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Interoffice Communication

To J. A. DeBernardi - J. H. McCulley - R. D. Gamblin

From C. E. Gremillion

Date October 21, 1974

Subject Semi-annual Toxicity Test

Several persons did not receive the scheduled toxicity test given in the plant during October 2-4, 1974. Therefore, the following employees listed below are requested to go to the Pathology Lab (see map attached) at sometime during this month between the hours of 8 a.m. to 5 p.m., Monday through Friday and on Sat. from 8-12 a.m. to give their blood and urine sample.

Name

R. D. Gamblin
G. G. Draper
P. L. Fetzer
A. C. Hughes
B. J. Landers
J. Morris

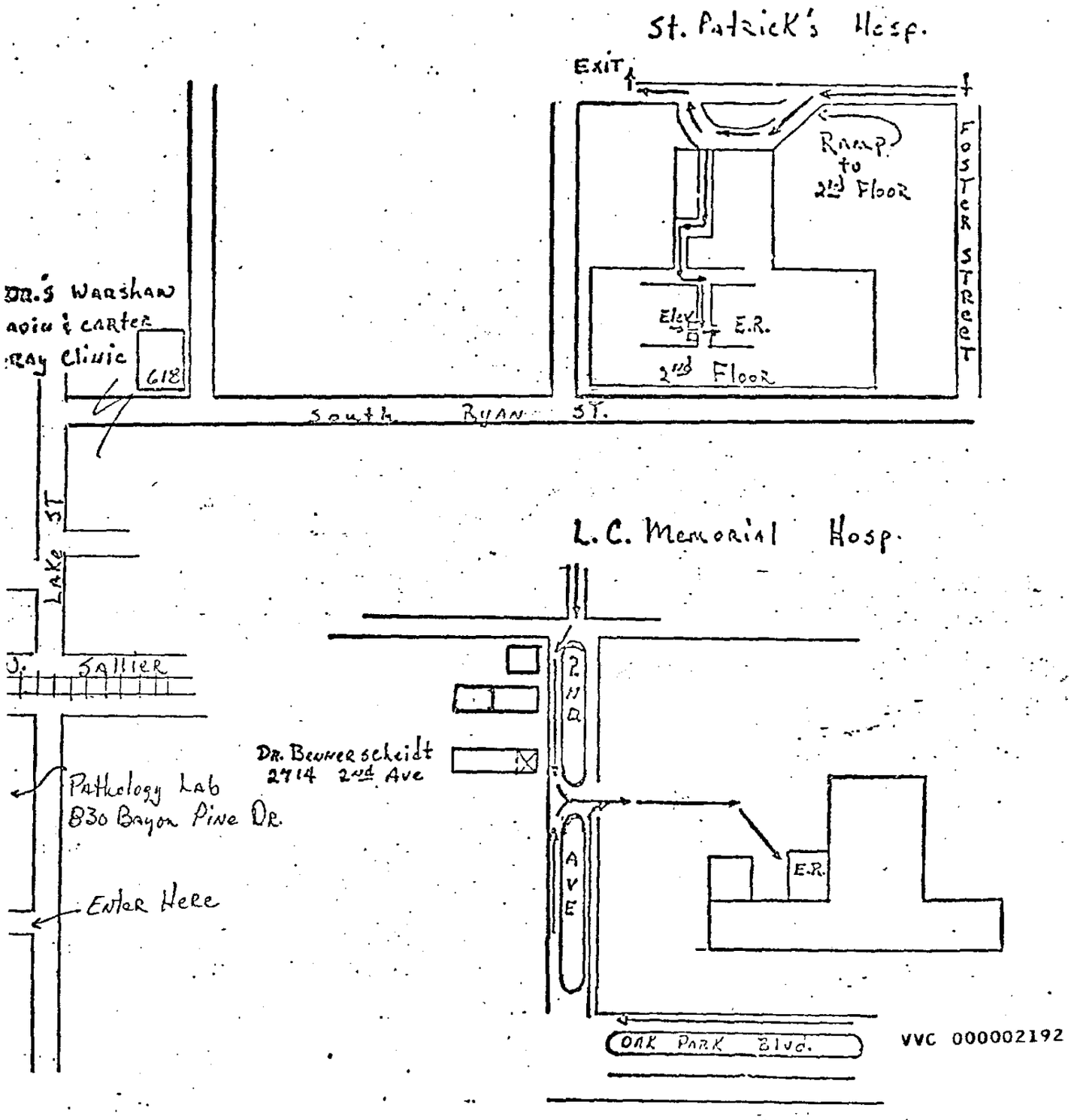
Remember that strict fasting is required at least six (6) hours before giving the blood or urine sample. Employees will be paid 1 hour overtime to give the blood and urine sample. One overtime breakfast, lunch or dinner will be provided after the test is run.

Earl Gremillion

C. E. Gremillion
Safety Director

bw

VVC 000002191



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CONOCO VCM

TO: J. GIEGER - BRUSSELS

FROM: D. E. MICHELS - CONOCO VCM PLANT

DATE: OCTOBER 21, 1974

SUBJECT: VCM EMISSION PROBLEMS IN PLANT TANK FARM AND LOADING AREA

THE FOLLOWING IS A LIST OF VCM EMISSION PROBLEM AREAS ASSOCIATED WITH THE PLANT TANK FARM AND VCM LOADING OPERATIONS. ALSO INCLUDED IS A SHORT DISCUSSION OF THE PROBLEM AND THE POTENTIAL SOLUTIONS THE PLANT IS CONSIDERED AND IS NOW WORKING ON.

1. VENTING FROM NITROGEN PURGED TANK CARS - PRESENTLY THE VAPORS, CONTAINING ABOUT 70 TO 80 MOLE % VCM ARE VENTED TO THE ATMOSPHERE. PLANS ARE TO INSTALL A -50 DEGREE F REFRIGERATION SYSTEM TO CONDENSE THE VCM.
2. VAPOR DISPERSION FROM VENT STACK - ALL VENTING FROM STORAGE TANKS, TANK FARM VESSELS, RAIL CARS, ECT IS NOW DONE THROUGH A 40 FOOT HIGH VENT STACK. THIS LEADS TO HIGH GROUND LEVEL VCM CONCENTRATIONS. THE PLANT WILL INSTALL A 150 FOOT STACK TO DISPERSE THESE FUGITIVE EMISSIONS.
3. VAPOR EMISSIONS AT SHIP LOADING AREA- THE SHIP LOADING DOCK IS LOCATED ABOUT FOUR MILES FROM THE MAIN PLANT. VENTING FROM VESSELS AND FROM THE SHIP IS NOW THROUGH A COMPRESSOR - AIR COOLER SYSTEM TO A 50 FOOT VENT STACK. THE PLANT WILL INSTALL A 150 FOOT STACK FOR VAPOR DISPERSION AND WILL BUILD A PIPELINE BACK TO THE PLANT. THE VAPORS WILL THEN EQUALIZE INTO A STORAGE SPHERE WITH ANY SUBSEQUENT VENTING THROUGH THE PREVIOUSLY MENTIONED REFRIGERATION SYSTEM.

4. RAIL CAR LOADING ARMS - THE PLANT NOW USES SWIVEL JOINT TO CONNECT THE RAIL CAR LOADING ARMS TO THE TANK CARS. THESE WILL BE REPLACED WITH FLEXIBLE HOSE AND FLANGED CONNECTIONS.
5. DIP TUBE EMISSIONS - THE PLANT PREVIOUSLY USED DIP TUBES OPEN TO THE ATMOSPHERE TO DETERMINE THE LIQUID LEVEL WITHIN TANK CARS. AN ENCLOSED SYSTEM HAS BEEN INSTALLED AND INSTALLATION OF NON-VENTING LIQUID MEASURING DEVICES ARE BEING CONSIDERED.
6. TANK VENT COLLECTION SYSTEM AND RECOVERY - THE PLANT'S EDC STORAGE TANKS ARE ATMOSPHERIC VESSELS AND VENTING OF EDC CONTAINING UP TO 1000 PPM VCM IS A PROBLEM. A FINAL REFRIGERATION SYSTEM TO COLLECT AND CONDENSE THE VAPORS IS A POTENTIAL SOLUTION. ANY FURTHER VENTING WILL BE THROUGH THE 150 FOOT VENT STACK DESCRIBED PREVIOUSLY.
7. LOADING PUMP SEAL EMISSIONS - THE PLANT USES SINGLE MECHANICAL PUMP SEALS WHICH RESULT IN VCM EMISSIONS. THE PLANT IS CONSIDERING SEAL MODIFICATIONS OR PUMP REPLACEMENT.

SEAL MODIFICATIONS OR PUMP REPLACEMENT.

8. CONTROL AND BLOCK VALVES - EMISSIONS FROM THE STEMS OF THESE VALVES LEAD TO LOCALLY HIGH EXPOSURE PROBLEMS. REPLACEMENT OF THESE VALVES WITH PLUG OR BALL VALVES WILL BE NECESSARY. BELLOWS TYPE FULLY ENCLOSED CONTROL VALVES MAY ALSO BE INSTALLED.

9. RELIEF VALVE COLLECTION SYSTEM - ALL RELIEF VALVES WILL BE REPLACED WITH EXPANSION BOTTLES OR WILL BE ROUTED IN TO THE VENT HEADER SYSTEM.

10. FIXED POINT MONITORING SYSTEM - A CONTINUOUS MONITORING AND ALARM SYSTEM WILL BE INSTALLED TO DETECT VCM CONCENTRATIONS AND ALERT EMPLOYEES. THIS SYSTEM WILL BE CAPABLE OF MONITORING UP TO 10 INDIVIDUAL SOURCE POINTS.

11. BREATHING AIR SYSTEM - A BREATHING AIR SYSTEM WILL BE INSTALLED WITH CONNECTING POINTS WHERE THE POTENTIAL OF VCM HAZARDS EXISTS.

12. CAUSTIC DRYER LOADING BED - THE PERIODIC RECHARGING OF THIS BED PRESENTS A SIGNIFICANT EXPOSURE PROBLEM. THIS VESSEL WILL BE CLEARED BY BLOWING THE LIQUID BACK INTO THE STORAGE SPHERES. NITROGEN PRESSURE PURGING THROUGH THE VESSEL INTO THE VENT STACK AND FINAL VACUUM EVACUATION OF THE VESSEL.

13. FILTER CLEARING - THE FINAL PRODUCT FILTER WILL BE CLEARED USING THE SAME PROCEDURE AND SYSTEM AS DESCRIBED FOR THE CAUSTIC DRYER.

14. SAMPLE RECOVERY SYSTEM - THE PLANT IS CONSIDERING INSTALLATION OF A SAMPLE RECOVERY SYSTEM WHICH WILL RETURN THE SAMPLE BACK INTO THE STORAGE SPHERES. ANY VCM VENTED DURING SAMPLING WILL ALSO BE RETURNED BACK INTO THE SPHERES.

15. BLOCK AND BLEED PURGE CONNECTIONS - CONNECTIONS FOR NITROGEN PURGING AND VACUUM EJECTION WILL BE MADE AT POINTS WHEREVER IT IS PERIODICALLY NECESSARY TO BREAK INTO THE PIPING.

THE ABOVE REPRESENTS OUR CURRENT BEST ESTIMATE OF THE MODIFCATIONS WHICH MAY BE NECESSARY. IF YOU REQUIRE ADDITIONAL DATA OR DESIRE FURTHER INFORMATION PLEASE CONTACT JOHN MCCULLEY OR MYSELF AT THE LAKE CHARLES VCM PLANT.

SINCERELY

D. E. MICHELS

VCM PLANT

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