CLASS "A" DESIGN

FIXED POINT MONITOR DATA COMPUTER

AND WARNING LIGHTS

ABERDEEN PVC PLANT

MAY 7, 1980

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FIXED POINT MONITOR DATA COMPUTER

AND WARNING LIGHTS

ABERDEEN PVC PLANT

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AND WARNING LIGHTS

ABERDEEN PVC PLANT

I. PURPOSE OF DESIGN

The Aberdeen PVC Plant uses four Honeywell gas chromatographs (GC's) to monitor VCM concentrations at specific locations throughout the plant. Three stripcharts are located in the vinyl control room and one in the lab. The VCM concentrations are recorded by the control room operator and the lab technician once an hour. These data points are complied once a month by hand.

This design provides for an interface between the existing Honeywell GC's and a central processing unit (CPU) that will average, store, and report VCM concentration data. In addition, beacon warning lights will be installed in the reactor and unloading areas to provide a warning if the VCM concentration in the area is greater than 1 ppm. The CPU will control the beacons and the panel alarms.

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II. PROCESS DESCRIPTION

A chromatograph data system and a mini-computer will interface with the existing Honeywell gas chromatographs. This system checks for high levels of VCM concentration and provides the proper warning. Time, location, and hourly averages are stored on floppy disks. Area warning beacons are located in the plant to provide local warnings.

The analog signals from each of the Honeywell gas chromatographs is converted to a digital signal by an analog to digital converter. Each of the four GC's provide data at a one point per minute rate which gives a total of four points per minute. The digital signal is sent to a gas chromatograph interperter. The interpreter will provide the mini-computer with VCM concentration, location, and time. The interpreter also automatically recalibrates when the gas chromatograph drifts.

The mini-computer system consists of a modular CPU, two dual density floppy disks, a line printer, and a graphic CRT with a keyboard. Programming of this system is handled through the keyboard using BASIC, a high level computer language. This ability allows the programming to be handled by Aberdeen PVC Plant personnel.

Setpoints for VCM levels are 1 ppm or over and 5 ppm or over. When the VCM level in any area reaches 1 ppm or above, the warning beacon in that area will be activated along with the panel light to let the control room operator know of this condition. For any reading above 5 ppm, except for the incinerator point which has a limit of 10 ppm, the computer will print the time, location, and VCM concentration on the CRT immediately. This information will also be printed on the line printer if it is not printing a shift report. For three consecutive readings over 5 ppm from the same point, the high VCM level alarm will be activated.

A shift report will be printed at the beginning of each shift. The shift report will give hourly highs and average for each point, all concentration levels above 5 ppm and the number of points falling into the categories of interest. The hourly averages, along with the category tally, will be kept on the floppy disk until the end fo the month for a monthly report. The format of the monthly report will be similar to the shift report.

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III. SHIFT REPORT

The computer will print out a shift report at the change of each 12-hour shift. The shift report will provide location, hourly average, and high points taken during that hour. Also, all points 5 ppm or over will be listed along with time taken, location and actual concentration reading. A running tally of the number of points falling in certain categories will also be printed with each report. The categories being .4 ppm and less, .5 ppm to .9 ppm, 1 ppm to 4.9 ppm, and 5 ppm and over.

SHIFT SUMMARY

DATE: 10/24/80

LOCATION	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	19000	SHIFT AVERAGE
1A	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	HIGH AVG	AVG
2B													
2C													
2D													
2E													
.													
.													
.													
4J	HIGH AVG.	HIGH .	HIGH .	.	.	.	.						

LEAKS--THREE CONSECUTIVE READINGS OVER 5PPM

TIME	LOCATION	CONCENTRATION
0700	1J	6.3
0710	1J	5.4
0720	1J	5.8
.	.	.
.	.	.
.	.	.

TO DATE CONCENTRATION COUNT

LOCATION	0. THRU .49	.5 THRU .9	1. THRU 4.9	5.0 AND OVER

FIXED POINT MONITOR DATA COMPUTER

AND WARNING LIGHTS

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IV. WARNING BEACON LOCATIONS

A total of 16 warning beacons will be located in the plant to provide immediate warning to people in areas of VCM concentration 1 ppm or greater. The beacons will be located at the:

1. VCM unloading rack.
2. Ground level between the VCM bullets and the VCM unloading pumps.
3. Ground level in old unit near the VCM charge pumps.
4. Ground level between D-300 and D-400.
5. Ground level between D-500 and D-600.
6. Top level between D-300 and D-400.
7. Top level between D-500 and D-600.
8. Second floor old module recovery module near the recovery vacuum pumps and compressors.
9. Second floor of old module recovery building near the seal water pumps.
10. Ground level between reactor 741 & 742.
11. Ground level between reactor 743 & 744.
12. Top level between 741 and 742.
13. Top level between 743 and 744.
14. Ground level near new module VCM charge pumps.
15. Ground level near new module seal water pumps.
16. Second floor new module recovery building between recovery vacuum pumps and the compressors.

When a monitor point exceeds 1.0 ppm VCM, the nearest beacon will be activated by the VCM monitor computer. See Plot Plan - Fig. 2.

FIXED POINT MONITOR DATA COMPUTER

AND WARNING LIGHTS

ABERDEEN PVC PLANT

V. EQUIPMENT SPECIFICATIONS

Label	Description
AT-101	Gas chromatograph data system to provide VCM concentration, time and location to AAR-101.
AAR-101	Mini-computer system used to monitor the Honeywell gas chromatographs and sound appropriate alarms.
AR-101	Line printer for AAR-101.
Warning Beacons	Plant area warning beacons warning for concentrations of 1 ppm or greater.

CONOCO

ENGINEERING CENTER

PONCA CITY, OKLAHOMA

SPECIFICATION SHEET

A F E NO _____
DATE 4/23/80 W O NO _____
MADE BY DCW INQ NO _____
APP D BY VEM REQ NO _____
B. M. NO _____ P O NO _____

PLANT ABERDEEN PVC PLANT PROJECT FIXED POINT MONITOR COMPUTER

ITEM NO AT-101
SERVICE GAS CHROMATOGRAPH INTERPRETER / TRANSMITTER

GAS CHROMATOGRAPH DATA SYSTEM (4) TO:

- ACQUIRE DATA FROM THE EXISTING HONEYWELL GAS CHROMATOGRAPHS (1)
- DISTINGUISH AND LABEL EACH POINT
- ESTABLISH TIME EACH READING WAS TAKEN
- INTEGRATE GC PEAKS TO GIVE VCM CONCENTRATIONS
- AUTOMATICALLY RELOCATE THE BASELINE IF DRIFTING IN GC OCCURS
- PROVIDE SERIAL ASCII OUTPUT TO BE USED BY A MINI-COMPUTER (2)

NUMBER OF POINTS — 50 (MINIMUM)

ELECTRICAL SOURCES NEEDED — 110V OR 24VDC (2)

NOTES:

(1) THIS WILL REQUIRE 4 A/D CONVERTERS — TO BE BOUGHT AS PART OF THIS SYSTEM

(2) USE AN RS232C INTERFACE

(3) BE ABLE TO USE BATTERIES AS A BACKUP

(4) SPEC-4000 BY SPECTRA-PHYSICS OR CONOCO APPROVED EQUAL

SHEET 1 OF 1

VAB 0001027878

F-270-9A

Spectra-Physics

5201 Mitchelldale, Suite A-2
Houston, Texas 77092
(713) 688-9886

Rd 4/14/80

Pro Forma ☐
Quotation ☒

QUOTE NO. 2830

TO
Conoco
Box 91
Aberdeen, Mississippi 39730

Attn: Chris Wing

QUOTE FIRM FOR 30 Days

QUOTATION DATE 4-10-80

TERMS: NET 30 DAYS

RECOMMENDED METHOD OF SHIPMENT Air Freight

YOUR REFERENCE

ITEM NO.	QUANTITY	DESCRIPTION	APPROX. * SHIPPING SCHEDULE	UNIT PRICE	TOTAL
1	1	Central Processor Order No. SP 4000-03	30 Days ARO	5,760.00	$5,760.00
2	4	Data Interface Module -Order No. SP 4020-01		1,750.00	7,000.00
3	1	Computer/Teletype Interface Printed Circuit Board Order No. A0214-010		1,060.00	1,060.00
4	1	16K RAM Memory Expansion Order No. A0655-010		2,060.00	2,060.00
					$15,880.00
		OPTIONS			
1	1	Central Processor Order No. SP 4000-03		5,760.00	5,760.00
2	1	Disc Memory Module Order No. SP 4010-01		3,270.00	3,270.00
3	1	Computer/Teletype Interface Printed Circuit Board Order No. A0214-010		1,060.00	1,060.00
					$10,090.00

THIS QUOTATION IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. Orders are FOB Santa Clara unless otherwise indicated and are subject to acceptance only at seller's plant at Santa Clara, California.
2. Seller shall not be liable for any delay in performance of any order accepted by it or in delivery or shipment of material thereunder when such delay is directly or indirectly caused by or in any manner arises or results from fire, flood, accident, riot, war, governmental interference, rationing, allocations or embargoes, strikes or shortage of labor, delay in delivery of material by sub-suppliers, or other difficulties (whether or not similar in nature to any of those specified) beyond its control.
3. Stenographical and clerical errors on the face of this form are subject to correction.

REPRESENTATIVE Pat Cooper

BY Pat Cooper

* AFTER RECEIPT OF CONFIRMING ORDER – SUBJECT TO PRIOR SALE

ACCEPTANCE OF THIS QUOTATION IS LIMITED TO THE TERMS STATED HEREIN.

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ORIGINAL

Specifications of SP 4000

Central Processor

CRT Display
7" diagonal size
16 lines of 32 upper case ASCII characters

Program Memory
44.000 8-bit words

Read/Write Storage Memory
32.000 8-bit words max

Peak Detection Sensitivity
Automatic or time-programmed update of peak width and/or slope threshold level

Peak Width Range
.5 to 2550 seconds (at half height)

Data Transfer Rate
10 Hz

Resolution
1 μV-second

Dynamic Range
10^6:1

Area
8 digits

Baseline Corrections
Forward and backward horizontal. non-horizontal. tangent skimming. multiple fused rider peaks. valley-to-valley. negative peak. Baseline drift correction in time segment mode.

Number of Peaks
No arbitrary limit

Number of Parameter Files
39 max in RAM (400 using optional Disc Memory)

Number of Calibrated Components
No arbitrary limit

Number of Samples
255 max per method

Chromatogram Storage
Record and replay for reintegration using optional Disc Memory

Calculation Methods
Area normalization. normalization with area correction factors. external standard (absolute and weight percent). internal standard (measurement by weight volume). component addition. simulated distillation (ASTM D-2887 compatible). molecular weight distribution of GPC analyses. retention indices. amino acid analysis

Kovats Indices
Isothermal or temp programmed available on optional Disc Module

Automatic calibration/analysis sequencing for single or multiple levels of standard concentrations

Data Reduction
Multiple reference peaks. one or two internal standards. normalization of results. deviation from range of expected concentration. application of averaged correction factors from calibration runs before and after analysis runs

Customer-programmed (Autolab* BASIC) calculation with optional SP 4100

Report Formats
Standard detailed or abbreviated reports. collated report of multiple injection of same or different samples. statistical analysis ratios of peaks and/or detectors. peak grouping. custom report headings. expected concentration reports

Customer-programmed report formats via SP 4100

Recalculation Capability
Peak times and areas are stored until next run or times and areas can be entered for recalculation.

Post-run reintegration and recalculation using optional Disc Module

Power Requirements
110/220 (± 20%. 50/60 Hz)
24 VDC (standby power supply)
500W max

Dimensions, cm (in)
25H x 46W x 62D
(10H x 18W x 25.2D)

Weight, kg (lb)
30 (62.9)

Data Interface

Detector Input
1V standard: 2.6 mV. 5 mV. 10 mV. or 10V optional

Input Impedance
10 megohms/min

Dynamic Range
10^6:1

Linearity
± 0.1% of reading. ± .005% of full scale

Common Mode Rejection
160 db

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Recorder Output
0-1 VDC @ 2.5 μ A. Binary steps (1-1024), log and shunt

External Outputs
Four time-controlled terminals. TTL compatible, open collector with pull-up resistor. 30V @ 40 mA max

External Control Inputs
Run/Stop and start. TTL compatible, negative true

BCD Inputs
Two formats: 0-99 and 0-7, 0-64. TTL compatible, positive or negative true. Input max 5V @ 1mA

Status Display
LED and 4 digits of time or input level

Test Signal
"Peak" of 1 second width at 10 second intervals

Power Requirements
110/220 VAC (±20%), 50/60 Hz
180W max

Dimensions, cm (in)
25H x 13W x 38D
(9.8H x 5.2W x 15D)

Weight, kg (lb)
6 (13)

Printer/Plotter

Printing/Plotting
By eight element head on thermographic paper with black characters

Printing Speed
10 characters per second

Plotting Response
1 second full scale

Chart Speed
.25 to 8 cm/minute (binary steps) while plotting

Paper Feed
Positive sprocket feed, with form feed to prevent printing on folds

Power Requirements
110/220V (± 20%), 50/60 Hz
60W max

Disc Memory Module

Dimensions, cm (in)
26H x 26W x 43D
(10.3H x 10.3W x 17D)

Removable Recording Medium
Hard sector flexible disc (32 sectors)

Maximum Storage Capacity
2.5 megabits (unformatted)

Tracks per Disc
41,665 (max. unformatted)

Transfer Rate
250,000 bits per second

Disc Speed
360 rpm (± 1.5%)

Latency Time
83.3 milliseconds

Start/Stop Time
5 seconds (with Disc)

Head Life
20,000 Hours

Power Requirements
110/220V (± 20%), 50/60 Hz
200W max

Computer/Teletype/SP 4100 Interface Printed Circuit Board

Input/Output
2 separate I/O ports

RS-232-C or 20 mA Current loop, switch selectable for each I/O port

Switch selectable word length, parity and stop bits for each I/O port

Switch selectable data rate (110-2400 baud) for each I/O port

Data rate 110-2400 baud, switch selectable for each I/O port

Maximum Cable Lengths
50 ft. for RS-232C
300 ft. for Current Loop

Modem compatible for RS-232C

Environment

Temperature
+10° to +40°C (operation)
−40° to +70°C (storage)

Humidity
20% to 80% relative

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SPECIFICATION SHEET

A F E NO
DATE 4/29/80 W O NO
MADE BY DCW INQ NO
APP D BY VEM REQ NO
B. M NO P O NO

PLANT ABERDEEN PVC PLANT PROJECT FIXED POINT MONITOR COMPUTER

ITEM NO AAR-101
SERVICE VCM MONITOR COMPUTER

MINI- COMPUTER SYSTEM①:

- DUAL FLOPPY DISKS
- INPUT TERMINAL WITH CRT
- MODULAR CPU
- LINE PRINTER②

CAPABILITIES:

- HIGH LEVEL COMPUTER LANGUAGE PROGRAMMABILITY
- RELAYS TO ACTIVATE ALARMS
- PRIORITY TASKING (TO DO REPORTING AND MONITORING AT SAME TIME)
- EMERGENCY BACKUP ELECTRICAL SYSTEM

NUMBER OF ALARM CONTACTS - 30 (MINIMUM)

LOCATION - VINYL CONTROL ROOM

NOTES:

① MINC-11 BY DEC OR EQUAL

② PRINTER IS TO BE PURCHASED SEPARATE

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SYSTEM ENVIRONMENTAL REQUIREMENTS

These requirements are imposed by the flexible diskettes, which must be within operating temperature range before use.

Temperature: Operating: 15°C to 32°C (59°F to 90°F) ambient
Non-Operating: −35°C to +52°C (−30°F to +125°F)
Relative Humidity: 25°C (77°F) maximum wet bulb
2°C (36°F) minimum dew point
20% to 80% relative humidity

DETAILED SPECIFICATIONS: STANDARD MINC ITEMS

The following specifications apply to the hardware items that make up the physical and electrical portions of the MINC system. These specifications often identify characteristics that are inaccessible or irrelevant to the user of the total hardware/software system. Nevertheless, such specifications may be of interest to MINC users, if only for comparative purposes.

- MINC Cart, with standard MINC system components
  Size: 54.6 cm W x 110.5 cm H x 77.5 cm D
  (21.5 in. x 43.5 in. x 30.5 in.)
  Weight: 125 kilos (275 lbs)
- Dual Diskette Drive (RX02M)
  Drive Performance
  Capacity: Per diskette: 512,512 bytes
  Per track: 6,656 bytes
  Per sector: 256 bytes
  Data transfer rate: Interface to LSI-11 I/O bus: 9μs/8-bit byte (>100k bytes/sec)
  Track-to-track move: 6 msec/track maximum
  Head settle time: 25 msec maximum
  Rotational speed: 360 rpm ±2.5%
  Recording surfaces/disk: 1
  Tracks/disk: 77
  Sectors/track: 26
  Bit density: 6400 bpi at inner track
  Track density: 48 tracks/inch
  Average access: 262 msec

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- MINC Chassis

  Number of processor-related module slots: 8
  Number of user I/O module slots: 8
  Power supply (+5 volts and +12 volts): +5V at 22A
  +12V at 11A
  Adequate to drive a MINC chassis filled with all standard modules plus the maximum number of optional modules.

- Processor (KD11-HA)

  The KD11-HA processor is built around a set of 5 N-channel metal oxide semiconductor (MOS) integrated circuit chips, which include control and data elements as well as three microcode read-only memories. The latter are programmed to emulate the PDP-11/34 instruction set and include routines for on-line debugging (ODT), operator interfacing, and bootstrap loading. The processor also contains a 16-bit buffered parallel input/output bus, a line time clock input, priority interrupt control logic, power-fail/auto restart, and other features to provide stand-alone operation. The entire processor, with all of the above-mentioned features, is contained on one 22.8 cm by 13.2 cm printed curcuit board.

  Word length: 16 bits (two 8-bit bytes)
  Memory address range: 32,768 words
  Instruction set: more than 400 PDP-11/34 type instructions

- IEEE Instrument Bus Interface (IBV11)

  Interfaces between MINC and an IEEE bus (IEEE Standard 488-1975).

  Input logic levels: TTL logical low: 0.8 VDC max
  TTL logical high: 2.0 VDC min
  Output logic levels: TTL logical low: 0.4 VDC max
  TTL logical high: 2.4 VDC min

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- Memory (MSV11-DD)
  Type: Dynamic random-access MOS
  Logical size: 32,768 words (65,536 8-bit bytes)
  Refresh: Internal
  Operating speed: Access time: 300 nsec typical;
  350 nsec max
  Cycle time: 650 nsec typical;
  750 nsec max
  Physical size: 22.8 cm by 13.2 cm
- Serial ASCII Interface (DLV11-J)
  Number of serial lines: 4
  Rates (jumper-selectable): 150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400 band
  Interface type: EIA
  Format: Jumper-selectable stop and data bit formats
  Architecture: compatible with LSI-11 bus and LSI-11 interrupt protocol
  Physical size: 22.8 cm x 13.2 cm
- Diagnostic Bootstrap/Terminator (BDV11-AA)
  Contains 120-ohm terminations for LSI-11 bus signal lines. Provides read-only memory programs that check the CPU, memory, and operator's console. Also contains start-up (bootstrap) programs for a number of LSI-11 compatible peripherals.
  Diagnostic/bootstrap conditions are factory-selected by means of switch packs on the BDV11-AA module. When power is applied to the system or when the system is restarted, the selected diagnostics are executed, followed by the selected bootstrap. If hard errors occur during execution, the CPU halts and a diagnostic light display on the BDV11-AA defines the area of the failure. At the same time, the CPU, by entering Halt mode, causes the I/O address of the error to be presented on the operator's console.
  The BVD11-AA is provided with two user-accessible switches: a halt/enable switch that allows the CPU to be forced into Halt mode and a restart switch that enables the system to be restarted. It is also provided with five diagnostic lights.

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- Keyboard/Monitor with Graphics Display

Alphanumeric terminal characteristics
- Detached keyboard with plug-in coil cord
- Screen size: 80 columns by 24 lines or 132 columns by 24 lines
- Double-width, or double-height and double-width characters, selectable on a line-by-line basis
- Selectable smooth or jump scrolling
- Blinking cursor, selectable as either underline or reverse video at cursor location
- Split screen capability
- 7 x 9 dot matrix characters with descenders
- Normal or reverse video
- Nonvolative RAM storage of terminal operating characteristics
- Single character underline or reverse attributes accomplished on a whole-screen basis whereby all selected characters are given the same attribute.
- The cursor position is identified by blinking the selected attribute at the cursor location.
- Composite video output—standard RS170 output for an auxiliary monitor (via BNC connector on rear of terminal)
- Built-in self-test.
- P4 phosphor (white).

Size
- Keyboard: 45.7 cm W x 8.9 cm H x 20.3 cm D (18 in. x 3.5 in. x 8 in.)
- Monitor: 45.7 cm W x 36.8 cm H x 36.2 cm D (18 in. x 14.5 in. x 14.25 in.)
- Combined depth: 51.4 cm (20.25 in.)

Weight
- Keyboard: 2.3 kg; 5 lbs
- Monitor: 14 kg; 31 lbs

Video Connections
- Composite Video Output (external BNC connector): Provides EIA RS170-compatible output generated by combining the video signal with a composite sync signal.

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Output impedance: 75 ohms, direct coupled
Sync level: 0 volts
Black level: approx 0.3 volts with 75 ohm load
White level: approx 1.0 volts with 75 ohm load
Composite sync waveform: composed of 6 equalizing pulses, 6 vertical sync pulses, and 6 equalizing pulses.

DETAILED SPECIFICATIONS: OPTIONAL MINC ITEMS

- A/D Converter (at 25°C unless otherwise noted)

Input voltage range: ±5.12 V bipolar (full scale)
Resolution: 12 bits (1 part in 4096)
Data acquisition time: 40 μsec typical: 43 μsec worst case (single channel)
Sample and hold: aperture delay = 200 nsec; aperture uncertainty = 2 nsec
Number of channels: 16 single-ended or 8 single-ended and 4 quasi-differential
Input impedance: 100 megohms minimum
Input bias current: 40 nA maximum.
Input slew rate: 1.5 volts/μsec
Integral linearity: ±1 LSB maximum (referenced to end points)
Differential linearity: ±½ LSB for 99% of states with no states missing or wider than 2 LSB
Temperature stability: differential linearity = 2 ppm of full-scale range per degree C; offset = 7.5 ppm of full scale range per degree C; gain = 6 ppm per degree C.
Analog input protection: fusible resistor guaranteed to open at ±85 V within 6.25 seconds. Guaranteed not to open from −25 V to +20 V at the input. Overload affects no components other than the fusible resistor on the overloaded channel. No other channels will be affected.
Logic input protection: fusible resistor guaranteed to open at ±25 V within 6.25 seconds. Guaranteed not to open from −25 V to +20 V at the input.

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PONCA CITY, OKLAHOMA

SPECIFICATION SHEET

AFE NO _____
DATE 4/25/80 W O NO _____
MADE BY DCN INQ NO _____
APP'D BY VEM REQ NO _____
B.M. NO _____ P O NO _____

PLANT ABERDEEN PVC PLANT PROJECT FIXED POINT MONITOR COMPUTER

ITEM NO
SERVICE FLASHING WARNING BEACONS

— NUMBER NEEDED : 16

— SUITABLE FOR CLASS I DIVISION II GROUP D ENVIROMENTS

— SOURCE: 120 V — 60 HZ

— COLOR OF DOME: BLUE

— LIGHT SHOULD BE EITHER FLASHING OR ROTARY BEACON

LOCATIONS

(1) VCM UNLOADING RACK
(2) BETWEEN VCM BULLETS & VCM UNLOADING PUMPS
(3) AT OLD UNIT VCM CHARGE PUMPS
(4) GROUND LEVEL BETWEEN D-300 & D-400
(5) GROUND LEVEL BETWEEN D-500 & D-600
(6) TOP LEVEL NEAR D-300
(7) TOP LEVEL NEAR D-600
(8) 2ND FLOOR NEAR RECOVERY VACUUM PUMPS & COMPRESSORS
(9) 2ND FLOOR OLD RECOVERY MODULE NEAR SEAL WATER PUMPS
(10) GROUND LEVEL BETWEEN REACTOR 741-742
(11) GROUND LEVEL BETWEEN REACTOR 743-744
(12) TOP BETWEEN REACTORS 741 & 742
(13) TOP BETWEEN REACTORS 743 & 744
(14) GROUND LEVEL VCM CHARGE PUMPS IN NEW MODULE
(15) GROUND LEVEL NEW MODULE RECOVERY MODULE NEAR SEAL H_2O PUMPS
(16) 2ND FLOOR NEW MODULE RECOVERY MODULE BETWEEN RECOVERY COMPRESSORS & VACUUM PUMPS

SHEET 1 OF 1 REV 1

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F-270-9A

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SPECIFICATION SHEET

A F E NO _____
DATE 5/6/89 W O NO _____
MADE BY DW INO NO _____
APP D BY VEM REQ NO _____
B. M. NO _____ P O NO _____

PLANT ABERDEEN PVC PROJECT: FIXED POINT MONITOR DATA COMPUTER AND WARNING LIGHTS

ITEM NO
SERVICE AR-101

LINE PRINTER FOR OUTPUT OF THE [redacted]-MNC COMPUTER SYSTEM. IT WILL RECEIVE SERIAL ASCII AND PRINT AT A RATE ~ 30 CHARACTERS/SECOND.

NOTE: USE DEC LA 36 OR CONOCO APPROVED EQUAL

SHEET 1 OF 1 REV _____

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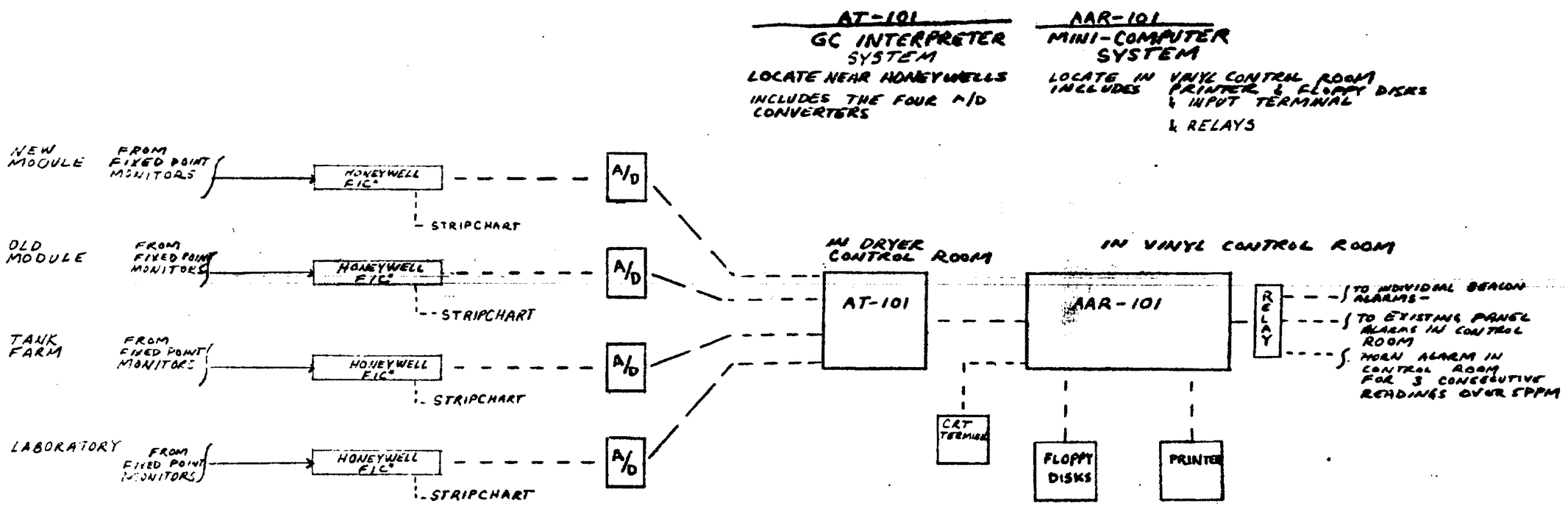
FIXED POINT MONITOR DATA COMPUTER

AND WARNING LIGHTS

ABERDEEN PVC PLANT

VI. WORKLIST

1. Purchase and install AT-101 in the dryer control room.
2. Purchase and install AAR-101 in the vinyl control room.
3. Program AAR-101 to be consistent with process description.
4. Purchase and install the warning beacons.
5. Install warning alarms in vinyl control room.
6. Connect AT-101 to AAR-101.
7. Connect warning beacons and warning alarms to AAR-101.
8. Connect AR-101 to AAR-101.



EXISTING

NEW

* FIC - STANDS FOR FLAME IONIZATION CHAMBER

A/D - ANALOG TO DIGITAL CONVERTER

AFE

ISU	DATE	DESCRIPTION	BY	CKD	APD
1	4/24/80	ORIGINAL	PCW	PCW	W/EM

CONOCO CHEMICALS

ABERDEEN MISSISSIPPI

PLOT PLAN FIG-1

FIXED POINT MONITOR CPU

SCALE:

APPD: W. G. Hiesick

DATE: 5/7/80

No.

BRUNING 40-534 25137-6

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PARKING

EAST ROAD NORTH

ISU	DATE	DESCRIPTION	BY	CKD	APD
1	4/29/[illegible]	BEACON LOCATIONS	[illegible]	DCW	[illegible]
		REDRAW			

CONOCO CHEMICALS

ABERDEEN MISSISSIPPI

PLOT PLAN
FIXED POINT MONITOR COMPLEX
BEACON LOCATIONS

SCALE:

APPD: [illegible]
DATE: 5/13/20

No.

VAB.0001027892