



Blue light ~~light~~ recovery Bldg. 1)

INTER-COMPANY AND OFFICE CORRESPONDENCE

To: A. Godfried

FROM: M. Judson-Ebbets

{ Dept.
Branch
Division
Company

Leominster Continuous Monitoring
SUBJECT: Work by C&R

LOCATED AT: Stamford, Conn.

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INTRODUCTION

Due to EPA's promulgation of the vinyl chloride emission standard, a continuous multipoint monitoring system must be set up to detect leaks in those areas where vinyl chloride is mixed, weighed and stored. Since many of these areas are currently monitored through OSHA-related systems, the extent of additional work to include all leakage prone areas within the entire monitoring scheme will be greatly reduced. Any piece of equipment currently monitored by an OSHA system satisfies the EPA requirement for monitoring that item, since the OSHA excursion limit is set at the same VCM concentration level as that of EPA, 5 ppm.

The purpose of this report is to ultimately decide exactly what new equipment is needed at Leominster to meet the continuous monitoring standard. A look at the current OSHA system and its additional capacity is made with respect to extended indoor and outdoor monitoring.

BACKGROUND AND DISCUSSION

The current OSHA monitoring system is contained in two buildings, each serving one plant. Building ~~2~~ ³ contains two Bendix model #007 gas chromatographs. One chromatograph (G.C. #1) services indoor areas and is thus called the OSHA G.C. Associated with it are two sample panels, one with 10 points and another with 6 points. The sixteen points is the maximum limit of sample points that can fit on any one chromatograph. Spare point number 10 on G.C. #1 (or point 1-10) will be used for the new recovery building indoor monitoring.

The second chromatograph in building 5 (G.C. #2) will be used to monitor outdoor, or EPA, area locations. Seven of its existing 16 sample points will be used for new outdoor area location monitoring and the equipment being monitored now by 5 of the 7 points will no longer need monitoring once the EPA compliance work is done because this equipment will either be decommissioned or will be put in service downstream of the polymer strippers. Chromatograph #2 has three sample panels of 6 points each.

The chromatograph for site 2 (G.C. #3) is located in building 22 and is used for both indoor (OSHA) and outdoor (EPA) monitoring at that site. The sixteen point sample panel currently has only 9 points in use. Two of the 7 available points will be used for two outdoor EPA areas.

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Figure 1 shows the Leominster site with the location of the gas chromatographs marked "GC" in buildings 5 and 22. Outdoor sample points are marked according to gas chromatograph number and sample number within a particular chromatograph.

Tables I, II and III explain the work which Crawford & Russell will do to extend the monitoring system for gas chromatographs #1, 2 and 3, respectively.

All new outdoor tubing that is required will be specified stainless steel. Plastic tubing tends to crack outdoors during cold days and will only be used indoors. Existing outdoor plastic tubing will remain as is, but any extension of a plastic leg will be of stainless steel tubing.

ALARM SYSTEM

Existing in building 5 is an OSHA annunciator panel which is tied into alarms in the plant. The first alarm fires at 5 ppm and a blue beacon light signals the plant operators in the alarm area to wear their carbon canister gas masks. The first light on the annunciator panel goes on. At the 25 ppm VCM level, the second light on the panel goes on and simultaneously, a horn sounds in the alarm area. At this time, the operators must hook up to the breathable air supply if they are to remain in the alarm area.

The new recovery building will have an alarm system similar to the one described above. One spare annunciator location on the panel in building 5 will be used for this area.

For outdoor area alarming, no additional work will be done by Crawford and Russell. At present, the only alarm notification is the computer printout sheet in building 5. The operator in building 5 must be present in building 5 to observe an outdoor area alarm.

SUMMARY

Crawford & Russell will do the following work on the extension of the emission monitoring system:

1. Add, change or extend 14 sample points on the existing three gas chromatographs using plastic tubing for indoor areas and stainless steel tubing for outdoor areas.
2. Add one annunciator point on the panel in building 5 to indicate alarm levels in the new recovery building.
3. Provide a blue beacon light and a horn for signalling alarm conditions in the new recovery building.

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Attachs.

M. Judson-Ebbets
M. Judson-Ebbets

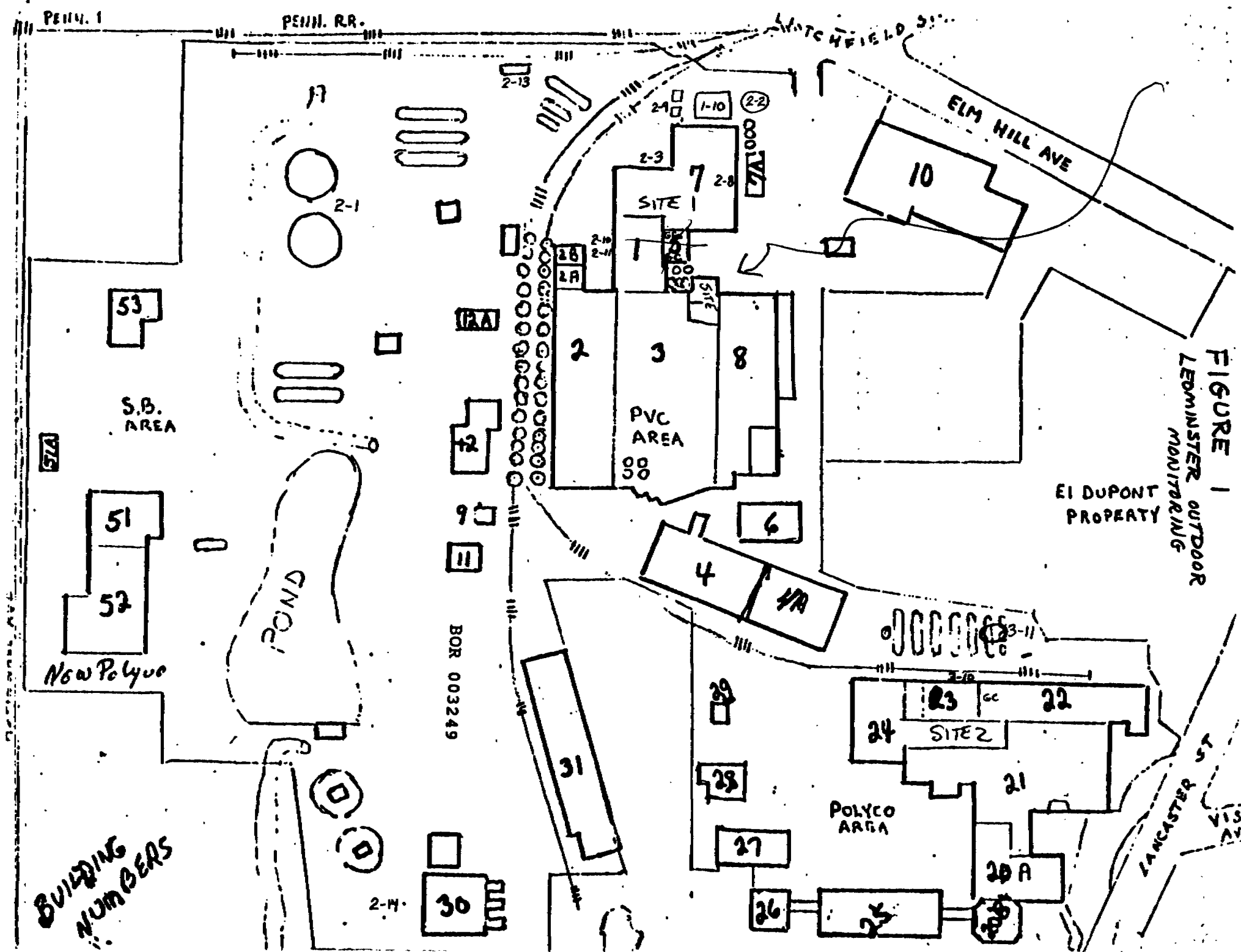


TABLE I
(SITE 1) G.C. #1 MONITORING SCHEDULE
WORK BY C&R

<u>STREAM #</u>	<u>EXISTING POINT LOCATION</u>	<u>WORK BY C&R</u>
1 - 1	BLDG. 7W UPPER	EXTEND - TO LOCAL RVCN KO TANK
1 - 2	BLDG. 7E UPPER	EXTEND - TO LOCAL RVCN KO TANK
1 - 3	BLDG. 7 LOWER	
1 - 4	BLDG. 1W UPPER	EXTEND - TO LOCAL RVCN KO TANK
1 - 5	BLDG. 1W LOWER	
1 - 6	BLDG. 1E UPPER	EXTEND - TO LOCAL RVCN KO TANK
1 - 7	BLDG. 1E LOWER	
1 - 8	BLDG. 5	
1 - 9	BLDG. 10 - SPP	
1 - 10	TEST POINT	CHANGE - NEW RECOVERY BUILDING
1 - 11	BLDG. 4	
1 - 12	BLDG. 8	
1 - 13	BLDG. 4A	
1 - 14	FORCE FLOW PACKER	
1 - 15	DRYER CONTROL AREA	
1 - 16	CONTROL LAB	

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(SITE 1)

TABLE II
G.C.#2 MONITORING SCHEDULE
WORK BY C&R

STREAM #	EXISTING POINT LOCATION	WORK BY C&R
2 - 1	BLDG. 1E RECOVERIES FREE	2-4 CHANGE - STORAGE SPHERES & TANK FARM PUMPS
2 - 2	BLDG. 1W RECOVERIES	CHANGE - GAS HOLDER AREA
2 - 3	BLDG. 7 RECOVERIES	CHANGE - F-403/404/405/406 UPPER
2 - 4	BULK BIN SWITCH STA.	CHANGE - F-403/404/405/406 LOWER Valley View pump pad.
2 - 5	F-209/210 LOWER	
2 - 6	F-209/210 UPPER	
2 - 7	BLDG. 7 RECOVERIES FREE	
2 - 8	BLDG. 7 ROOF Column Recovery Condenser	EXTEND - TO MONITOR ALL RECOVERY CONDENSERS
2 - 9	BASE OF COLUMNS (SHIDS)	EXTEND - TO TOP OF COLUMNS (POLYMER STRIPPERS)
2 - 10 13	BLDG. 1 REMOTE AIR IS	2-13 UNLOADING STATION A, 1 and Compressor Pad
2 - 11	F-419 UPPER	
2 - 12	PIT LOWER BLDG. 7 FREE	
2 - 13 10	UNLOADING COMPRESSOR AREA UNLOAD	Unloading Station 2, 3, 4
2 - 14	F-415/416/417 UPPER	CHANGE - WASTEWATER STRIPPER & INCINERATOR AREA
2 - 15	BLDG. 7 REMOTE AIR SOURCE	
2 - 16	BLDG. 7 NCM CHARGE METERS FREE	

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TABLE III
(SITE 2) G.C. #3 MONITORING SCHEDULE
WORK BY C&R

<u>STREAM #</u>	<u>EXISTING POINT LOCATION</u>	<u>WORK BY C&R</u>
3 - 1	BLDG. 23 UPPER	
3 - 2	STRIPPING AREA	
3 - 3	BLDG. 23 LOWER	
3 - 4	P-215/216/227 PUMP AREA	
3 - 5	H&V AIR DUCT	
3 - 6	PIT (AT RR TRACKS)	
3 - 7	P-418/419 VACUUM PUMPS	
3 - 8	POLYCO TANK FARM	
3 - 9	LOWER BLDG. 23 (REACTOR SAMPLING AREA)	
3 - 10	VACANT	ADD - WEIGH TANKS - UPPER AREA
3 - 11		ADD - GASHOLDER AREA
3 - 12		
3 - 13		
3 - 14		
3 - 15		
3 - 16		

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