



INTERNAL CORRESPONDENCE

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Date: May 13, 1981

Subject: USV S.O.P. No. 2 -
Vinyl Chloride Exposure
Protection (Revised)

cc: H. J. Augustus
J. H. Barrett
T. L. Bateman
J. B. Leverton
D. G. Reese
USV Staff *TTD*

The subject S.O.P. was issued May 11 and is to be effective May 15, 1981.

The revision combines two S.O.P.'s and several areas related to vinyl chloride protection and updates and spells out details of procedures to be followed.

The objective of the S.O.P. is to provide procedures for safe operation and protection of personnel working in the area. Following procedures in the S.O.P. are mandatory, there are no exceptions.

It is requested that you train your Operators and Craftsman in the S.O.P. This training should be completed by June 15, 1981. Written confirmation should be submitted when training is complete. Furthermore, any new personnel subsequently entering the area under your responsibility must also receive the training. I will be glad to assist you in any way that I can.

A copy of the S.O.P. is attached. Each S.O.P. Manual in the Vinyls Area should now have a copy. However, if you need extra copies, let me know.

F. L. Johnson

FLJ/st
Attachments

UCC 093667

"Vinyl Chloride at Texas City: An Update"
Final Script
May 20, 1982

1. TITLE: "DAMON ENGLE, PLANT MANAGER UCC TEXAS CITY."

2. SCENES OF WORKERS AT JOBSITE AND VINYL AREA

NATURAL SOUNDS

Engle Voice Over: (Statement of UCC concern for the health and welfare of employees and importance of cooperating with monitoring program)

3. FADE UP TO OUTSIDE SHOT OF DOOR TO OXO UNIT.

a.) Narrator walks out door with hat and glasses on and steps up to camera.

NARRATOR:

"Hi, I'm Pete Rygaard and my hat shows that I work in the OXO unit. But for this program I'm going to change hats..."

b.) Narrator changes hat to blue UCC hard hat

...in order to update the facts about vinyl chloride here at the Texas City plant."

4. SHOTS OF GROUPS OF WORKERS ON A JOBSITE (CUTAWAY)

NATURAL SOUNDS

NARRATOR:

"A lot of the work we do here at the plant is a cooperative effort. We depend on each other to do our job safely."

5. SHOT OF WORKER BEING OUTFITTED WITH PERSONAL MONITORING DEVICE (CUTAWAY)

NARRATOR:

"We need that same type of cooperation when it comes to monitoring exposure to vinyl chloride."

6. TITLE "VINYL CHLORIDE AT TEXAS CITY: AN UPDATE"

SFX: TITLE MUSIC

7. SCENE OUTSIDE BLDG. 114

a.) Car pulls up, narrator gets out and walks up to b. 114 entrance. Workers exit 114 and greet narrator on the way by.

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8. SCENE INSIDE B. 114 CONTROL ROOM.

- a.) Narrator walks up to sign-in sheet, signs in, and turns toward camera.

NARRATOR: (with OSHA book in hand)

"This program is the result of an OSHA regulation that says workers engaged in vinyl chloride operations must be provided training in some of the potential hazards of vinyl chloride and some of the precautions the plant takes to insure its safe processing.

9. TITLE GRAPHIC: "EXPOSURE LIMITS"

...the limits to vinyl chloride exposure as set by OSHA

10. SHOT OF PERSONAL MONITORING DEVICE IN LABORATORY

...the monitoring program conducted by our Industrial Hygiene group...

11. SHOT OF MEDICAL DIVISION (INSIDE)

"During this program we will discuss the chronic and acute effects of vinyl chloride exposure and the medical surveillance program our Medical Division oversees...

12. SHOT OF CONTROL PANEL INSIDE UNIT.

...operating conditions that could lead to a vinyl chloride release and emergency procedures to deal with one...

13. SHOT OF RESPIRATORY DEVICE (AIR PACK)

...respiratory equipment to protect yourself if a leak occurs...

14. SCENE OUTSIDE BUILDING 121

...and finally, regulated areas in our plant and how they get that way."

15. SHOT OF NARRATOR (SAME AS SCENE #8)

"We have alot of information to cover, so let's get started with some basic information."

16. ESTABLISHING SHOT OF LOCAL DEPARTMENT STORE (J.C. Penny's or Woolco)

NATURAL SOUNDS

17. SHOT OF NARRATOR INSIDE DEPARTMENT STORE

- b.) Narrator walks slowly down aisle

NARRATOR

"Vinyl chloride is a gas that is used to make solid materials such as vinyl resins also known as PVC.

- b.) Narrator picks up floor tile samples

vinyl resins are used to manufacture such products as floor tiles...

- c.) Narrator picks up record album

and record albums."

18. LOW ANGLE SHOT OF OUTDOOR AREA

- a.) Narrator enters frame and kneels down

NARRATOR:

"A heavy concentration of vinyl chloride, 36,000 PPM or more, would settle on the ground like a vapor cloud. Only a major release would cause a vapor cloud and that would constitute a potential fire emergency. The vinyls area SOP lists the steps an operator must take to deal with a massive release and we'll outline those steps later in this program.

19. SCENE IN TANK FARM (#9209-A)

- a.) Narrator enters frame with 8 oz cup in hand.

NARRATOR:

"During this program we will be using the term PPM, or part per million, to express the ratio of vinyl chloride to the air. That tank behind me is one million cups roughly, so if we added this cup of water to that tank the concentration would be one part per million parts. PPM is a ratio and an important term to understand when we discuss vinyl chloride. Exposure limits.

20. TITLE GRAPHIC: "EXPOSURE LIMITS"

NARRATOR (VOICE OVER)

"The regulation says the limits to employee exposure to vinyl chloride are one part per million averaged over any eight hour period, and five parts per million over any fifteen minute period.

21. SHOT OF NARRATOR (CUT BACK TO SHOT #19)

NARRATOR:

"Remember, the mild sweet odor of vinyl chloride is not detected by smell until the concentration reaches 1000 parts per million. Because the OSHA limits are low, instruments capable of detecting vinyl chloride are necessary to monitor exposure. We'll discuss monitoring later, but first let's look at the acute and chronic effects of vinyl chloride exposure.

22. TITLE GRAPHIC: "ACUTE EFFECTS"

NARRATOR:

"The acute, or short term, effects of vinyl chloride occur after exposure to concentrations far above the OSHA limits. These effects are light-headedness or a woozy condition that resembles drunkenness. The acute effects will usually clear up if the affected person is removed from the source of exposure and, if necessary, administered oxygen.

23. TITLE GRAPHIC: "CHRONIC EFFECTS"

NARRATOR:

"The chronic, or long term, effects of vinyl chloride have been associated with repeated, high level, exposure. The most serious chronic effect is a rare form of liver cancer, angiosarcoma, which was discovered in 1974 amongst workers whose exposure was long term and high level. No cases have been reported here at Texas City."

24. SCENE OF NARRATOR OUTSIDE B. 113 (OR NEAR I.H. SIGN)

NARRATOR:

"Because of the chronic effects associated with exposure to vinyl chloride, an accurate employee exposure monitoring program is essential. The personal monitoring program is conducted by our Industrial Hygiene group.

- a.) Narrator turns and enters building.

25. SCENE INSIDE LAB

- a.) Narrator enters room, turns toward camera

NARRATOR:

"This is where the personal monitoring devices are stored and analyzed."

- b.) Narrator picks up monitoring device

"How often you must wear one of these depend on what OSHA refers to as the action level of exposure. Recall that we told you the permissible exposure limit was 1 PPM averaged over an 8 hour period. OSHA says that .5 PPM is the action level. If you are exposed above the action level but below the permissible limit you will be monitored at least quarterly. If your above the permissible limit, you'll be monitored monthly.

26. SHOT OF OPERATOR WEARING DEVICE WHILE IN UNIT.

NARRATOR: (VOICE OVER)

"The only way to get an accurate reading of your exposure is to wear your monitoring device. Remember its for your benefit.

27. CLOSE UP SHOT OF DESK TOP

- a.) Monitoring device is dropped onto desk.

NARRATOR: (VOICE OVER)

"The monitoring device won't do any good sitting on a desk."

- b.) Hand reaches into frame and points at monitor, other hand reaches back into frame and retrieves monitoring device.

28. SCENE INSIDE LAB (SAME AS SCENE #25)

- a.) Narrator holds up monitoring summary form.

NARRATOR:

"When it comes time for you to wear your monitoring device you will be given one of these, a monitoring summary form. Please fill this form out completely so Industrial Hygiene can keep an accurate track of where you were during the time you wore the device. Remember, these steps are taken for your protection.

- b.) Narrator puts down form.

How often you are monitored can change if the plant introduces any new methods of processing, handling, or control of vinyl chloride which could potentially increase the release of vinyl chloride."

29. CLOSE UP OF CHARCOAL TUBE ANALYZER (TECHNICIAN BREAKS VIAL)

NARRATOR: (VOICE OVER)

"Industrial hygiene will determine the vinyl chloride level in the charcoal tube section of the monitoring device and enter the results into a computer."

30. SCENE OUTSIDE MEDICAL DIVISION

a.) Narrator walks into frame.

NARRATOR:

"Those results are sent to the Medical Division which uses the information in it's medical surviellance program,

b.) Narrator turns and enters building

31. SHOT INSIDE MEDICAL DIVISION

a.) Narrator enters building and approaches Dr. Glenn

NARRATOR:

"Hi, Dr. Glenn...

b.) Superimpose title: "Dr. David Glenn, Gulf Coast Medical Director."

...we're doing an update on vinyl chloride training and we would like to ask you about the medical surviellance program."

DR. GLENN:

"Sure Pete, I'd be happy to answer any questions."

NARRATOR:

"How do you determine who will be subject to medical survifellance?"

DR. GLENN:

"Well Pete, we provide medical surviellance to all employees normally assigned to regulate areas.

NARRATOR:

"And what does the medical survey involve?"

DR. GLENN:

"The survey is pretty far ranging, Pete...

32. CUTAWAY TO SHOT MEDICAL EXAMINATION

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DR. GLENN: (VOICE OVER)

...we give a general physical examination with special attention to the liver, spleen and kidneys. We also test the blood. In addition, we do a complete medical history with questions on such things as past incidence of hepatitis and alchoholic intake...

33. CUTAWAY SHOT OF MEDICAL RECORDS BEING FILED

DR. GLENN: (VOICE OVER)

...we repeat the examination every year for those workers in regulated areas, unless they've been there for more than ten years, at which point the examination is repeated every six months."

34. SHOT OF NARRATOR AND DR. GLENN (SAME AS #31)

NARRATOR:

"I see, Dr. Glenn, are the workers required to take the examinations?"

DR GLENN:

"No they're not, Pete. If they choose not to then they are asked to sign a statement saying so."

NARRATOR"

"Thank you, Dr. Glenn."

DR. GLENN:

"Your welcome, Pete."

35. SCENE OUTSIDE INDUSTRIAL HYGIENE BLDG.

a.) Narrator walks into frame

NARRATOR:

"The Medical Division are not the only ones provided information on exposure levels. If your personal monitoring device reflects an exposure in excess of the permissible limit of 1 PPM, your department head will be notified.

36. SHOT OF MAINTANENCE WORKERS AT WORK ON UNIT.

NARRATOR: (VOICE OVER)

The department must then take steps to try to reduce the

source or cause of the exposure...

37. SHOT OF SUPERVISOR AT DESK AND OPERATOR STANDING NEXT TO HIM:

NARRATOR: (VOICE OVER)

...and also notify you in writing of the level of exposure.

38. SCENE OUTSIDE INDUSTRIAL HYGIENE BLKDG. (SAME AS #35)

NARRATOR:

"Before we move on from this section on personal exposure monitoring and medical surveillance we would like to make a couple of observations. First, the Industrial Hygiene group needs your cooperation. Wear your monitoring devices so they can keep accurate information. It's for your protection. Also the purpose of the medical surveillance program is to monitor your good health and to determine your suitability to work in a regulated area.

39. SCENE OUTSIDE REGULATED AREA (b. 114)

a.) Camera starts on close up of "regulated area" sign, slow zoom out to narrator.

NARRATOR:

"We've referred to regulated areas a couple of times so far in this program, so let's look at the regulated areas in this plant, how to enter one and area monitoring equipment.

40. SCENE OUTSIDE B. 121

NARRATOR: (VOICE OVER)

"OSHA regulations are very clear on what constitutes a regulated area. They say a regulated area is where vinyl chloride is manufactured, stored, handled, or used, or more importantly where vinyl chloride concentrations may exceed the permissible limit of 1 PPM time-weighted average."

41. SHOT OF NARRATOR (SAME AS #39)

"What that means is OSHA standards determine what areas are to be regulated and that's why you see signs like the one behind me. OSHA also says we must keep a roster of all persons entering regulated areas. Our roster is kept in building 114, so let's go sign in.

a.) Narrator turns and enters building.

42. SHOT INSIDE B. 114

a.) Narrator enters building, walks up to roster and signs in.

NARRATOR:

"Now that we've signed in let's look at the regulated areas in this plant.

43. SHOT OF B. 115

NARRATOR: (VOICE OVER)

...Building 115, the auto wave building

44. SHOT OF B. 117

NARRATOR: (VOICE OVER)

...building 117, the stripping building.

45. SHOT OF B. 119

NARRATOR: (VOICE OVER)

...building 119, ethylanamines stripping building.

46. SHOT OF B. 121

NARRATOR: (VOICE OVER)

...building 121, processing or drying building.

47. SHOT OF B. 122

NARRATOR: (VOICE OVER)

...building 122 clarification building.

48. SHOT OF TANK CAR UNLOADING RACK

NARRATOR: (VOICE OVER)

..the vinyl chloride tank car unloading rack. Workers here must wear protective clothing and respiratory equipment."

49. SCENE INSIDE B. 114 (SAME AS #42)

NARRATOR:

"The areas we just showed you are all tied in to an area monitoring system thats housed in building 115."

50. SHOT OF MONITOR SYSTEM IN B. 115 .

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NARRATOR: (VOICE OVER)

"Two vapor fraction analyzers, or VFA's, automatically scan 38 points throughout the vinyls area. If one finds a reading of 5 PPM or more, an alarm will sound in building 115. If the same VFA detects a concentration of 5 PPM or more this indicates a leak and the operator must follow the vinyl chloride exposure SOP and the leak detection procedure. A single reading of 10 PPM or more also indicates a leak and the SOP must follow. The operator must notify the chief operator and the personnel in the affected area over the intercom.

51. SHOT OF OPERATOR PROWLING AREA FOR LEAK

NARRATOR: (VOICE OVER)

"The chief operator, or someone he designates, will look for the leak with the OVA, Century Organic Vapor Analyzer. Personnel required to remain in the area must wear respiratory protection including maintenance personnel repairing the leak.

52. SHOT OF NARRATOR INSIDE B. 114 (SAME AS #49)

NARRATOR:

"We've mentioned respiratory equipment a few times. Let's look at what types are available in the regulated areas and their limitations."

53. SHOT OF AIR PURIFYING CANISTER ON OPERATOR

NARRATOR: (VOICE OVER)

"This canister type mask is designed for use in concentrations known to be no more than 25 PPM. The canister is good for 4 hours."

54. SHOT OF PRESSURE DEMAND RESPIRATOR ON OPERATOR

NARRATOR: (VOICE OVER)

"This 30 minute pressure demand type respirator known as an MSA air-pack is intended for concentrations known to be no more than 3,600 PPM.

55. SHOT OF BOTTLED AIR SYSTEM IN USE.

NARRATOR: (VOICE OVER)

"Another type of respirator is the bottled air system, pressure demand type, used for special jobs such as disconnecting tank cars."

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56. SHOT OF NARRATOR OUTSIDE B. 114

- a.) Narrator walks out door and up to camera

NARRATOR:

"Respiratory equipment is also required for entering a confined space that contains vinyl chloride above the permissible limit. Plant procedure 1-D-3 describes the safety procedures for entering a vessel."

- b.) Narrator walks out of frame.

57. SHOT OF B. 115 CONTROL ROOM.

- a.) Narrator walks in door.

NARRATOR:

"Every operator should be familiar enough with their unit to know operating conditions that could potentially lead to a release of vinyl chloride."

58. TRACKING SHOT OF GAGES AND DIALS ON CONTROL PANEL

NARRATOR: (VOICE OVER)

"Keep an eye on the pressure and temperature of the autoclaves for example. An uncontrolled reaction might lead to venting of vinyl chloride to the atmosphere. Another key area to watch out for are level gages of vessels containing vinyl chloride."

59. TRACKING SHOT OF PROCESSING EQUIPMENT

NARRATOR: (VOICE OVER)

"Equipment failures could also lead to a release of vinyl chloride. Improperly seated safety valves, leaking process valves or other conditions out of the ordinary could lead to a release. Avoid these conditions by thoroughly inspecting all processing equipment at least once a shift."

60. SHOT OF NARRATOR B. 114 (SAME AS #57)

NARRATOR:

"Now, what does an operator do in the event of a massive vinyl chloride release?"

- a.) Narrator holds up SOP.

The SOP for the vinyls area lists the steps the operator must take.

61. SHOT OF DELUGE SYSTEM CONTROL

NARRATOR: (VOICE OVER)

"First, activate the deluge system in the affected area...

62. SHOT OF PA MIKE

NARRATOR: (VOICE OVER)

...active the plant fire alarm and the toxic gas alarm."

64. SHOT OF NARRATOR NEXT TO EMERGENCY TRUCKS.

NARRATOR:

"Next, isolate the area, rope it off if necessary. But do not re-enter the area, that's the job of emergency personnel. Again, the plant procedures describe what you must do in the event of a release that could form a vapor cloud. Read them and know them.

65. SHOT OF NARRATOR OUTSIDE OXO UNIT DOOR (SAME AS #3)

a.) Narrator walks into frame

NARRATOR:

We've covered alot of information in this program, permissable limits, the effects of exposure, and other areas. We also showed you that participating in the monitoring and medical survjellance is for your benefit. Vinyl chloride is recognized as a carcinogen. Union Carbide has taken steps that have dramatically reduced the potential for exposure, but we need your continuing cooperation to protect your health and well being.

b.) Narrator replaces blue hat with OXO hat. Walks back into unit.

c.) Roll Credits: PRODUCTION
TECHNICAL ADVISORS
DIRECTORS
SCRIPT AND CONCEPT
NARRATOR
PRODUCTION ASSISTANCE

5/20/82
2200A/dr

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