



PPG Industries, Inc. Chemicals P.O. Box 1000 Lake Charles, Louisiana 70602

December 10, 1991

Mr. Gus Von Bodungen
Department of Environmental Quality
Air Quality Division
P O Box 82135
Baton Rouge, LA 70884-2135

Dear Mr. Von Bodungen:

Re: LESHAP VCM Quarterly Report

In accordance with LESHAP requirements contained in LAC 33:III. 2561, PPG Industries' Lake Charles Complex submits the attached Quarterly Report for the period September 1, 1991 through November 30, 1991.

Emissions in excess of 10 ppm (averaged on an hourly basis) in the stacks exiting the incinerators are listed in Exhibit I. There were no (0) such incidents this quarter.

Exhibit II is a record of emissions in excess of 10 ppm which resulted from a temporary by-pass of incineration. There was one (1) incident this quarter resulting in an estimated total release of 0.2 pounds of vinyl chloride.

Exhibit III is a record of sudden discharges of vinyl chloride during the quarter. There was one (1) such incident this quarter resulting in an estimated total release of 0.16 pounds of vinyl chloride.

Also, in accordance with the provisions of Section 61.243-1 of the NESHAP regulations, PPG is hereby submitting the results of performance leak tests of 204 randomly selected valves in vinyl chloride service performed at our VCM-II Unit on October 30 and 31, 1991, and 203 randomly selected valves at our TE II Unit which were leak tested on October 21, 1991. A listing of the valves checked is attached as Exhibits IV and V, respectively. For these tests, a leak was considered to be any reading greater than 1500 ppm right at the valve (more stringent than the regulatory definition of a leak as any reading of 10,000 ppm or greater). There were no valves found leaking out of the 407 valves tested. Thus, the percentage of leaking valves in each unit is demonstrated to be less than 2.0%. Based on these results, PPG intends to continue its LESHAP approved leak detection and elimination program in its VCM II and TE II Units.

Respectfully,

Esther S. Liggio
Esther S. Liggio
Environmental Engineer

SL 026587

EXHIBIT I
CONTINUOUS STACK EMISSION RESULTS > 10 PPM VCM

<u>DATE</u>	<u>STACK NO.</u>	<u> HOUR ENDING</u>	<u> HOURLY AVG PPM</u>	<u> 3-HOUR* AVG PPM</u>	<u>COMMENTS</u>
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NONE FOR THIS QUARTER

SL 026588

EXHIBIT II

NON-INCINERATION OF VCM VENTS

<u>DATE</u>	<u>TIME</u>	<u>SOURCES NOT INCINERATED</u>	<u>EST. QUANTITY VCM VENTED, LBS.</u>	<u>COMMENTS</u>
9/10/91	10:38 am	VCM II	0.23	See Below

During a supplier's planned outage of instrument air, PPG was required to operate totally on its internal instrument air system. During the process of isolating the supplier's input and adjusting PPG's air compressor system, the plant air pressure was interrupted. This interruption caused the VCM II vent scrubber valve to open, creating a bypass of incineration. The duration of the bypass was 5 minutes.

Several actions are being taken to prevent a reoccurrence of this bypass. A Standard Operating Procedure for switching the air supply in and out of the plant air system will be written. A plot plan of the main instrument air header system has been developed. Extra operator coverage will be supplied when switching air systems in the future. An Engineering Work Order has been written to install an automatic reset on the Derivatives air compressor surge control system.

EXHIBIT III

SUDDEN DISCHARGES OF VCM

<u>DATE</u>	<u>TIME/DURATION</u>	<u>ESTIMATED QUANTITY VCM RELEASED, LBS.</u>	<u>COMMENTS</u>
9/10/91	07:35/30 minutes	0.16	SEE BELOW

During a supplier's planned outage of instrument air, PPG was required to operate totally on its internal instrument air system. During the process of isolating the supplier's input and adjusting PPG's air compressor system, the plant air pressure was interrupted. In response to the loss of instrument air, an attempt was made in the Tri-Ethane II Unit to switch to the instrument nitrogen supply. Improper switching resulted in the loss of all instrumentation in the OHC area at Tri-Ethane II. Due to the loss of instrumentation, the OHC Reactor in this area shutdown resulting in a blown rupture disk on the vent header.

In order to prevent a reoccurrence, all OHC operators at Tri-Ethane II will be instructed concerning the proper procedure for switching from instrument air to instrument nitrogen. The operator involved in the incident was counseled. A work order has also been written to modify the nitrogen to instrument air manifold to make it less complex, safer, and quicker to swap.

SL 026590

EXHIBIT IV

CHEMICALS

PPG

INTEROFFICE / LAKE CHARLES

TO: Esther Liggio

DATE: NOVEMBER 1. 1991

FROM: MIKE GUIDRY

SUBJECT: VCM-II Annual Leak
Patrol Compliance Test

Attached please find a list of approximately 204 valves that were selected at random from the list of valves in VCM service at VCM-II. These valves were checked for leaks with the definition of a leak, for the purpose of the survey, being any reading greater than 1500 ppm right on the valve. This definition was used because our meters only indicate amounts up to 2000 ppm. The true definition of a leak, as dictated in the regulations, is a reading of 10.000 ppm or greater right on the valve. Please note that the meter used for the testing was calibrated daily at 1500 ppm VCM.

Of the valves surveyed none showed any leakage, therefore it can be said that "no leaks were found".

SL 026591

VCN-1 ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10-30-91 NAME: Paul Wasson METER #: 913 CALIBRATION DATE: 10-29-91
10-30-91

CHECK FOR

NO

No. LEAKAGE PAID DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- 1 ☒ 2. 1" Block Valve for PT 3436 #1 Furnace #1 Pass Out
- 2 ☒ 4. 1" Block Valve on #1 Furnace #2 Pass going to Vent Header
- 3 ☒ 19. 3" Dump Valve from Q.T. to #2 Dopp Kettle
- 4 ☒ 21. 3" Stramen Valve from Q.T. to #2 Dopp Kettle
- 5 ☒ 23. Bottom Block Valve on Q.T. Sightglass
- 6 ☒ 32. 1/2" Block Valve on Flush Line to LT 3240
- 7 ☒ 38. 1/2" Block Valve on Pressure Gauge on East SRV on Q.T. Vapor Line
- 8 ☒ 41. 6" Block Valve under West SRV on Q.T. Vapor Line
- 9 ☒ 49. 3" Block Valve Condensate Drain on Quench Tower Vapor Line
- 10 ☒ 54. Product Still Rework LCV at Q.L.T.
- 11 ☒ 62. 1/2" Block Valve on PT 3440 Quench Vapor to Absorber
- ☒ 65. Upstream Block Valve for VCN Rework FCV 3199
- 13 ☒ 67. Downstream Block Valve for VCN Rework FCV 3199
- 14 ☒ 71. Sample Point Block Valve on Discharge of Q. Liq. Pump
- 15 ☒ 73. 6" Discharge Valve on #1 Q. Liq. Pump
- 16 ☒ 75. 6" Discharge Valve on #2 Q. Liq. Pump
- 17 ☒ 77. Upstream Block Valve to EDC Rework from Q. Liq. Pumps
- 18 ☒ 84. 1 1/2" Block Valve for Pressure Gauge on Top #1 Dopp Kettle
- 19 ☒ 86. 6" Block Valve on Vapor Line out of #1 Dopp Kettle
- 20 ☒ 87. 1 1/2" Block Valve on Top #1 Dopp Kettle from Entrainment Separator
- 21 ☒ 94. 1 1/2" Block Valve on Top #2 Dopp Kettle from Entrainment Separator
- 22 ☒ 99. Top Block Valve on Q. Dopp Kettle Entrainment Separator Sightglass
- 23 ☒ 118. 3" Block Valve on Suction #1 Dopp Overhead Pump
- 24 ☒ 131. Downstream Block Valve on FCV 3048 Dopp Overhead to Q.T.
- 25 ☒ 135. 4" Upstream Block Valve on FCV 3102 Presat Receiver Flow
- 26 ☒ 146. 8" Block Valve on Suction of #1 HCl Presat Pump
- 27 ☒ 149. 6" Block Valve on Discharge of #2 HCl Presat Pump

SL 026592

VCN-1: ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10-30-91 NAME: Paul Wasson METER #: 913 CALIBRATION DATE: 10-30-91

CHECK FOR

NO

No. LEAKAGE P#ID# DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- 28 ☒ 150. 8" Block Valve on Suction of #2 HCl Presat Pump
- 29 ☒ 155. 6" Block Valve on Suction of Upper Intercooler Pump
- 30 ☒ 156. 1/2" Block Valve On High Pressure Side FT 3115 Upper Intercooler Flow
- 31 ☒ 159. PCV 3115 Upper Intercooler Flow
- 32 ☒ 161. 2" Bypass Valve on PCV 3115 Upper Intercooler Flow
- 33 ☒ 171. 2" Block Valve on Bottom LT 3305 Presat Surge Tray Level
- 34 ☒ 185. 2" Block Valve on Bottom L.I.C. D.P. Transmitter 3525
- 35 ☒ 191. 10" Block Valve Next to Absorber From Quench Tower
- 36 ☒ 194. 2" Block Valve on Bottom Of LT 3340 Absorber Pot Level
- 37 ☒ 199. 3" Downstream Block Valve on VCM Rework Header
- 38 ☒ 200. 8" Block Valve Just Out the Bottom of Absorber
- 39 ☒ 201. Sample Point Block Valve on Suction of Absorber Bottoms Pumps
- 40 ☒ 203. 8" Suction Valve to #1 Absorber Bottom Pump
- 41 ☒ 204. 6" Discharge Valve to #1 Absorber Bottom Pump
- 42 ☒ 210. PCV 3340 Absorber Pot Level
- 43 ☒ 211. 6" Downstream Block Valve on LCV 3340 Absorber Pot Level
- 44 ☒ 217. 4" Discharge Valve to Spare U.I.C. Pump
- 45 ☒ 227. 4" Block Valve Next to Stripper from Quench Liquor Drum
- 46 ☒ 230. High Pressure Nitrogen to Stripper Next to Stripper
- 47 ☒ 239. 3" Upstream Block Valve on VCM Rework Header to Product Still Feed Drum
- 48 ☒ 240. 4" Block Valve on EDC Rework Header on Top Product Still Feed Drum
- 49 ☒ 241. 3" Downstream Block Valve on VCM Rework Header
- 50 ☒ 254. 6" Discharge Valve on #2 Product Still Feed Pump
- 51 ☒ 260. 6" Downstream Block Valve FCV 3160 Product Still Feed
- 52 ☒ 271. Top Block Valve on Product Still Sightglass
- 53 ☒ 272. Top Block Valve on LT 3375 Product Still Level
- 54 ☒ 282. 1/2" Block Valve on High Pressure Side FT 3170 Product Still Reflux

SL 026593

VCN- ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10-30-91 NAME: Paul Wagon METER #: 913 CALIBRATION DATE: 10-30-91

CHECK FOR

NO

No. LEAKAGE PAID# DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- | | | |
|----|-------------------------------------|---|
| 55 | ☒ | 283. 1" Block Valve on PT 3580 Product Still Overhead |
| 56 | ☒ | 284. 1" Block Valve on Pressure Gauge Product Still Overhead into Condenser |
| 57 | ☒ | 286. 6" Upstream Block Valve PCV 3580 Product Still Overhead |
| 58 | ☒ | 292. Top Block Valve on Product Still Reflux Drum Sightglass |
| 59 | ☒ | 293. Bottom Block Valve on Product Still Reflux Drum Sightglass |
| 60 | ☒ | 297. Top Block Valve on Product Still Reflux Drum LT 3380 |
| 61 | ☒ | 312. 4" Discharge Valve on #1 Product Still Reflux Pump |
| 62 | ☒ | 316. 4" Discharge Valve on #2 Product Still Reflux Pump |
| 63 | ☒ | 318. 3/4" Bleed Valve on #2 Product Still Reflux Pump |
| 64 | ☒ | 328. 3" Block Valve on Top Humidifier Product Still Reflux |
| | ☒ | 330. 1" Block Valve on Pressure Gauge Product Still Reflux out of Humidifier |
| 66 | ☒ | 331. 3" Block Valve on Rework into #1 Neutralizer |
| 67 | ☒ | 333. 2" Bleed Valve on Top #1 Neutralizer |
| 68 | ☒ | 338. 4" Drain Valve from #1 Neutralizer to Neutralizer Drain Drum |
| 69 | ☒ | 342. 4" Drain Valve from #2 Neutralizer to Neutralizer Drain Drum |
| 70 | ☒ | 344. 3" Block Valve on Top #2 Neutralizer from Neutralizer Wash Pump |
| 71 | ☒ | 348. 2" Block Valve on Top #3 Neutralizer |
| 72 | ☒ | 351. 3" Block Valve on Product out of #3 Neutralizer |
| 73 | ☒ | 356. 4" Product Outlet Valve on #1 VCM Product Filter |
| 74 | ☒ | 359. 1" Block Valve to Pressure Gauge on Outlet of VCM Product Filter |
| 75 | ☒ | 376. 3" Block Valve Next to Neutralizer Drain Drum from Sabine Water |
| 76 | ☒ | 378. 4" Block Valve Next to Neutralizer Drain Drum from Neutralizers |
| 77 | ☒ | 382. 1/2" Block Valve on High Pressure Side FT 3187 Neutralizer Wash to Neutralizer |
| 78 | ☒ | 384. PCV 3187 Neutralizer Wash to Neutralizer |
| 79 | ☒ | 389. 2" Upstream Block Valve for LCV 3390 Neutralizer Drain Drum |
| 80 | ☒ | 397. Bottom Block Valve on LT 3388 NaOH Storage Tank |

SL 026594

VCV - ANNUAL LEAK PATROL COMPLIANCE TEST - 199

DATE: 10/31/91 NAME: R. J. J. J. METER #: 915 CALIBRATION DATE: 10/31/91

CHECK FOR

NO

No. LEAKAGE PAID# DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- | | | |
|-----|-------------------------------------|--|
| 81 | ☒ | 399. 1" Block Valve under West Rupture Disc on Vent Header at East Battery Limits |
| 82 | ☒ | 402. 2" Top Block Valve to Float Chamber from B-1 |
| 83 | ☒ | 407. 4" Block Valve for Product into B-1 |
| 84 | ☒ | 414. 3" Drain Valve on Bottom B-1 |
| 85 | ☒ | 421. 2" Top Block Valve on LT 7202 B-2 |
| 86 | ☒ | 423. 2" Block Valve to High High Pressure Switch on B-2 |
| 87 | ☒ | 439. 3" Bottom Block Valve on LT 7203 B-3 |
| 89 | ☒ | 445. 2" Block Valve for High Pressure Switch & Pressure Gauge on B-3 |
| 90 | ☒ | 450. 2" Drain Valve on Bottom B-3 |
| 91 | ☒ | 457. 4" Block Valve on Product Line into B-4 |
| 92 | ☒ | 459. 4" Block Valve on Recirculation Line on B-4 |
| 93 | ☒ | 460. 3" Block Valve on Rework Line on B-4 |
| 94 | ☒ | 461. 2" Block Valve on High Pressure Switch & Pressure Gauge on B-4 |
| 95 | ☒ | 463. 3" Drain Valve on Bottom B-4 |
| 96 | ☒ | 465. 6" Rework Suction Valve on B-4 |
| 97 | ☒ | 466. 2" Drain Valve on Bottom B-4 |
| 98 | ☒ | 467. 1" Floating Line on 6" Line to/from VCM Storage Spheres |
| 99 | ☒ | 468. 6" Block Valve between Product Transfer Header & Low Temp. Transfer Header |
| 100 | ☒ | 469. 1" Floating Line on 6" Line to/from Low Temp. Storage |
| 101 | ☒ | 472. 6" Block Valve between Alternate Transfer Header to Low Temp. Transfer Header |
| 102 | ☒ | 474. Block Valve on Product Pump Discharge Line into Product Transfer Header |
| 103 | ☒ | 475. 3/4" Block Valve on Floating Line from Product Transfer Header (North) to Suct. Line of Prod. Transfer Pump |
| 104 | ☒ | 477. 3/4" Block Valve on Floating Line from Alternate Transfer Header (South) to Suction of Prod. Transfer Pump |
| | ☒ | 479. 2" Top Block Valve to Float Chamber on B-5 |
| 106 | ☒ | 483. 2" Block Valve to High High Pressure Switch on B-5 |
| 107 | ☒ | 494. 6" Discharge Valve on #1 Product Transfer Pump |
| 108 | ☒ | 495. 10" Suction Valve on #1 Product Transfer Pump |

SL 026595

VCN: ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10/30 NAME: Noweno METER #: 913 CALIBRATION DATE: 10-29-91

CHECK FOR

NO

No. LEAKAGE PAID? DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- | | | |
|-----|---|--|
| 109 | ✓ | 504. Sample Point Block Valve on Suction Product Rework Pump |
| 110 | ✓ | 511. 2" Block Valve to Bypass Vents Around Shift Storage Vent Compressor |
| 111 | ✓ | 515. 4" Block Valve Next VCM Compressor Suction Drum From Vent Line |
| 112 | ✓ | 518. 4" Auto Valve on Suction of Shift Storage Vent Compressor |
| 113 | ✓ | 520. 1-1/2" Block Valve on Shift Storage Vent Compressor Recirculation Line |
| 114 | ✓ | 521. 1/2" Block Valve to Pressure Gauge on Discharge VCM Shift Storage Vent Compressor |
| 115 | ✓ | 524. 2" Block Valve on Line From VCM HP Vent Condenser to Incinerator Header |
| 116 | ✓ | 527. 1-1/2" Top Block Valve on Sightglass of VCM HP Vent Condenser Receiver |
| 117 | ✓ | 529. 1-1/2" Bottom Block Valve on Sightglass of VCM HP Vent Condenser Receiver |
| 118 | ✓ | 530. 1-1/2" Drain Valve on Bottom VCM HP Vent Condenser Receiver |
| | ✓ | 531. 1-1/2" Drain Valve on Bottom VCM HP Vent Condenser Receiver |
| 120 | ✓ | 539. 1/2" Block Valve on PT 7426 Shift Storage Vent to Incinerator |
| 121 | ✓ | 540. 2" Upstream Block Valve on PCV 7426 Shift Storage Vent to Incinerator |
| 122 | ✓ | 555. Block Valve to Pressure Switch and Pressure Gauge on D-1 |
| 123 | ✓ | 556. 3-Way Valve for SRVs on D-1 |
| 124 | ✓ | 560. 6" Product Suction Valve on #1 Day Tank |
| 125 | ✓ | 571. 3" Block Valve on Product Line into D-2 |
| 126 | ✓ | 577. 3-Way Valve to SRVs on D-2 |
| 127 | ✓ | 586. 3" Bottom Block Valve to LT 7001 D-3 |
| 128 | ✓ | 593. 3-Way Valve to SRVs on D-3 |
| 129 | ✓ | 595. 6" Product Suction Valve on D-3 |
| 130 | ✓ | 609. 2" Top Block Valve to Varec on D-4 <i>Don't get the lines</i> |
| 131 | ✓ | 612. 4" Rework Suction Valve on D-4 |
| 132 | ✓ | 613. 4" Bottom Block Valve to Varec on D-4 |
| 133 | ✓ | 616. 1" Block Valve on Rework Recirculation Line Between D-1 & D-8 |
| 134 | ✓ | 619. 4" Block Valve Downstream CertainTeed Flow Meter |

SL 026596

VCN ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10-30 NAME: Monro METER #: 913 CALIBRATION DATE: 10-29-91

CHECK FOR

NO
No. LEAKAGE PAID? DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- 135 ✓ 620. 1/2" Block Valve to SRV on Discharge Line on CertainTeed Transfer Pump
- 136 ✓ 628. 3/4" Sample Point Block Valve on Discharge CertainTeed Transfer Pump
- 137 ✓ 637. 4" Discharge Valve on #1 VC Product Transfer Pump
- 138 ✓ 642. 4" S-J Transfer Block Valve on VC Product Transfer Line
- 139 ✓ 645. 4" Block Valve Upstream SRV on S-J Transfer Line from VC:
- 140 ✓ 661. 1/2" Block Valve to Pressure Switch and Pressure Gauge on D-8
- 141 ✓ 662. 3-Way Valve to SRVs on D-8
- 142 ✓ 664. 6" Product Suction Valve on D-8
- 143 ✓ 666. 4" Bottom Block Valve to Varec on D-8
- 144 ✓ 677. 6" Product Suction Valve on D-7
- 145 ✓ 682. 1" Block Valve on Rework Recirculation into D-6
- 146 ✓ 686. 1/2" Block Valve to Pressure Switch and Pressure Gauge on D-6
- 147 ✓ 687. 3-Way Valve to SRVs on D-6
- 148 ✓ 692. 4" Bottom Block Valve to Varec on D-6
- 149 ✓ 693. 1/2" Top Block Valve to LT 7120X D-5
- 150 ✓ 707. 1/2" Top Block Valve to LT 9000 S-1
- 151 ✓ 708. 2" Block Valve on S-1 Vent Upstream of Equalizing and Stack Valves
- 152 ✓ 713. 4" Auto Valve on S-1 Fill Line Next to Tank
- 153 ✓ 722. 4" Recirculation Valve on S-2
- 154 ✓ 727. 3" Discharge Valve on #1 VC Tank Car Loading Pump
- 155 ✓ 729. 4" Suction Valve on #2 VC Tank Car Loading Pump
- 156 ✓ 730. 3" Discharge Valve on #2 VC Tank Car Loading Pump
- 157 ✓ 737. 4" Blinded Block Valve near the north VC Tk Car Ldg line thermal SRV
- ✓ 740. 6" Auto Valve on S-2 Suction Line Next to Tank
- 159 ✓ 747. 1-1/2" Equalizing Vent Valve on S-2
- 160 ✓ 753. 4" Block Valve on Vent Line on Top S-3
- 161 ✓ 755. 3-Way Valve to #2 SRVs on S-3

SL 026597

VCN- ANNUAL LEAK PATROL COMPLIANCE TEST - 1991

DATE: 10-30 NAME: Moreno METER #: 913 CALIBRATION DATE: 10-29-91

CHECK FOR

NO

No. LEAKAGE P&ID# DESCRIPTION

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

- | | | |
|-----|-------------------------------------|--|
| 162 | ☒ | 756. 3" Bottom Block Valve to LT 8036 S-3 |
| 163 | ☒ | 768. 8" Common Discharge Valve for Both S-3 Pumps |
| 164 | ☒ | 773. Downstream Block Valve on DP Transmitter Across ON/OFF Valve on Low Temperature Vents |
| 165 | ☒ | 779. 1-1/2" Suction Valve on C-4 |
| 166 | ☒ | 785. 1-1/2" Drain valve on bottom T-4 |
| 167 | ☒ | 788. 6" Inlet Valve to E-1 |
| 168 | ☒ | 791. 6" Block Valve Upstream Bypass Valve for E-1 |
| 169 | ☒ | 797. 8" Suction Block Valve from T-2 to P-3 |
| 170 | ☒ | 798. 8" Block Valve Between P-3 & P-4 Suction. |
| 171 | ☒ | 805. 6" Discharge Block Valve on P-4 |
| | ☒ | 810. 10" Discharge Valve on P-1 |
| 173 | ☒ | 813. 10" Chain Valve to VCN Dock |
| 174 | ☒ | 820. 14" Block Valve on Suction Between P-1 & P-2 |
| 175 | ☒ | 831. 3" Suction Valve on P-6 from T-3 |
| 176 | ☒ | 834. 1-1/2" Top Block Valve to Sightglass on T-3 |
| 177 | ☒ | 835. 1-1/2" Block Valve to Pressure Gauge on T-3 |
| 178 | ☒ | 839. 2" Inlet Deriving Valve to E-4 |
| 179 | ☒ | 842. 2" Drain Valve from E-3 to T-3 |
| 180 | ☒ | 844. 2" Drain Valve from E-3 to T-7 |
| 181 | ☒ | 847. 6" Block Valve on E-3 to Incinerator |
| 182 | ☒ | 852. 6" Inlet to E-3 from Dock |
| 183 | ☒ | 859. PCV 6427 C-6 Recirculation |
| 184 | ☒ | 861. 4" Suction Valve on C-6 |
| 185 | ☒ | 864. 2" Inlet Valve to D-1 |
| 186 | ☒ | 872. Bottom Block Valve on D-1 Sightglass |
| 187 | ☒ | 873. 2" Top Block Valve on D-1 Sightglass |

SL 026598

VCV '1 ANNUAL LEAK PATROL COMPLIANCE TEST - 199

DATE: 10-30 NAME: Moham METER #: 713 CALIBRATION DATE: 10-29-91

CHECK FOR

NO

NOTE: A LEAK IS DEFINED AS A READING
>1500 PPM RIGHT ON THE VALVE.

No. LEAKAGE PAID? DESCRIPTION

- 189 ☒ 874. 1-1/2" Bleed Valve on Top D-1
- 190 ☒ 876. 1/2" Block Valve on Downstream of Filter Out of D-1
- 191 ☒ 880. 1-1/2" Top Block Valve to LT 6215 T-7
- 192 ☒ 882. 3" Drain Valve on T-7 to P-5 & P-6
- 193 ☒ 883. 2" Block Valve on Deriving Line into T-7
- 194 ☒ 884. 2" Block Valve on T-7 Vent Line
- 195 ☒ 885. 1-1/2" Block Valve into T-7 From Transfer Line
- 196 ☒ 887. 1-1/2" Block Valve Next to T-7 on N2 Line to T-7
- 197 ☒ 902. 1" Block Valve on T-2 Suction to Vaporizer
- 198 ☒ 904. Isolation Valve on T-1 Suction
- 199 ☒ 911. 1-1/2" Block Valve to PT 6474 T-1
- 200 ☒ 914. 1-1/2" Block Valve Downstream N2 ON/OFF Valve to T-1
- 201 ☒ 920. N2 ON/OFF Valve on T-1
- 202 ☒ 937. 3" Vent Valve on T-2 Float Chamber
- 203 ☒ 942. Isolation Valve on Suction Line T-2
- 204 ☐ 943. Downstream Block Valve on Product Still LCV at Q.C.T.

SL 026599

EXHIBIT V

TE II VC/DCE AREAS

VALVE MONITORING

TIP# 970

10-21-91
(CALIBRATION DATE)

RANDOM SELECTION OF 203 VALVES

DATE OF CHECK
10-21-91

CHECKED BY

DAN YOUNG
#5273

SL 026600

TO: ESTHER LIGGIO

DATE: OCTOBER 22, 1991

FROM: BOBBY CHASSON

SUBJECT: TE-II VCM ANNUAL
LEAK PATROL
COMPLIANCE TEST

ATTACHED IS A LIST OF 203 VALVES THAT WERE SELECTED FROM A LIST OF VALVES IN VCM SERVICE AT TE-II. THESE VALVES WERE CHECKED FOR LEAKS WITH A LEAK BEING DEFINED AS BEING GREATER THAN 1500 PPM RIGHT AT THE VALVE. REGULATIONS DICTATE THAT A LEAK IS A READING OF 10,000 PPM OR MORE RIGHT AT THE VALVE. OUR METER WAS CALIBRATED AT 1443 PPM.

NONE OF THE VALVES SURVEYED WERE FOUND TO BE LEAKING. IT CAN BE SAID THAT "NO LEAKS WERE FOUND". PLEASE NOTE THAT THE METER USED FOR THE TESTING WAS CALIBRATED THE DAY OF THE TEST.

AG	TYPE	SER	LOCATION	AMT	STR UNIT
II001	VALVE	AG	S SUPER VLV	0	AA TE-II
II002	VALVE	AG	N SUPER VLV	0	AA TE-II
II003	VALVE	AG	NO.1 PASS VT VLV TO THE VT HDR	0	AA TE-II
II005	VALVE	AG	EDC INLET TO THE QCH TWR	0	Q TE-II
II006	VALVE	AG	DP CELL BTM VLV	0	Q TE-II
II007	VALVE	AG	DP CELL TOP VLV	0	Q TE-II
II009	VALVE	AG	SIGHT GLASS TOP VLV	0	BB TE-II
II010	VALVE	AG	S DOPP KET VAPOR RETURN VLV	0	BB TE-II
II011	VALVE	AG	N DOPP KET VAPOR RETURN VLV	0	BB TE-II
II013	VALVE	AG	N 'STRAHMAN' VLV AT THE QCH TWR	0	BB TE-II
II014	VALVE	AG	NO.1 PASS OUTLET PRESS TRANS VLV	0	AA TE-II
II015	VALVE	AG	NO.2 PASS OUTLET PRESS TRANS VLV	0	AA TE-II
II017	VALVE	AG	NO.2 PASS VLV TO THE ATMOSPHERIC VLV	0	AA TE-II
II018	VALVE	AG	QCH LQR RFLX VLV AT THE QCH TWR	0	CC TE-II
II019	VALVE	AG	FLOAT CHAMBER BTM VLV	0	CC TE-II
II021	VALVE	AG	NO.1 DUMP UPSTR VLV	0	MM TE-II
II022	VALVE	AG	NO.1 DUMP VLV	0	MM TE-II
II023	VALVE	AG	NO.1 DOPP KET INLET VLV	0	MM TE-II
II025	VALVE	AG	NO.2 DUMP VLV	0	MM TE-II
II026	VALVE	AG	NO.2 DOPP KET INLET VLV	0	MM TE-II
II027	VALVE	AG	QCH COND DRAIN TO THE QCH LQR TNK	0	CC TE-II
II029	VALVE	AG	QCH TWR VAPOR LN EQUAL VLV	0	EE TE-II
II030	VALVE	AG	QCH LQR TNK 3-WAY VLV TO SRV's	0	EE TE-II
II031	VALVE	AG	QCH LQR TNK VAPOR VLV TO VC/HCL STL	0	EE TE-II
II033	VALVE	AG	FURNACE FEED VLV AT THE QCH LQR TNK	0	EE TE-II
II034	VALVE	AG	QCH LQR TNK SUCT VLV	0	II TE-II
II035	VALVE	AG	NO.1 QCH LQR PMP SUCT	0	II TE-II
II036	VALVE	AG	NO.2 QCH LQR PMP SUCT	0	II TE-II
II037	VALVE	AG	NO.1 QCH LQR PMP DISCH	0	II TE-II
II039	VALVE	AG	QCH TWR RFLX FCV UPSTR VLV	0	II TE-II
II040	VALVE	AG	QCH TWR RFLX FCV BY-PASS VLV	0	II TE-II
II041	VALVE	AG	QCH TWR RFLX FCV (F-124)	0	II TE-II
II043	VALVE	AG	QCH TWR RFLX FCV DRAIN VLV	0	II TE-II
II044	VALVE	AG	QCH LQR DRM LCV UPSTR VLV	0	II TE-II
II045	VALVE	AG	QCH LQR DRM LCV BY-PASS VLV	0	II TE-II
II047	VALVE	AG	QCH LQR DRM LCV DWNSTR VLV	0	II TE-II
II048	VALVE	AG	QCH LQR DRM LCV DRAIN VLV	0	II TE-II
II049	VALVE	AG	NO.1 QCH LQR PMP DRAIN	0	II TE-II
II051	VALVE	AG	NO.1 QCH LQR PMP DISCH BLD	0	II TE-II
II052	VALVE	AG	NO.2 QCH LQR PMP DISCH BLD	0	II TE-II
II053	VALVE	AG	QCH LQR PMP DISCH PRESS IND VLV	0	II TE-II
II055	VALVE	AG	QCH LQR SAMPLE PNT VLV	0	II TE-II
II056	VALVE	AG	QCH LQR TNK LEV TRANS BTM VLV	0	II TE-II
II057	VALVE	AG	QCH LQR TNK LEV TRANS TOP VLV	0	II TE-II
II059	VALVE	AG	QCH LQR TNK LEV TRANS TOP BLD VLV	0	II TE-II
II060	VALVE	AG	QCH LQR TNK SITE GLASS BTM VLV	0	II TE-II
II061	VALVE	AG	QCH LQR TNK SITE GLASS TOP VLV	0	II TE-II
II063	VALVE	AG	QCH LQR TNK SITE GLASS TOP BLD VLV	0	II TE-II
II064	VALVE	AG	VC/HCL STL LQD FEED BTM VLV	0	II TE-II
II065	VALVE	AG	VC/HCL STL LQD FEED MIDDLE VLV	0	II TE-II
II067	VALVE	AG	VC/HCL STL VAPOR FEED BTM VLV	0	EE TE-II
II068	VALVE	AG	VC/HCL STL VAPOR FEED MIDDLE VLV	0	EE TE-II
II069	VALVE	AG	VC/HCL STL VAPOR FEED TOP VLV	0	EE TE-II
II071	VALVE	AG	VC/HCL STL 3-WAY VLV SRV's	0	KK TE-II
II072	VALVE	AG	VC/HCL STL 3-WAY VLV SRV's S BLD VLV	0	KK TE-II
II073	VALVE	AG	VC/HCL STL 3-WAY VLV SRV's N BLD VLV	0	KK TE-II
II075	VALVE	AG	VC/HCL STL LEV TRANS TOP VLV	0	Q TE-II
II076	VALVE	AG	VC/HCL STL LEV TRANS BLD VLV	0	Q TE-II
II077	VALVE	AG	VC/HCL STL SITE GLASS BTM VLV	0	Q TE-II

SL 026602

3	VALVE	LL	VC/HCL STE REBOILER OVERFLOW VLV	0	Q	TE-II
3	VALVE	LL	VC/HCL STE REBOILER UNDERFLOW VLV	0	Q	TE-II
3	VALVE	LL	VC/HCL STL RFLX DRM LCV UPSTR VLV	0	KK	TE-II
4	VALVE	LL	VC/HCL STL RFLX DRM LCV UPSTR BLD VLV	0	KK	TE-II
5	VALVE	G	VC/HCL STL RFLX DRM LCV (L-150)	0	KK	TE-II
7	VALVE	G	VC/HCL STL RFLX DRM LCV DWNSTR BLD VLV	0	KK	TE-II
5	VALVE	G	VC/HCL STL RFLX DRM SPA LCV UPSTR VLV	0	KK	TE-II
9	VALVE	G	VC/HCL STL RFLX DRM SPA LCV BYPASS VLV	0	KK	TE-II
1	VALVE	G	VC/HCL STL COND INLET BLD VLV	0	KK	TE-II
2	VALVE	LL	VC/HCL STL RFLX DRM INLET VLV	0	KK	TE-II
3	VALVE	G	VC/HCL STL RFLX DRM EQUAL VLV	0	KK	TE-II
5	VALVE	G	VC/HCL STL RFLX DRM 3-WAY VLV FOR SRVs	0	JJ	TE-II
6	VALVE	G	VC/HCL STL RFLX DRM 3-WAY VLV N BLD	0	JJ	TE-II
9	VALVE	G	VC/HCL STL RFLX DRM 3-WAY VLV S BLD	0	JJ	TE-II
9	VALVE	G	VC/HCL STL RFLX DRM LEV TRANS TOP VLV	0	JJ	TE-II
9	VALVE	G	VC/HCL STL RFLX DRM LEV TRANS BTM VLV	0	JJ	TE-II
1	VALVE	LL	NO. 3 VC/HCL RFLX PMP DISCH BLD VLV	0	JJ	TE-II
3	VALVE	G	VC/HCL STL RFLX DRM LEV TRANS TOP BLD	0	JJ	TE-II
4	VALVE	LL	VC/HCL STL RFLX DRM SITE GLASS BTM VLV	0	JJ	TE-II
5	VALVE	G	VC/HCL STL RFLX DRM SITE GLASS TOP VLV	0	JJ	TE-II
7	VALVE	G	VC/HCL STL RFLX DRM SITE GLASS TOP BLD	0	JJ	TE-II
3	VALVE	LL	VC/HCL STL RFLX DRM SUCT VLV	0	JJ	TE-II
7	VALVE	G	VC/HCL STL RFLX DRM LEV TRANS BTM VLV	0	JJ	TE-II
1	VALVE	LL	NO.2 VC/HCL RFLX PMP SUCT VLV	0	JJ	TE-II
2	VALVE	LL	NO.1 VC/HCL RFLX PMP SUCT DRAIN VLV	0	JJ	TE-II
7	VALVE	LL	NO.2 VC/HCL RFLX PMP SUCT DRAIN VLV	0	JJ	TE-II
7	VALVE	LL	NO.1 VC/HCL RFLX PMP DISCH VLV	0	JJ	TE-II
5	VALVE	LL	NO.2 VC/HCL RFLX PMP DISCH VLV	0	JJ	TE-II
7	VALVE	LL	NO.1 VC/HCL RFLX PMP DISCH BLD VLV	0	JJ	TE-II
7	VALVE	LL	NO.3 VC/HCL RFLX PMP DISCH VLV	0	JJ	TE-II
0	VALVE	LL	VC REWORK LN VLV AT THE PUMPS	0	JJ	TE-II
1	VALVE	LL	LQD VC TO VCII FCV UPSTR VLV	0	JJ	TE-II
3	VALVE	LL	LQD VC TO VCII FCV UPSTR VLV BLD	0	JJ	TE-II
4	VALVE	LL	LQD VC TO VCII FCV (F-141)	0	JJ	TE-II
5	VALVE	LL	LQD VC TO VCII FCV DWNSTR VLV BLD	0	JJ	TE-II
7	VALVE	LL	LQD VC TO VCII SRV BLK VLV	0	JJ	TE-II
3	VALVE	LL	VC/HCL RFLX FCV UPSTR VLV	0	JJ	TE-II
7	VALVE	LL	VC/HCL RFLX FCV BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL RFLX FCV DWNSTR VLV	0	JJ	TE-II
100	VALVE	LL	VC/HCL RELX SAFETY DRYER BY-PASS	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX SAFETY DRYER INLET PI VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX SAFETY DRYER INLET VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX SAFETY DRYER INLET BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX FCV BY-PASS	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX SAFETY DRYER PI VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL RELX SAFETY DRYER OUTLET VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.1 FLTR INLET VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.1 FLTR PI BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.1 FLTR PI VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.1 FLTR OUTLET VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.2 FLTR TOP BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.2 FLTR PI BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.2 FLTR PI VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL FILTERS INLET BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.1 FLTR OUTLET BLD VLV	0	JJ	TE-II
1	VALVE	LL	VC/HCL NO.2 FLTR OUTLET BLD VLV	0	JJ	TE-II
1	VALVE	G	VC/HCL STL PCV BLD VLV	0	KK	TE-II
1	VALVE	G	VC/HCL STL PCV (P-156)	0	KK	TE-II
1	VALVE	G	VC/HCL STL PCV DWNSTR VLV	0	KK	TE-II
1	VALVE	G	VC/HCL STL PCV (HIC) BLD VLV	0	KK	TE-II
1	VALVE	G	VC/HCL STL PCV (H-154)	0	KK	TE-II
1	VALVE	G	VC/HCL STL PCV (HIC) DWNSTR VLV	0	KK	TE-II
1	VALVE	LL	DCE FEED SE SPARGER FEED VLV	0	LL	TE-II
1	VALVE	LL	DCE FEED SW SPARGER FEED VLV	0	LL	TE-II

SL 026603

38	VALVE	✓	NO.1 DCE RX RECIR PMP SUCT VLV (A/OP)	0	LL TE-II
39	VALVE	✓	NO.1 DCE RX RECIR PMP SUCT BLD VLV	0	LL TE-II
41	VALVE	✓	NO.1 DCE RX RECIR PMP DISCH (A/OP)	0	LL TE-II
42	VALVE	✓	NO.1 DCE RX RECIR PMP DISCH BLD (1")	0	LL TE-II
43	VALVE	✓	NO.1 DCE RX RECIR PMP DISCH	0	LL TE-II
45	VALVE	✓	NO.2 DCE RX RECIR PMP SUCT VLV (A/OP)	0	LL TE-II
47	VALVE	✓	NO.2 DCE RX RECIR PMP SUCT BLD VLV	0	LL TE-II
49	VALVE	✓	NO.2 DCE RX RECIR PMP DISCH BLD VLV	0	LL TE-II
50	VALVE	✓	NO.2 DCE RX RECIR PMP DISCH	0	LL TE-II
51	VALVE	✓	NO.3 DCE RX RECIR PMP SUCT VLV	0	LL TE-II
52	VALVE	✓	NO.3 DCE RX RECIR PMP SUCT VLV (A/OP)	0	LL TE-II
53	VALVE	✓	NO.3 DCE RX RECIR PMP DISCH BLD VLV	0	LL TE-II
54	VALVE	✓	NO.3 DCE RX RECIR PMP DISCH (A/OP)	0	LL TE-II
55	VALVE	✓	NO.3 DCE RX RECIR PMP DISCH	0	LL TE-II
56	VALVE	✓	NO.2 DCE RX COOLER OUTLET BLD VLV	0	LL TE-II
57	VALVE	✓	NO.2 DCE RX COOLER OUTLET VLV	0	LL TE-II
58	VALVE	✓	NO.2 DCE RX COOLER OUTLET BLD VLV	0	LL TE-II
59	VALVE	✓	NO.1 DCE RX COOLER OUTLET BLD VLV	0	LL TE-II
60	VALVE	✓	NO.1 DCE RX COOLER OUTLET VLV	0	LL TE-II
61	VALVE	✓	DCE CAT ADDITION POT INLET VLV (A/OP)	0	LL TE-II
62	VALVE	✓	VC/HCL STL SAMPLE FNT-TRAY #7	0	JJ TE-II
63	VALVE	✓	VC/HCL STL SAMPLE FNT-TRAY #8	0	JJ TE-II
64	VALVE	✓	VC/HCL STL SAMPLE FNT-TRAY #13	0	JJ TE-II
65	VALVE	✓	VC/HCL STL SAMPLE FNT-TRAY #27	0	II TE-II
66	VALVE	✓	VC/HCL STL SAMPLE FNT-TRAY #31	0	Q TE-II
67	VALVE	✓	2 INCH P.I. NOZ QCH TWR BOTTOMS	0	BB TE-II
68	VALVE	✓	1/2 INCH BLD FLOAT CHAMBER QCH TWR	0	BB TE-II
69	VALVE	✓	QCH TWR FLOAT CHAMBER BTM. FLUSH VLV	0	BB TE-II
70	VALVE	✓	BLD VLV BTM OF S SUPER VLV	0	BB TE-II
71	VALVE	✓	N2 BLK VLV TO S VC KET DUMP LN	0	MM TE-II
72	VALVE	✓	N2 BLK VLV TO N VC KET DUMP LN	0	MM TE-II
73	VALVE	✓	BLD VLV UNDER S VC DUMP LN AUTOMATIC	0	MM TE-II
74	VALVE	✓	Q.T. SITE GLASS DRAIN VLV	0	BB TE-II
75	VALVE	✓	Q.T. SITE GLASS FLUSH LN	0	Q TE-II
76	VALVE	✓	Q.T. SITE GLASS FLUSH LN	0	Q TE-II
77	VALVE	✓	S VC DOPP P.I. BLK VLV	0	Q TE-II
78	VALVE	✓	N VC DOPP P.I. BLK VLV	0	Q TE-II
79	VALVE	✓	S VC DOPP R.D. FLUSH VLV	0	Q TE-II
80	VALVE	✓	N VC DOPP R.D. FLUSH VLV	0	Q TE-II
81	VALVE	✓	S SUPER VLV P.I. BLK VLV	0	AA TE-II
82	VALVE	✓	N SUPER VLV P.I. BLK VLV	0	AA TE-II
83	VALVE	✓	N DOPP STRAHAM VLV	0	MM TE-II
84	VALVE	✓	DCE TWR DUBBY INLET VLV	0	MM TE-II
85	VALVE	✓	DCE TWR DUBBY P.I. BLK VLV	0	MM TE-II
86	VALVE	✓	QCH COND OVERHEAD P.I.	0	II TE-II
87	VALVE	✓	QCH COND SEAL LOOP BLK VLV OFF OH LN	0	II TE-II
88	VALVE	✓	QCH COND SEAL LOOP BLD	0	II TE-II
89	VALVE	✓	F-142 (ORFICE BLK VALVES)	0	II TE-II
90	VALVE	✓	F-124 (ORFICE BLK VALVES)	0	II TE-II
91	VALVE	✓	F-138 (ORFICE BLK VALVES)	0	II TE-II
92	VALVE	✓	F-147 BLK VALVES	0	II TE-II
93	VALVE	✓	QCH LOR PMP SEAL POT BLK VLV	0	II TE-II
94	VALVE	✓	QCH LOR PMP SEAL POT BLK VLV	0	II TE-II
95	VALVE	✓	QCH LOR PMP SEAL POT GAUGE VLV	0	II TE-II
96	VALVE	✓	BLD VLV QCH LOR SUCT LN	0	II TE-II
97	VALVE	✓	DRAIN VLV VC/HCL REBOILER BTM ELL	0	Q TE-II
98	VALVE	✓	P.I. BLK VLV ABOVE BTM ELL	0	Q TE-II
99	VALVE	✓	F-141 ORFICE BLK VALVES	0	JJ TE-II
100	VALVE	✓	VC/HCL RFLX PMP SUCT COOLER INLET VLV	0	JJ TE-II
101	VALVE	✓	VC/HCL RFLX PMP SUCT COOLER BYPASS VLV	0	JJ TE-II
102	VALVE	✓	#3 VC/HCL RFLX PMP SUCT VLV	0	JJ TE-II
103	VALVE	✓	#3 VC/HCL RFLX PMP DISCH VLV	0	JJ TE-II
104	VALVE	✓	#3 VC/HCL RFLX PMP SUCT VLV	0	JJ TE-II
105	VALVE	✓	#3 VC/HCL RFLX PMP OIL POT BLK VLV	0	JJ TE-II

SL 026604

1257	VALVE	✓	HDR BLK VLV TO #3 COND	0	KK TE-II
1260	VALVE	✓	HDR BYPASS VLV AROUND #3 COND	0	KK TE-II
1261	VALVE	✓	P.I. ON #3 COND BYPASS	0	KK TE-II
1262	VALVE	✓	F-156 BYPASS VLV	0	KK TE-II
1264	VALVE	✓	P.T. BLK VLV F-156	0	KK TE-II
1265	VALVE	✓	FE-154 ORFICE BLK VALVES	0	KK TE-II
1266	VALVE	✓	LT 239 BTM VLV	0	LL TE-II
1268	VALVE	✓	LT 212 BTM VLV	0	LL TE-II
1269	VALVE	✓	LT 239 TOP VLV	0	LL TE-II

HNU 970

Calibrated 10/21/91

Zero 4.0

Span 4.10

1443 ppm

Check by Daniel Young - 5273

10/21/91