- . AT 0547, ALL APPLICABLE ENVIRONMENTAL AND EMERGENCY RESPONSE AGENCIES HAD BEEN CONTACTED.

FACTS SURROUNDING THE INCIDENT

DAY SHIFT HOURS - 0600 TO 1800 NIGHT SHIFT HOURS - 1800 TO 0600

1. ON THE DAY SHIFT OF 1-2-92, THE PLANT STARTED COMING UP AFTER A 19-DAY SHUTDOWN.
2. ON THE DAY SHIFT OF 1-3-92, V-32 EXPERIENCED AN EMERGENCY DEGAS ALARM AND HIGH PRESSURE ALARM DURING REACTION. IT HAD TO BE SHORTSTOPPED. THE 3F1 FILTER SOCK ON V-32 WAS TORN.
3. AT THE START OF NIGHT SHIFT ON 1-3-92, DIRECT DEGAS (THROUGH 316, 3F5, AND 3F6) WAS IMPOSSIBLE AS A RESULT OF THE 3F1 ON V-32 BEING TORN. CHARGING OPERATIONS WERE STOPPED. THE 316 HEADER WAS OPENED AND THE REMOVAL OF BUILD-UP PROCEEDED. AT THE START OF SHIFT, V-33 WAS NEARING THE END OF REACTION - THIS WAS COMPLETED AND IT WAS COOLED DOWN AFTERWARDS. V-34 HAD RECEIVED THE PREPOLY AND HAD JUST STARTED HEATING UP FOR REACTION - IT WAS COOLED DOWN. WHILE CLEANING THE 316 HEADER, THE ON-LINE FILTERS (3F5A AND 3F6A) WERE OPENED AND FOUND TO BE PLUGGED SOLID. 3F5A COULD NOT BE CLEANED SO IT WAS BYPASSED.
4. DURING THE DAY SHIFT ON 1-4-92, WORK CONTINUED TO UNPLUG THE HEADER. WHEN IT WAS COMPLETE, DEGASSING OF V-33 WAS ATTEMPTED WITH NEGATIVE RESULTS. V-34 WAS THEN HEATED UP WITH ATTEMPTS TO DEGAS. THIS ALSO PROVED UNSUCCESSFUL.

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10. CURRENT SHORT STOP PROCEDURES ONLY ADDRESS OVERPRESSURE CHARGES.

CONCLUSION

1. V-32 FILTER SOCK BROKE AND PLUGGED THE RECOVERY HEADERS SOLID. IT TOOK TWO ATTEMPTS AND APPROXIMATELY 30 HOURS TO CLEAN THE HEADER. CAUSE OF THE FILTER FAILURE IS NOT CLEAR.
2. V-34 HAD REACTED SLOWLY WHILE IT WAS KEPT ON "HOLD AND COOLING" FOR APPROXIMATELY 30 HOURS. THIS LOW REACTION TEMPERATURE RESULTED IN LOW BULK DENSITY RESIN. THIS RESIN "HYDROFILLED" THE REACTOR AND BROKE THE RUPTURE DISC.
3. THE 3F1 FILTER SOCK ON V-34 TORE, CAUSING THE DEGAS LINE AND FILTERS TO PLUG AGAIN. THE FILTER SOCK WAS TORN BY THE RESIN "HYDROFILLING" THE REACTOR. THE FILTER SOCKS WERE NOT DEFECTIVE.
4. THE TIME REQUIRED TO CLEAN THE DEGAS LINE AND FILTERS WAS TOO LONG.
5. PROCEDURE NOT TO SHORTSTOP "DUMP AND DEGAS" BATCHES NEVER ANTICIPATED A WAITING PERIOD OF 30 HOURS.

CORRECTIVE ACTION

1. PROCEDURES TO INCLUDE EXPLICIT INFORMATION ON WHEN TO SHORTSTOP A "DUMP AND DEGAS" BATCH, (2 HOURS AFTER HEATUP) HAVE BEEN COMPLETED. J. RICHARDS JANUARY, 1992.
2. INSPECTED ALL FILTER CAGES AND REMOVED ONE DEFECTIVE CAGE WITH SHARP EDGES FROM SERVICE. J. LEA COMPLETE, JANUARY, 1992.
3. INSTALL PRESSURE GAUGES ON 316 HEADER TO INDICATE WHEN LINES ARE PLUGGING. - COMPLETE. J. LEA FEBRUARY, 1992.
4. REVIEW FILTER SOCK INSTALLATION PROCEDURE WITH ALL OPERATOR TECHS. J. LEA FEB. & MAR., 1992
5. THIS NARRATIVE WILL BE REVIEWED WITH ALL RESIN MANUFACTURING PERSONNEL. M. COMEAUX MARCH, 1992
6. REVIEWED TROUBLESHOOTING PROCEDURE WITH PERSONNEL INVOLVED AND CORRECTIVE ACTION TAKEN. COMPLETE. M. BRECKENRIDGE, MARCH, 1992.

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