SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT *STATIONARY SOURCE COMPLIANCE DIVISION* APPLICATION PROCESSING AND CALCULATIONS	PAGES 33	PAGE 1
	APPL. NO. See Below	DATE 03/03/10r
	PROCESSED BY E.R.Ruivivar	CHECKED BY:

PERMIT TO OPERATE
- Change of Condition -

COMPANY NAME: Chevron Products Company

MAILING ADDRESS: 324 W. El Segundo Blvd.
El Segundo, CA 90245

EQUIPMENT LOCATION: 324 W. El Segundo Blvd.
El Segundo, CA 90245

EQUIPMENT DESCRIPTION:

Additions to the equipment description are noted in bold & underlines. Affected equipment is in bold only. Deletions are noted in strikeouts

Section D of Chevron Products Co. Facility Permit, ID# 800030

APPLICATION NO. 413817

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 28 : ISOMAX RELIEF GAS RECOVERY TRAIN A					~~S15.5~~ **S15.23** S15.9 S18.14 S31.17
EDUCTOR, ME-951A, HIJET, 2 MMSCFD CAPACITY ~~AN 388982~~ **AN413817**	**D3762**				**E73.6 K67.73**
VESSEL, V-951A, SEPARATOR, LENGTH: 24 FT; DIAMETER: 6 FT ~~AN 388982~~ **AN413817**	D3763				

APPLICATION NO. 413818

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 29 : ISOMAX RELIEF GAS RECOVERY TRAIN B					~~S15.5~~ **S15.23** S15.9 S18.14 S31.17
EDUCTOR, ME-951B, HIJET, 2 MMSCFD CAPACITY ~~AN 391052~~ **AN413818**	**D3766**				**E73.6** **K67.73**
VESSEL, V-951B, SEPARATOR, LENGTH: 24 FT; DIAMETER: 6 FT ~~AN 391052~~ **AN413818**	D3767				

APPLICATION NO. 413819

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 30 : ISOMAX RELIEF GAS RECOVERY TRAIN C					~~S15.5~~ **S15.23** S15.9 S18.14 S31.17
EDUCTOR, ME-951C, HIJET, 2 MMSCFD CAPACITY ~~AN 391053~~ **AN413819**	**D3770**				**E73.6** **K67.73**
VESSEL, V-951C, SEPARATOR, LENGTH: 24 FT; DIAMETER: 6 FT ~~AN 391053~~ **AN413819**	D3771				

APPLICATION NO. 413820

SECTION D:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 4 : ISOMAX VAPOR RECOVERY SYSTEM					S7.4, S13.2 ~~S15.5~~ **S15.23** S15.9 S18.14
KNOCKOUT POT, V-849, HYDROCARBON RELIEF, LENGTH: 29 FT; DIAMETER: 17 FT ~~AN~~ **AN413820**	D1750				
COMPRESSOR, K-847, 1ST STAGE, WITH INTEGRAL PULSATION DAMPENER AND AFTERCOOLER, 100 HP ~~AN~~ **AN413820**	**D1753**				**E73.6** **K67.73**
COMPRESSOR, 2ND STAGE, K-847B, WITH INTEGRAL PULSATION DAMPENER AND AFTERCOOLER, 100 HP ~~AN~~ **AN413820**	**D1754**				**E73.6** **K67.73**
FUGITIVE EMISSIONS, MISCELLANEOUS ~~AN~~ **AN413820**	D3676			HAP: (10) [40CFR 63 Subpart CC, #5A, 5-25-2001]	H23.19

SECTION H:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 4 : ISOMAX VAPOR RECOVERY SYSTEM					S13.2 ~~S15.5~~ **S15.23** S15.9 S18.14
KNOCKOUT POT, V-849, HYDROCARBON RELIEF, LENGTH: 29 FT; DIAMETER: 17 FT ~~AN362340~~ **AN413820** ~~*Permit to Construct Issued: 12/15/99*~~	D1750				
~~**COMPRESSOR, K-941, TEMPORARY, THREE-STAGE, RECIPROCATING, SKID-MOUNTED, WITH 600-HP MOTOR**~~ ~~AN362340~~ **AN413820** ~~*Permit to Construct Issued: 12/15/99*~~	~~**D3570**~~				~~**E73.6 K67.73**~~

[Note : Device D3570 has been dismantled, and already deleted from the permit.]

APPLICATION NO. 413821

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 2 : COKING AND RESID CONDITIONING					P13.1
System 5 : COKER BLOWDOWN SYSTEM					S7.3, S13.2 ~~S15.5~~ **S15.24 S18.12 rev**
KNOCKOUT POT, V-509, BLOWDOWN K.O., HEIGHT: 42 FT 6 IN; DIAMETER: 12 FT ~~AN 401517~~ **AN413821**	D193				

TANK, BLOWDOWN SETTLING, V-510, LENGTH: 40 FT; DIAMETER: 10 FT ~~AN 401517~~ **AN413821**	D194				
VESSEL, SOUR WATER DEGASSER, V-511, HEIGHT: 18 FT; DIAMETER: 5 FT ~~AN 401517~~ **AN413821**	D195				
COMPRESSOR, K-2005, COKER BLOWDOWN GAS RECOVERY. TWO-STAGE, RECIPROCATING WITH PACKED SEAL, 700-HP (LOCATED IN LSFO) ~~AN 401517~~ **AN413821**	**D196**				**E73.7** **K67.73**
POT, BLOWDOWN SEPARATOR, V-514, HEIGHT: 5 FT; DIAMETER: 1 FT 6 IN ~~AN 401517~~ **AN413821**	D197				
TANK, EMULSION BREAKER, T-208, HEIGHT: 8 FT; DIAMETER: 3 FT ~~AN 401517~~ **AN413821**	D201				
FUGITIVE EMISSIONS, MISCELLANEOUS ~~AN 401517~~ **AN413821**	D3581			HAP: (10) [40CFR 63 Subpart CC, #5A, 5-25-2001]	H23.3

APPLICATION NO. 413823

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 19 : WASTE GAS COMPRESSOR STATION					S13.2 **S15.25** , **S15.26, S15.7**
COMPRESSOR, K-450A, PACKED SEALS, MOTOR DRIVE ~~AN A73242~~ **AN413823**	**D3489**				**E73.8** **K67.73**
COMPRESSOR, K-450B, PACKED SEALS, MOTOR DRIVE ~~AN A73242~~ **AN413823**	**D3566**				**E73.8** **K67.73**
FUGITIVE EMISSIONS, MISCELLANEOUS ~~AN A73242~~ **AN413823**	D3685				H23.3

APPLICATION NO. 413824

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 10 : REFINERY BLOWDOWN GAS RECOVERY SYSTEM					S7.4, S13.2 ~~S15.5~~ **S15.24** , S15.9, **S18.12 rev**
KNOCKOUT POT, V-2010, RESID STRIPPER, LENGTH: 10 FT; DIAMETER: 7 FT 1 IN ~~AN 421284~~ **AN413824**	D1772				

KNOCKOUT POT, V-2011, BLOWDOWN GAS, HEIGHT: 10 FT; DIAMETER: 5 FT ~~AN 421284~~ **AN413824**	D1773				
KNOCKOUT POT, V-2012, RESID STRIPPER, DEHEX MERCAPTAN TAIL GASES, LENGTH: 12 FT; DIAMETER: 3 FT 6 IN ~~AN 421284~~ **AN413824**	D1774				
COMPRESSOR, K-2002, 2-STAGE, RECIPROCATING ~~AN 421284~~ **AN413824**	**D1782**				**E73.7** **K67.73**
COMPRESSOR, K-2003, 2-STAGE, RECIPROCATING ~~AN 421284~~ **AN413824**	**D1783**				**E73.7** **K67.73**
COMPRESSOR, K-2004, 2-STAGE, RECIPROCATING ~~AN 421284~~ **AN413824**	**D1784**				**E73.7** **K67.73**
FUGITIVE EMISSIONS, MISCELLANEOUS ~~AN 421284~~ **AN413824**	D3679			HAP: (10) [40CFR 63 Subpart CC, #5A, 5-25-2001]	H23.3

APPLICATION NO. 414104

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 34 : FCCU VAPOR RECOVERY SYSTEM					~~S15.5~~ **S15.27** S18.13
KNOCK OUT POT, V-301, HEIGHT: 30 FT ; DIAMETER: 12 FT A/N 414104	D1742				
KNOCK OUT POT, V-302, COMPRESSOR SUCTION, HEIGHT: 10 FT ; DIAMETER: 4 FT A/N 414104	D1743				
KNOCK OUT POT, V-305, HEIGHT: 33 FT ; DIAMETER: 12 FT A/N 414104	D1744				
ACCUMULATOR, DRAINAGE, V-308, HEIGHT: 6 FT 6 IN; DIAMETER: 2 FT A/N 414104	D1745				
COMPRESSOR,VAPOR, K-302, RECIPROCATING, 60-HP ~~AN 387302~~ **AN414104**	**D1747**				**E73.9** **K67.73**
COMPRESSOR,VAPOR, K-301, RECIPROCATING, 60-HP ~~AN 387302~~ **AN414104**	**D1748**				**E73.9** **K67.73**

APPLICATION NO. 452504

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 20 : AIR POLLUTION CONTROL					
System 34 : FCCU VAPOR RECOVERY SYSTEM					~~S15.5~~ **S15.27** S18.13
COMPRESSOR, RELIEF GAS, K-201A, RECIPROCATING, 125-HP **AN 452504**	**D1815**				**E73.9** **K67.73**
COMPRESSOR, RELIEF GAS, K-201B, RECIPROCATING, 125-HP **AN 452504**	**D1816**				**E73.9** **K67.73**
KNOCK OUT POT, V-212, ARU RELIEF, LENGTH:20 FT; DIAMETER: 10 FT **AN 452504**	**D1819**				

Additions to the conditions are noted in bold & underlines. Deletions are noted in strikeouts

PROCESS CONDITIONS

P13.1
All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 12-4-2003]

[Processes subject to this condition : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16]

SYSTEM CONDITIONS

S7.3
The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Final Environmental Impact Report dated 09-August-2006 for this facility.

The operator shall maintain records in a manner approved by the District , to demonstrate compliance with the applicable measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document.

[CA PRC CEQA, 11-23-1970]
[Systems subject to this condition : Process 1, System 5; Process 2, System 1 , 3 , 5 , 7; Process 10, System 1; Process 12, System 26 , 27; Process 13, System 1 , 2 , 4; Process 20, System 12]

S7.4
The following conditions shall apply to all refinery operation and related devices from this system:

The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Final Environmental Impact Report dated 09-May-2008 for this facility.

The operator shall maintain records in a manner approved by the District , to demonstrate compliance with the applicable measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document.

[CA PRC CEQA, 11-23-1970]
[Systems subject to this condition : Process 3, System 1; Process 7, System 4; Process 12, System 28; Process 13, System 10 , 11 , 12 , 13; Process 20, System 4 , 7 , 10 , 31]

S13.2
All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1123

[RULE 1123, 12-7-1990]

[Systems subject to this condition : Process 1, System 3 , 5 , 13 , 17; Process 2, System 1 , 5 , 6; Process 3, System 1 , 5; Process 4, System 1 , 3 , 5 , 7 , 9 , 11 , 13; Process 5, System 1; Process 6, System 1 , 3 , 4; Process 7, System 2 , 4 , 7; Process 8, System 1 , 2 , 5 , 7 , 8, 10; Process 9, System 1 , 2; Process 10, System 1 , 2 , 4; Process 12, System 2 , 4 , 7 , 9 , 10 , 11 , 12 , 13 , 16 , 17 , 18 , 22 , 26; Process 20, System 3 , 4 , 7 , 10 , 11 , 12 , 14 , 18 , 19 , 23; Process 21, System 13 , 14 , 16 , 18; Process 25, System 2]

~~S15.5~~
~~The vent gases from all affected devices of this process/system shall be vented as follows:~~

~~All emergency vent gases from the vapor recovery system shall be directed to a flare system.~~

~~This process/system shall not be operated unless the flare(s) is in full use and has a valid permit to receive vent gases from this system.~~

~~[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]~~

~~[Systems subject to this condition : Process 2, System 5; Process 8, System 9; Process 20, System 4 , 10 , 28 , 29 , 30 , 34]~~

S15.23
The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gas not vented to the vapor recovery system [consisting of all the compressor and eductors in Process 20, System 4 (D1753/D1754)and Process 20, Systems 28/29/30 (D3762, D3766 and D3770) operated concurrently] shall be directed to a flare system.

This process/system shall not be operated unless the flare(s) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Systems subject to this condition : Process 20, System 4 , 28 , 29 , 30]

S15.24
The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gas not vented to the vapor recovery system [consisting of all the compressors in Process 2, System 5 (D196)and Process 20, System 10 (D1782, D1783 and D1784) operated concurrently]shall be directed to a flare system.

This process/system shall not be operated unless the flare(s) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Systems subject to this condition : Process 2, System 5; Process 20, System 10]

S15.25
The vent gases from all affected devices of this process/system shall be vented as follows:

All waste gases recovered by the vapor recovery system [consisting of all the compressors in Process 20, System 19 (D3489 and D3566) operated independently or concurrently] shall be directed to a gas treating system.

This process/system shall not be operated unless the gas treating system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 20, System 19]

[NOTE: If the compressors are down, then there is no gas recovery by the subject process system and any waste/vent gas not recovered and directed to P2S5 or P20S10 should be covered by an S15 cond for its source.]

[A new S15.26 condition would be created to address the emergency vents from P20 S19]:

S15.26

The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases from the process system shall be directed to the vapor recovery system.

This process/system shall not be operated unless the vapor recovery system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 20, System 19]

[Then P20 S19 is added to S18.12]

S15.27
The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gas not vented to the vapor recovery system [consisting of all the compressors in Process 20, System 34 (D1747, D1748, D1815 and D1816) operated concurrently] shall be directed to a flare system.

This process/system shall not be operated unless the flare(s) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Systems subject to this condition : Process 20, System 34]

S15.7
The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to a vapor recovery system and/or flare system except Devices IDs D15, D3195, D3199, D3200 (Process 1, System 3), D106 (Process 1, System 13), D3574, D3371, D3373, D591, D595, D597, D3372, D592, D598 & D602 (Process 6, System 4) that vent to the atmosphere.

This process/system shall not be operated unless the vapor recovery system and/or flare system is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]
[Systems subject to this condition : Process 1, System 3 , 5 , 13 , 17; Process 2, System 1; Process 3, System 1 , 5; Process 4, System 1 , 3 ,

5 , 7 , 9 , 11 , 13; Process 5, System 1; Process 6, System 4; Process 7, System 4 , 7; Process 8, System 1 , 2 , 5 , 7 , 8 , 10; Process 9, System 1 , 2; Process 10, System 1; Process 12, System 2 , 7 , 9 , 11 , 13 , 17 , 22 , 23 , 25 , 26 , 27; Process 20, System 18 , 19; Process 21, System 18]

S15.9
The vent gases from all affected devices of this process/system shall be vented as follows:

All sour gases shall be directed to the sour gas treating unit(s).

This process/system shall not be operated unless the sour gas treating unit(s) is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 1, System 3 , 5 , 13; Process 2, System 1; Process 3, System 1; Process 4, System 1 , 3 , 7, 9 , 11 , 13; Process 7, System 4; Process 8, System 1; Process 10, System 1; Process 12, System 7; Process 20, System 4 , 28 , 29 , 30]

S18.7 rev
All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Crude Distillation (Process: 1, System: 3, 5 & 13)

Delayed Coking (Process: 2, System: 1 & 5)

FCCU (Process: 3, System: 1 & 5)

Hydrotreating (Process: 4, System: 1, 7, 9, 11 & 13)

Hydrogen Generation (Process: 6, System: 4)

Alkylation (Process: 8, System: 1, 2, 5, 7, 8, 9 & 10)

Oxygenates Production (Process: 9, System: 2)

LPG Production (Process: 10, System: 1 & 2)

Treating & Stripping (Process: 12, System: 2, 7, 9, 11, 13, 17, 22, 23 & 25)

Air Pollution Control (Process: 20, System: 10, **19** & 34)

Miscellaneous (Process: 21, System: 18)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : **Process 20, System 3 , 7 , 23**]

[Note: P20 S19 PRVs are discharged to vapor recovery in P2 S5 or P20 S10 (as reflected in Cond. S18.12. When said vapor recovery is not working, the vent gases go to the LSFO, Alky or FCC Flare; therefore, revision to Cond. S18.7 above.]

S18.12 rev
All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Alkylation (Process: 8, System: 2 & 5)

Crude Distillation (Process: 1, System: 3, 5 & 13)
LPG Production (Process: 10, System: 1)

Hydrotreating (Process: 4, System: 1, 9, 11 & 13)

Coking & Residual Conditioning (Process: 2, System: 1)

Vapor Gathering System (Process: 20, System: 18)

Hydrogen Generation (Process: 6, System: 4)

Treating and Stripping (Process: 12, System: 26)

Waste Gas Compressor Station (Process: 20, System: 19)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 2, System 5; Process 20, System 10]

S18.13
All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

FCCU (Process: 3, System: 1 & 5)

Alkylation (Process: 8, System: 8)

Oxygenates Production (Process: 9, System: 2)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 20, System 34]

S18.14

All affected devices listed under this process/system shall be used only to receive, recover and/or dispose of vent gases routed from the system(s) or process(es) listed below, in addition to specific devices identified in the "connected to" column:

Oxygenates Production (Process: 9, System: 1)

Crude Distillation (Process: 1, System: 17)

Hydrotreating (Process: 4, System: 3 & 5)

Catalytic Reforming (Process: 5, System: 1)

Hydrocracking (Process: 7, System: 4 & 7)

Hydrogen Generation (Process: 6, System: 1 & 6)

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 20, System 4 , 28 , 29 , 30]

S31.17
The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 388982, 391052 and 391053:

All new valves in VOC service, except those specifically exempted by Rule 1173, shall be bellows seal valves, except as approved by the District, in the following applications: heavy liquid service, control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

Valves not commercially available include valves with sizes above 8", special alloys for sizes above 2", and special connections for sizes above 2".

All new valves and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in R1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter "N"), and shall be noted in the records.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA reference Method 21. All new valves and flanges in VOC service, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Method 21.

If 98.0 percent or greater of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for two

consecutive months, then the operator may change to a quarterly inspection program with the approval of the District.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv.

All new components in VOC service with a leak greater than 500 ppmv but less than 1,000 ppmv, as methane, measured above background using EPA Method 21 shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pump, compressor, pressure relief valve, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least two years, and shall be made available to the Executive Officer or his authorized representative upon request.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 20, System 28 , 29 , 30]

S31.19
The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 448244 and 458897:

All sampling connections shall be closed-purge, closed loop, or closed-vent systems.

All new valves in VOC service shall be leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellows or equivalent approved in writing by the District prior to installation.

All new components in VOC service as defined by Rule 1173, except valves and flanges shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21. Components shall be defined as any valve, flange, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

The following leaks shall be repaired within 7 calendar days -- all light liquid/gas/vapor components leaking at a rate of 500 to 10,000 ppm, heavy

liquid components leaking at a rate of 100 to 500 ppm and greater than 3 drops/minute, unless otherwise extended as allowed under Rule 1173.

The following leaks shall be repaired within 2 calendar days -- any leak between 10,000 to 25,000 ppm, any atmospheric PRD leaking at a rate of 200 to 25,000 ppm, unless otherwise extended as allowed under Rule 1173. The following leaks shall be repaired within 1 calendar day -- any leak greater than 25,000 ppm, heavy liquid leak greater than 500 ppm, or light liquid leak greater than 3 drops per minute.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for two consecutive months, then the operator may revert to a quarterly inspection program with the approval of the Executive Officer. This condition shall
not apply to leakless valves.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new valves and the new flange population inspected are found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv. This condition shall not apply to leakless valves.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District.

The operator shall provide to the District, prior to initial startup, a list of all non-leakless type valves that were installed. The list shall include the tag numbers for the valves and reasons why leakless valves were not used. The operator shall not startup the equipment prior to the Districts approval for the use of all non-leakless
valves.

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The operator shall also submit a complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets or field inspection surveys for all non-leakless type valves with a listing of tag numbers and reasons why
leakless valves were not used.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition : Process 2, System 1 , 5]

DEVICE CONDITIONS

E73.6

Notwithstanding the requirements of Sec E conditions, the operator may, at his discretion, choose not to operate all the compressor and eductors in Process 20, System 4 (D1753/D1754) and Process 20, Systems 28/29/30 (D3762, D3766 and D3770) simultaneously, provided that the unit(s) being operated has (have) sufficient capacity to recover all vent gases that may go to the Isomax Flare (C1749) or the Coker Flare (C1785) under normal operating conditions.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Devices subject to this condition : D1753, D1754, D3762, D3766 & D3770]

E73.7

Notwithstanding the requirements of Sec E conditions, the operator may, at his discretion, choose not to operate all the compressors in Process 2, System 5 (D196)and Process 20, System 10 (D1782, D1783 and D1784) simultaneously, provided that the unit(s) being operated has (have) sufficient capacity to recover all vent gases that may go to the LSFO Flare (C1757), the FCC Flare (C1746), or Alky Flare (C3012), under normal operating conditions.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Devices subject to this condition : D196, D1782, D1783 & D1784]

E73.8

Notwithstanding the requirements of Sec E conditions, the operator may, at his discretion, choose not to operate all the compressors in Process 20, System 19 (D3489 and D3566) simultaneously, provided that the unit(s) being operated has (have) sufficient capacity to recover all process waste gases under normal operating conditions. Under this condition, no waste gas shall bypass the said compressor(s) during operation.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D3489 & D3566]

E73.9

Notwithstanding the requirements of Sec E conditions, the operator may, at his discretion, choose not to operate all the compressors in Process 20, System 34 (D1747, D1748, D1815 and D1816) simultaneously, provided that the unit(s) being operated has (have) sufficient capacity to recover all vent gases that may go to the FCC Flare (C1746), the LSFO Flare (C1757), or the Alky Flare C3012), under normal operating conditions.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Devices subject to this condition : D1747, D1748, D1815 & D1816]

H23.3

This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 5-13-1994; RULE 1173, 12-6-2002]

[Devices subject to this condition : D3659, D3671, D3672, D3673, D3687, D3688, D3921, D3581, D3685, D3679]

H23.19
This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173
VOC	40CFR60, SUBPART	GGG

[RULE 1173, 5-13-1994; RULE 1173, 12-6-2002; 40CFR 60 Subpart GGG, 6-7-1985]

[Devices subject to this condition : D3579, D3583, D3613, D3622, D3634, D3636, D3637, D3638, D3639, D3686, D3911, D3912, D3969, D3676]

K67.73
The operator shall keep records, in a manner approved by the District, for the following parameter(s) or items(s):

Date and duration of events when there is flaring of vent gases greater than 5,000 standard cubic feet from this vapor recovery system or compressor(s).

Estimated total volume of vent gases combusted in the flare for each such event.

Brief description of the cause of the vent gas flaring for each such event per Rule 1118 .

Identification of each of the compressor(s) not operating and reason why they are not online during each such event.

[RULE 1118, 02-13-1998; RULE 1118, 11-04-05]

[Devices subject to this condition : D3762, D3766, D3770, D1753, D1754, D196, D3489, D3566, D1782, D1783, D1784, D1747, D1748, D1815, D1816]

I. BACKGROUND / GENERAL INFORMATION:

Chevron Products Co. submitted the following applications for change of condition to accurately reflect the design and actual operation of the subject vapor compressors / eductors as described/proposed in their previous applications:

C/Cond A/N	Compressor No.	Device No.	Process (P)/System (S) Description	Previous/ Existing A/N
413817	Eductor ME-951A	D3762	P20 / S28 Air Pollution Control / Isomax Relief Gas Recovery Train A	388982
413818	Eductor ME-951B	D3766	P20 / S29 Air Pollution Control / Isomax Relief Gas Recovery Train B	391052
413819	Eductor ME-951C	D3770	P20 / S30 Air Pollution Control / Isomax Relief Gas Recovery Train C	391053
413820	K-847 K-951 (P/C)	D1753 D3570	P20 / S4 Air Pollution Control / Isomax Vapor Recovery System	362340 (P/C)
413821	K-2005	D196	P2 / S5 Coking and Resid Conditioning / Coker Blowdown System	401517
413823	K-450A K-450B	D3489 D3566	P20 / S19 Air Pollution Control / Waste Gas Compressor Station	A73242
413824	K-2002 K-2003 K-2004	D1782 D1783 D1784	P20 / S10 Air Pollution Control / Refinery Blowdown Gas Recovery system	421284
414104	K-301 K-302	D1748 D1747	P20 / S34 Air Pollution Control / FCCU Vapor Recovery System	387302
452504	K-201A K-201B	D1815 D1816	P20 / S34 Air Pollution Control / FCCU Vapor Recovery System	170200

The change of condition requested was to clarify and avoid misinterpretation of the meaning of "full use" as stated in some of the permit conditions specified (see **Appendix A**) and also in Section E (see **Appendix B**) of Chevron's Facility Permit considering that the subject compressors / eductors that are grouped together or are part of a single permit unit are not necessarily operated together all the time per its design or its actual operation contrary to what the "full use" description in the permit condition may imply. No other change is requested and the emission sources served by the compressors / eductors and the operation of the vapor

recovery systems associated with same will remain unchanged. Chevron has suggested inclusion of the following language in the S15 permit condition relating to vapor recovery system:

For each of the 2 compressors (D1753/D1754 and D3570) and the 3 eductors (D3762, D3766 and D3770):

"The operator, at his discretion, may choose not to operate all compressors and eductors in Process 20 System 4 (D1753/D1754 and D3570) and Process 20 Systems 28/29/30 (D3762, D3766 and D3770) simultaneously, provided that the unit(s) being operated has (have) sufficient capacity to recover all vent gases under normal conditions."

For each of the 4 compressors K-2005, K-2002, K-2003 and K- 2004 (D196, D1782, D1783 and D1784, respectively):

"The operator, at his discretion, may choose not to operate all compressors in Process 2 System 5 (D196) and Process 20 System 10 (D1782, D1783 and D1784) simultaneously, provided that the compressor(s) being operated has (have) sufficient capacity to recover all vent gases under normal conditions."

For each of the 2 compressors (D3489 and D3566):

"The operator, at his discretion, may choose not to operate both compressors (D3489 and D3566) simultaneously, provided that the compressor (D3489 and D3566) being operated has sufficient capacity to recover all vent gases under normal conditions."

For each of the 4 compressors (D1747, D1748, D1815 and D1816):

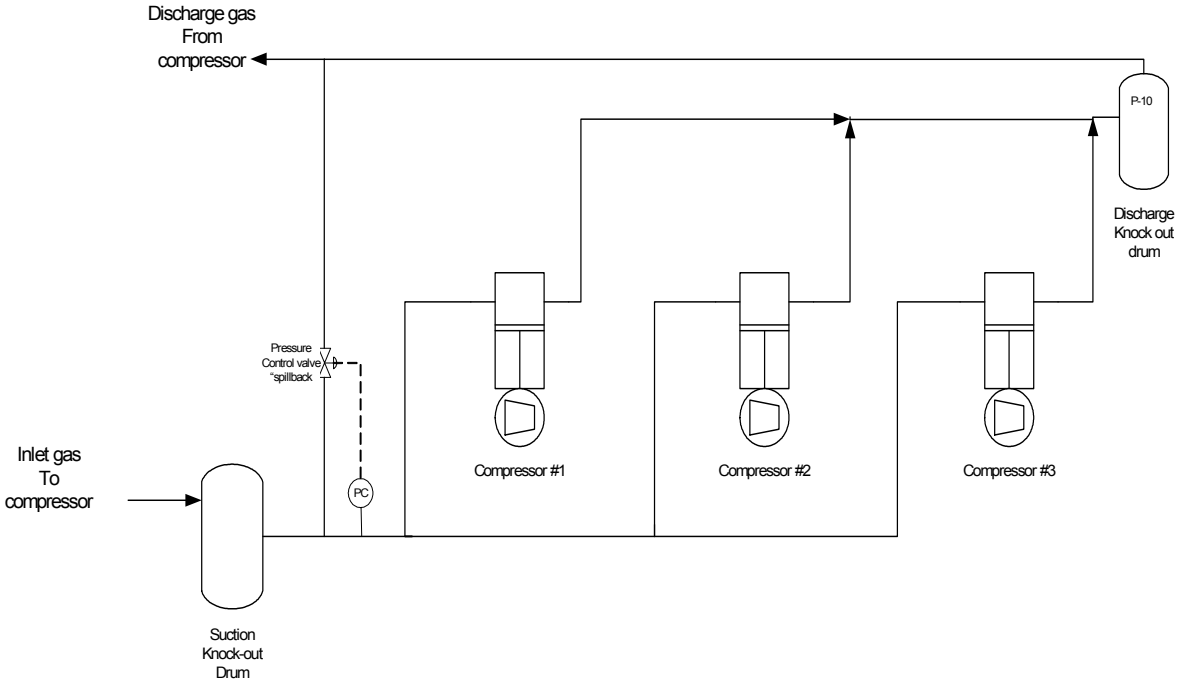
"The operator, at his discretion, may choose not to operate all compressors (D1747, D1748, D1815 and D1816) in this system simultaneously, provided that the compressor(s) being operated has (have) sufficient capacity to recover all vent gases under normal conditions."

A copy of the current permit issued to the subject compressors / eductors is shown in **Appendix C** of their respective application file.

District records do not indicate any outstanding compliance problem with the operation of the subject compressors / eductors and their vapor recovery systems under normal conditions.

Process Description: (Refer to **Appendix D** for process flow diagram)

Chevron provided the information described in this section including the sketch below to show a typical capacity control scheme for operation on "as needed" basis for vent gas recovery compressors used at the facility:



Pressure control on suction header opens the "spillback" valve as needed to maintain the set point. As the "inlet gas" volume increases the spillback valve closes thus allowing more gas to be discharged. Usually only one capacity control is installed per set of compressors.

*The compressors can operate at their design capacity which is also their maximum capacity. The control system allows the compressors to adjust from zero up to their full capacity. If more gas enters the system than the compressors maximum capacities which happens during an upset condition, the pressure will raise to a point where the water seal is overcome and the excess will be discharged to the flare stack.

<u>Isomax vent gas recovery:</u>

- Comprising of Vent Gas Compressor No. K-847, and three Eductor Nos. K-951A, K-951B, and K-951C configured in parallel. K-847 has a design capacity of 1.2 MMSCFD, and the combined design capacity of the Eductors is 6 MMSCFD. K-847, a motor driven reciprocating compressor takes in vent gases from several sources in the Isomax Division and transfers those gases to No. 4 H2S Unit for sulfur removal. Each system comprises a high speed water circulation loop passing through an eductor which entrains gas entering the system and compresses it. The circulation is driven by a multi stage centrifugal pump and the water is cooled to maintain it in the liquid state. A single "spillback" valve

connected between the discharge and suction headers provides capacity control as has been described earlier. The system takes in flare gas from the single flare gas knock out drum through a 16" connection. Recovered gas is transferred to the #4 H_2S unit for sulfur reduction.

- While normal operation finds Vent Gas Compressor No. K-847 running, when this compressor is down the gases normally handled by that compressor can be compressed by downstream eductors K-951A/B/C. Additionally it is not required to run all three eductors K-951A/B/C in order to compress all available relief gases. Only a sufficient number of eductors will be run in order to compress available vent relief gases.

- Vent Gas Recovery Compressor K-847 services some of the vents in the Isomax Division, and returns those gases into the process. All of the Isomax relief gases are serviced by three parallel eductors, K-951A, K-951B, and K-951C. These three eductors are normally all kept running unless relief gas flow is low, then the unnecessary eductors will be shutdown. When K-847 is not running, those gases normally handled by that compressor are compressed by downstream eductors, K-951A, K-951B, and K-951C. Note that while the three eductors can compress the gases normally handled by K-847, the reverse is not true, K-847 is upstream of the K-951s.

Design capacities of the compressors/eductors associated with this gas recovery system:

A/N	Device	Eductor / Compressor	Capacity
413817	D3762	ME-951A	2.0 MMSCFD
413818	D3766	ME-951B	2.0 MMSCFD
413819	D3770	ME-951C	2.0 MMSCFD
413820	D1753	K-847	1.2 MMSCFD
	D3570	K-951	Removed from service

The following gas rates were derived from a six month period, and represents the minimum, maximum, and average flow rates of vent gases recovered prior to the Isomax flare:

ME-951A/B/C	0.41 to 6.14 MMSCFD, with an average rate of 3.09 MMSCFD
K-847	0 to 1.25 MMSCFD, with an average rate of 0.249 MMSCFD

The Isomax Flare No. F-950.served by the eductors/compressor above has a design capacity of 1.3 million lbs/hr.

The LSFO relief gas recovery:

- Relief gases originating in the process pass to one of 11 knock-out drums connected to the main headers. Gas for recovery is taken from the central header through V-1098 an additional knock out vessel and passes into the three compressors K-2002/3/4. These compressors discharge into #5 H_2S plant. The three compressors together supply a capacity of 4 MMSCFD. A single capacity control valve is installed across the common suction discharge headers.

- Coker vent gas is generated by the coking process which must be vented on a cyclical basis in order to remove the coke from the unit. This gas passes through a dedicated line which routes the gas to the suction of K-2005 a compressor that was installed specifically to recover these gases into the H_2S unit. K-2005 has its own capacity control and a manually controlled cross connection is provided to the K-2002/3/4 system to allow each system to support each other.

- LPD (Low Pressure Distillation) vent gases are compressed by Vent Gas Compressor K-450 A and B, and are discharged into #5 H2S plant. Typically only one K-450 is sufficient to compress available vent gases. If neither compressor is running, the LPD vent gases are compressed by LSFO Compressor Nos. K-2002/3/4.

- Vent Gas Recovery Compressors K-450A and B services the vents in the LPD section. These two compressors are configured in parallel. If those compressors are not available to run, the gases normally compressed by those compressors will be handled by downstream compressors K-2002, K-2003, and K-2004. All LSFO relief gases are serviced by Compressor Nos. K-2002, K-2003, and K-2004. These compressors are configured in a parallel arrangement, and only a sufficient number of compressors are run to handle the relief gas flow, with the remaining compressor(s) held in standby. The primary function of the Coker Blowdown Compressor No. K-2005 is to handle gases from the Coker Division. However, because that compressor shares a common suction line intertie with Compressor Nos. K-2002, K-2003, and K-2004, these last three named compressors are available to compress the gases normally handled by K-2005. The physical arrangement of the common suction line is such that K-2005 is available to assist in compressing gases normally compressed by Compressor Nos. K-2002, K-2003, and K-2004.

Design capacities of the compressors/eductors associated with this gas recovery system:

A/N	Device	Compressor	Capacity
413821	D196	K-2005	4.0 MMSCFD
413823	D3489	K-450A	1.8 MMSCFD
	D3566	K-450B	1.8 MMSCFD
413824	D1782	K-2002	1.39 MMSCFD
	D1783	K-2003	1.39 MMSCFD

D1784 K-2004 1.39 MMSCFD

The following gas rates were derived from a six month period, and represents the minimum, maximum, and average flow rates of vent gases recovered prior to the LSFO flare:

K-2005	0 to 4.17 MMSCFD, with an average rate of 0.94 MMSCFD
K-450A/B	0 to 1.11 MMSCFD, with an average rate of 0.32 MMSCFD
K-2002/3/4	0 to 4.27 MMSCFD, with an average rate of 3.05 MMSCFD

The LSFO Flare No. F-2500.served by the compressors above has a design capacity of 1.2 million lbs/hr.

The FCC flare gas recovery:

- Two sets of two reciprocating compressors recover relief vent gases in the FCC. Each installation services a separate flare gas knock out drum although the whole system is connected together. The normal volume (without upset condition) of routine vent gases is ~0.8 MMSCFD and either compressor set (2) can comfortably supply this capacity. Hence normal operations require only one set to be on-line. Each set of 2 compressors has its own capacity control system and recovers gas into V-100, a process receiving drum in the FCC.

- For the FCCU Division there are two sets of Vent Gas Recovery Compressors. Compressor Nos. K-301 and K-302 are configured in parallel, and Compressor Nos. K-201A and K-201B are configured in parallel. Although each set of these compressors have their own respective suction knock out pots, those pots are connected so that either of the two sets of compressors can compress the gases normally handled by the other set. Therefore, because of the interconnection between the suction knock out pots, all four of these compressors are in effect in a parallel configuration.

Design capacities of the compressors/eductors associated with this gas recovery system:

A/N	Device	Compressor	Capacity
414104	D1748	K-301	0.85 MMSCFD
	D1747	K-302	0.85 MMSCFD
452504	D1815	K-201A	0.85 MMSCFD
	D1816	K-201B	0.85 MMSCFD

The following gas rates were derived from a six month period, and represents the minimum, maximum (with upset condition), and average flow rates of vent gases recovered prior to the FCCU flare:
K-301/2 and

K-201A/B 1.95 to 2.24 MMSCFD, with an average rate of 2.12 MMSCFD
The FCCU Flare No. F-309.served by the compressors above has a design capacity of 874,000 lbs/hr.
Additional information provided by Chevron on the subject vapor recovery systems are as follows: (see also e-mail dated 3/16/06):

A. Records of monthly daily average vent gas collection volume of the subject compressors/vapor recovery systems for the last two years are given below (Notes concerning this table are included after the table):

	Isomax		FCCU		LSFO		
	F-950		F-309		F-2500		
	K847s	K951s	K201s	K301s	K450s	K2005	Houdries
	mmscfd	mmscfd	mmscfd	mmscfd	mmscfd	mmscfd	mmscfd
Jan-04	0.287	2.230	0.000	0.291	0.333	1.319	3.892
Feb-04	0.318	2.505	0.000	0.319	0.283	1.422	3.245
Mar-04	0.262	2.817	0.000	0.323	0.352	1.462	3.347
Apr-04	0.258	3.579	0.264	0.351	0.353	1.738	2.981
May-04	0.276	2.948	0.253	0.343	0.469	1.638	4.012
Jun-04	0.253	2.991	0.337	0.370	0.351	1.914	3.837
Jul-04	0.450	3.093	0.276	0.453	0.348	1.749	4.005
Aug-04	0.338	3.324	0.358	0.471	0.346	1.762	3.551
Sep-04	0.406	3.881	3.270	0.364	0.052	1.744	2.957
Oct-04	0.187	2.297	3.360	0.482	0.373	2.298	3.902
Nov-04	0.197	3.026	3.360	0.411	0.301	1.914	3.171
Dec-04	0.184	3.828	3.360	0.360	0.258	1.854	2.651
Jan-05	0.209	4.039	3.248	0.248	0.291	2.172	3.549
Feb-05	0.207	3.849	2.888	0.000	0.289	1.729	2.778
Mar-05	0.175	4.570	2.593	1.162	0.336	1.338	3.403
Apr-05	0.214	3.894	2.057	0.696	0.307	2.012	3.526
May-05	0.203	3.612	2.028	0.755	0.338	1.645	3.314
Jun-05	0.245	3.545	2.043	0.866	0.350	2.299	3.294
Jul-05	0.209	3.283	2.060	0.582	0.280	2.389	3.196
Aug-05	0.258	3.445	2.077	0.603	0.563	1.031	1.859
Sep-05	0.301	3.166	2.091	0.606	0.273	1.315	3.145
Oct-05	0.321	3.527	2.114	0.548	0.232	0.876	3.388
Nov-05	0.252	3.095	2.150	0.525	0.243	0.870	3.134
Dec-05	0.159	2.747	2.173	0.177	0.265	0.993	3.283
Jan-06	0.222	2.793	2.175	0.280	0.404	0.853	2.870
Feb-06	0.205	3.005	2.031	0.473	0.347	0.909	2.969

- The figures given are monthly averages, expressed in mmscfd, and covers the time frame from January 2004 through February 2006.
- As the composition (and thereby density) of the gases recovered are not known, the lbs/day of vent gases recovered can not be calculated. Likewise, since the composition of

the recovered gases are not known, the figures given above have not been corrected for density.

- The recovery compressors are grouped by their relationship to a flare. For example, K-847s and K-951s recover vent gases prior to Flare No. F-950.
- The flow rates given are for that group of compressors, data is not available for individual compressors. Except that individual flow rates can be given for K-951A, B, & C.
- It is not possible to discern from available data how many compressors are on line, or which compressor was running at any given time. Except this information is available for K-951 A, B, & C.

B. When process vents exceed the capacity of the recovery compressors, the excess gases will be burned in the associated flare. The recovery compressors are designed to handle process vents during normal operating conditions. The flares are designed with the ability to burn the entire volume of gases of the units they serve in the event of emergencies, plant upsets, or other unusual conditions that may occur. Of the four dates given wherein FCCU flaring was observed by SCAQMD personnel the following conditions were noted:

1. April 10, 2005 – A flash over fire occurred in a substation providing electrical power to contract hydrogen provider. Hydrogen and steam outages required many refinery units to stop, or reduce feed. That upset condition caused flaring at the Isomax and FCCU flares.
2. May 17, 2005 – An electrical power failure in substations related to the FCCU caused several fin fan motors and pumps to stop. That upset condition caused flaring at the FCCU flare.
3. August 3, 2005 – Resulting from difficulties during a DFH plant startup, excess process vents caused flaring at the FCCU flare.
4. September 29, 2005 – Rapid increase in ambient temperatures caused temporary refinery fuel gas imbalances. Excess refinery fuel gas caused flaring at the FCCU flare.

In each of these occurrences, immediate and continuing actions were reportedly taken to stop the flaring.

C. The flare capacities given previously (in lbs/hr) are the result of exhaustive studies on the total hydrocarbons (of differing densities) in the respective units, and the abilities of the respective flares to handle that loading. Because of the differing densities of the hydrocarbons involved, to convert lbs/hr to MMSCFD is not possible.

The flares are designed for a complete depressuring of the units in an emergency situation. The flare capacities given previously are for those situations. The flare capacity is unrelated to the capacity of the vent gas recovery compressors.

D. The number of compressors used in any given system, as well as the loading of those compressors running, is determined by the amount of vent gases to be recovered.

In a typical set up, this is determined by the suction pressure of that set of compressors (see p. 19 for a typical compressor control scheme/process control diagram and brief description of operation).

As an example, if there are only a small amount of vent gases to be recovered, one compressor would be running, and the spillback controller would return the excess gases back to the suction of the compressor. As the amount of vent gases increase, the spill back valve will close so that less of the vent gases are spilled back to the suction of the compressors. When the spill back controller goes to zero (closed) then the system has reached its capacity (with the one compressor running). Before that occurs, a second compressor would be started. When that second compressor is started the amount of gases being pumped is increased and the spill back controller opens. To continue the example, if the vent gases to be recovered increases even more, the spill back controller will start to close. If the vent gases increase to the point that the spill back controller nears zero (closed), the third compressor would be started, and the spill back controller will again open.

In the example above, all vent gases are being recovered, and no gases are being flared. If, as in the case of abnormal operations, that the amount of vent gases to be recovered exceeds the capacity of all three compressors, the spill back controller would be at this time closed, and the excess vent gases would be flared. As the vent gases to be recovered diminishes, the spill back controller opens allowing more gas to be returned to the suction of the compressors. Before the spill back controller nears wide open one of the compressors will shut off. If an excessive amount of vent gases are allowed to spillback to the suction of the compressors, those gases become hot from the heat of compression, and damage to the compressors can occur.

To understand the spillback control of a set of compressors, consider a hypothetical configuration. Suppose that the vent gas recovery system consists of three identical compressors (A/B/C), each with 100 scfm capacity. Further, each compressor can be loaded to 50%, or 100%. These three compressors are typical and share one spill back controller.

E. As can be seen above, gas compressors are not operated at full load all the time. The number of compressors running, and the loading of those compressors is determined by amount of gas that is available to pump. The compressors are operated in a manner that they recover the full amount of available gas up to their full capacity. That control is possible by a combination of (1.) Number of compressors running, (2.) The load setting of each compressor, and (3.) Suction pressure control by the spill back controller.

II. EMISSION ESTIMATE:

The proposed change of condition is merely to clarify the language of the current permit conditions on “full use” imposed on the subject equipment and is not intended to change the limit on how much vent gases should be collected at any one time or produced from various vent sources served but rather to ensure that, without misinterpretation of the requirement of the

permit condition, the number of compressors / eductors used at any one time, not necessarily all, has sufficient capacity to recover ALL vent gases under normal design conditions. Therefore, for this purpose and NSR, no emission calculation is needed because emissions should remain the same after the change of condition.

III. EVALUATION:

It is shown from the information and operating data on gas collection provided by Chevron that there are conditions when not all of the compressors / eductors that are grouped together in parallel or single permit unit are used together or concurrently to collect all the available vent emissions from sources served by such vapor recovery units. In most occasions, the volume of vent gases recovered were within the total capacity of the compressors/vapor recovery system and no flaring of gases occurred except during upset or abnormal conditions. It is evident that the subject compressors / eductors are operated on "as needed" basis for adequate collection of all available vent gases. There is no record of instances whereby there was venting of uncollected gases to the atmosphere because not all of the compressors / eductors associated together were operating except during abnormal conditions. Hence, the request of Chevron to change permit condition to clarify the language of "full use" in the current permits has some basis or is valid to the point that not all of the compressors or eductors that are associated together need to be operated all the time to achieve its objective (collect all available vent gases) contrary to the implied requirement (all the compressors / eductors associated together be operated all the time) of "full use".

A request for a similar change of condition had been addressed in another refinery permit and sample of the revised conditions reads: (See **Appendix E** for full copy of the permit conditions)

> System Condition: S15.10 (example)
> " The vent gases from all affected devices of this process/system shall be vented as follows:
>
> All emergency vent gases shall be directed to a vapor recovery system or flare system.
>
> This process/system shall not be operated unless the vapor recovery system (**consisting of three compressors operated independently or concurrently at any given time**) or flare system is in full use and has a valid permit to receive vent gases from this system."
>
> Device Condition: E336.2 (example)
> " The operator shall vent the vent gases from this equipment as follows:
>
> All vent gases under normal operating conditions shall be directed to a vapor recovery system.
>
> This equipment shall not be operated unless the vapor recovery system (**consisting of three compressors operated independently or concurrently at any given time**) is in full use and has a valid permit to receive vent gases from this equipment. "

The proposed change of condition should not result in any emission increase and therefore, the provisions of NSR would not apply.

With the subject change of condition, continued compliance with the following District Rules and Regulations is expected:

Rule 212: No public notice is required because there is no emission increase expected. There is also no increase in toxic health risk and the equipment is not located within a 1,000-ft. of a school.

Rule 401: No visible emission to violate this rule is expected.

Rule 402: No nuisance problem is expected.

Reg. IX: Standards of Performance for New Stationary Sources:
There is no change that would be subject to this regulation.

Reg. X: National Emission Standards for Hazardous Air Pollutants :
There is no change that would be subject to this regulation

Rule 1173 There are no new fugitive components associated with this change of condition. The applicant has maintenance and inspection program required by this rule.

Reg. XIII: New Source Review

Emission Increase: There is no emission increase from the change of condition. Therefore, no BACT or emission offset is required.

Modeling: There is no VOC dispersion modeling required under R1303(b)(1), Appendix A.

Sensitive Zone Requirements – Not applicable because no ERC is required for this application.

Facility Compliance - Not applicable since there is no emission increase expected from the change of condition.

Rule 1401: There is no incremental increase in health risk from the change of condition.

CEQA: The proposal is not a significant project or part of a significant project requiring a CEQA document.

Reg. XX: RECLAIM rules do not apply since the change of condition does not affect NOx and SOx emissions from the facility. The facility, however, is covered by a RECLAIM Permit that would incorporate this change.

Reg. XXX: An initial Title V permit has been issued to the facility The subject change of condition is a minor permit revision under Reg. XXX – Title V Permits because it will not result in any emission increase per Rule 3000(12)(A)(vi). No public notice is required but EPA has to be provided with the application and proposed permit revision, and also a copy of the Title V permit within 5 days of its issuance.

VI. RECOMMENDATION:

Based on the foregoing evaluation, it is recommended that Permits to Operate be issued for the change of condition requested on the subject gas compressors and eductors subject to the applicable conditions on pages 10 to 20

(see also next page).

Emmanuel Ruivivar
A.Q. Engr. II

SUMMARY OF PERMIT CONDITIONS:

Additions to the conditions are noted in bold & underlines. Revisions are noted in bold only. Deletions are noted in strikeouts

C/Cond A/N	Process (P) /System (S)	Affected Devices	Permit Conditions		
			Process	System	Device
413817	P20 / S28	D3762	---	~~S15.5~~ **S15.23** S15.9 S18.14 S31.17	**E73.6 K67.73**
413818	P20 / S29	D3766	---	~~S15.5~~ **S15.23** S15.9 S18.14 S31.17	**E73.6 K67.73**
413819	P20 / S30	D3770	---	~~S15.5~~ **S15.23** S15.9 S18.14 S31.17	**E73.6 K67.73**
413820	P20 / S4	D1753 D1754 D3570	---	S13.2 ~~S15.5~~ **S15.23** S15.9 S18.14	**E73.6 K67.73**
413821	P2 / S5	D196	P13.1	S13.2 ~~S15.5~~ **S15.24 S18.12 rev**	**E73.7 K67.73**
413823	P20 / S19	D3489 D3566	---	S13.2 **S15.25** , **S15.26**,	**E73.8 K67.73**
413824	P20 / S10	D1782 D1783 D1784	---	S13.2 ~~S15.5~~ **S15.24 S18.12 rev**	**E73.7 K67.73**
414104	P20 / S34	D1748 D1747	---	~~S15.5~~ **S15.27** S18.13	**E73.9 K67.73**
452504	P20 / S34	D1815 D1816	---	~~S15.5~~ **S15.27** S18.13	**E73.9 K67.73**