GW - 10

GENERAL CORRESPONDENCE

YEAR(S):

4/5/2004

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: Natural Gas Processing

2. Operator: Sid Richardson Energy Services Co. -Jal

   Address: 201 Main Street, Suite 3000 Fort Worth, Texas 76102

   Contact Person: Robert L. Gawlik Phone: 817-390-8685

3. Location: SW ¼ of NW ¼ & NW ¼ of SW ¼ Section 33 Township 24-S Range 37-E
   Submit large scale topographic map showing exact location.

4. Attach the name, telephone number and address of the landowner of the facility site.

5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.

6. Attach a description of all materials stored or used at the facility.

7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.

8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.

9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.

10. Attach a routine inspection and maintenance plan to ensure permit compliance.

11. Attach a contingency plan for reporting and clean-up of spills or releases.

12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.

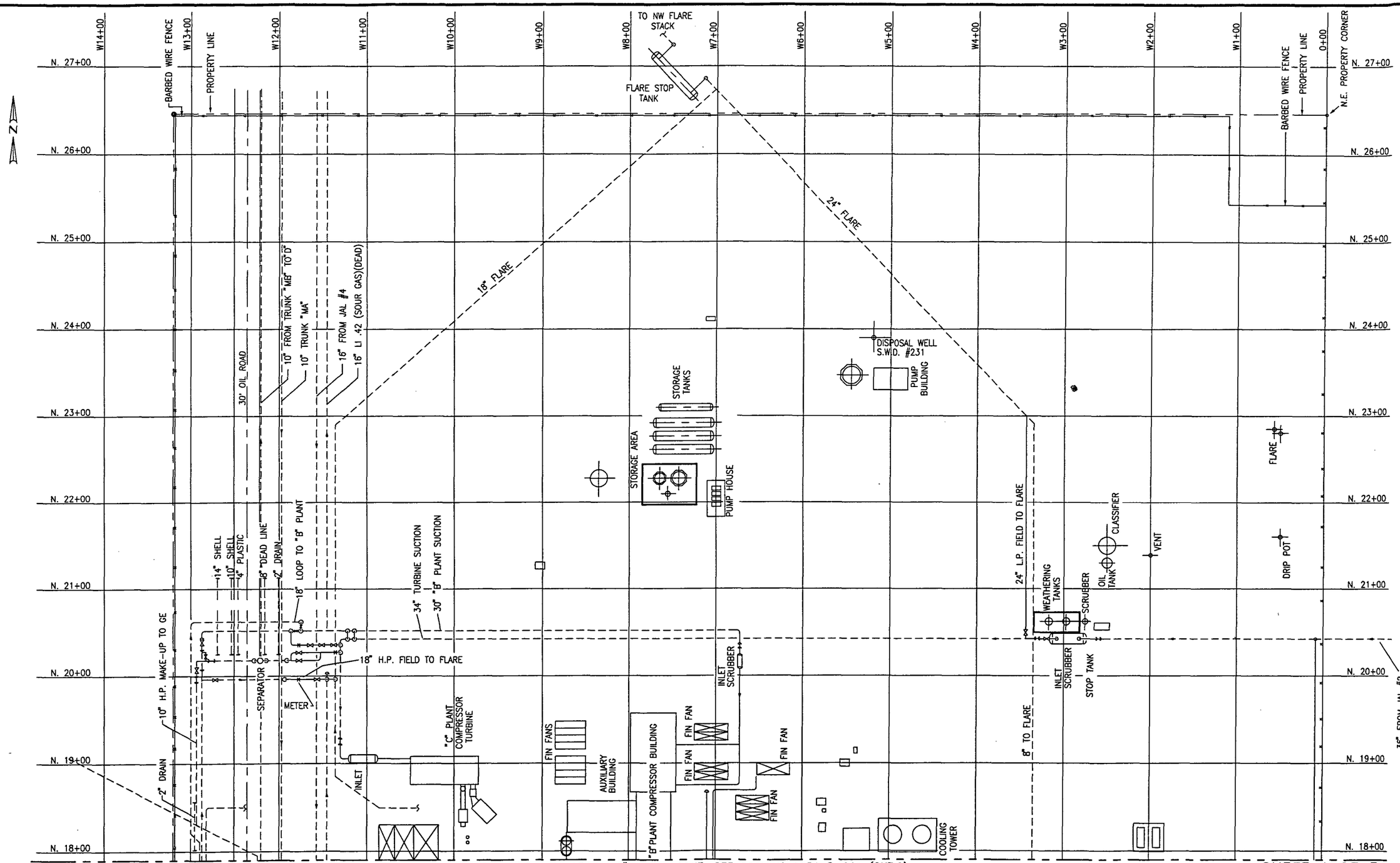
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.

14. CERTIFICATION I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Robert L. Gawlik Title: Environmental Health and Safety Manager

Signature: Robert L. Gawlik Date: April 5, 2004

E-mail
Address: rlgawlik@sidrich.com



MATCH LINE – N. 17+90'-0" FOR CONT. SEE DRAWING 9234-P-201 (SHT.2)

SHEET 1 OF 3

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	10-9-92	FOR CUSTOMER APPROVAL	MC			
1		ISSUED FOR BID	MC			
2	5/10/93	ADDED 18" LOOP AS BUILT	JAM			
3	9-25-93	REVISED PER AS-BUILT	kbs			

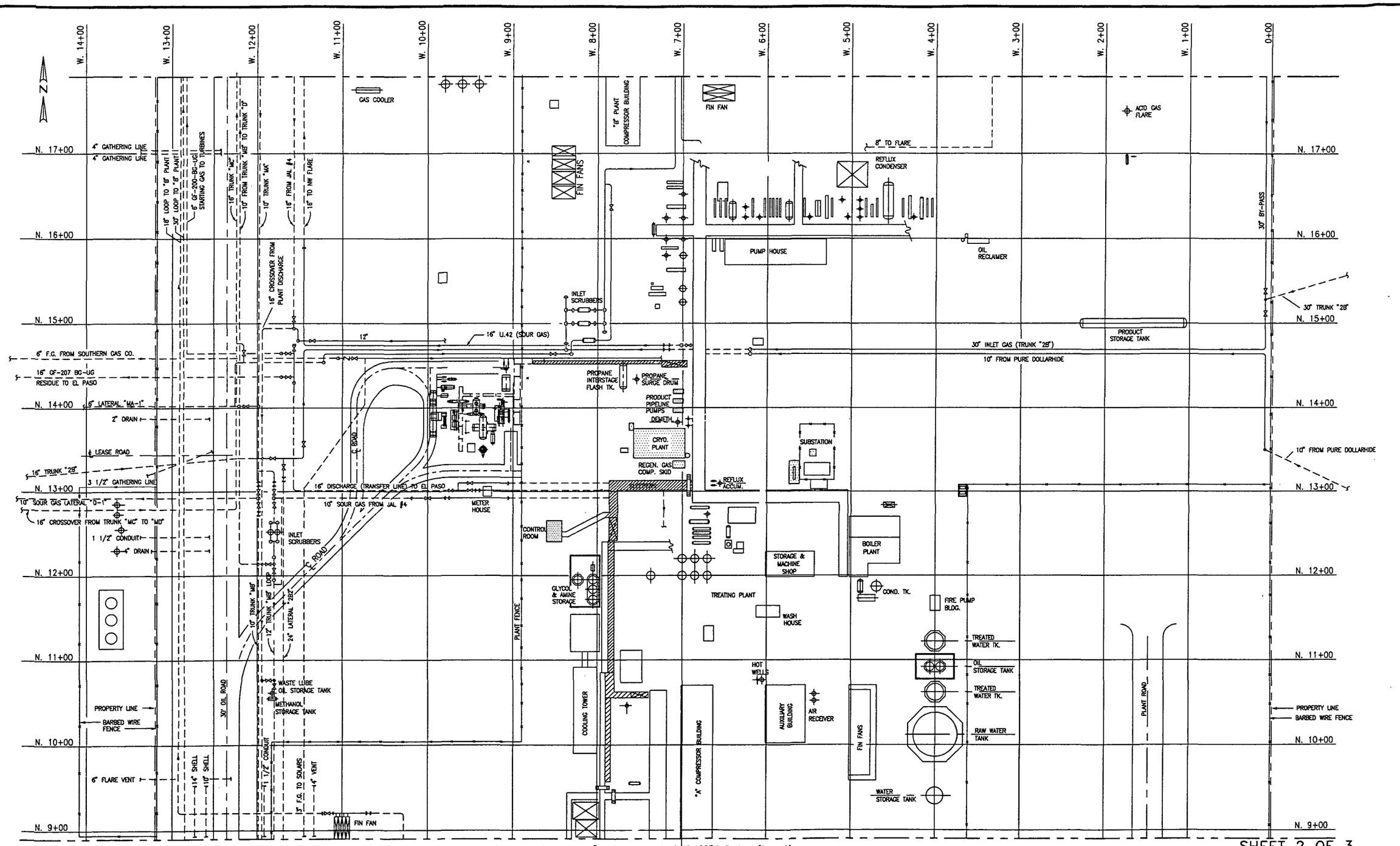
OPD

OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT
LEA COUNTY, NEW MEXICO

DES:	SCALE: 1"=50'	JOB No. 9234	
DR: J.vanWAGNER	FILE: 9234P201	DWG. No. 9234-P-201	REV. 3
CH:	DATE: 7-20-92		
APP:			



MATCH LINE N.8+90'-0" FOR CONT. SEE DWG. 9234-P-201 (SHT. 3)

SHEET 2 OF 3

NOTES:

INDICATES EQUIPMENT BEING ADDED FOR OPD JOB NO. 9234

INDICATES PROPOSED PIPEWAY AS INDICATED.

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	7/21/92	FOR CUSTOMER APPROVAL	MC			
1	10/1/92	ISSUE FOR BID (PRELIM.)	MC			
2		ISSUE FOR BID	MC			
3	9/25/93	REVISED PER AS-BUILT	kbs			

OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

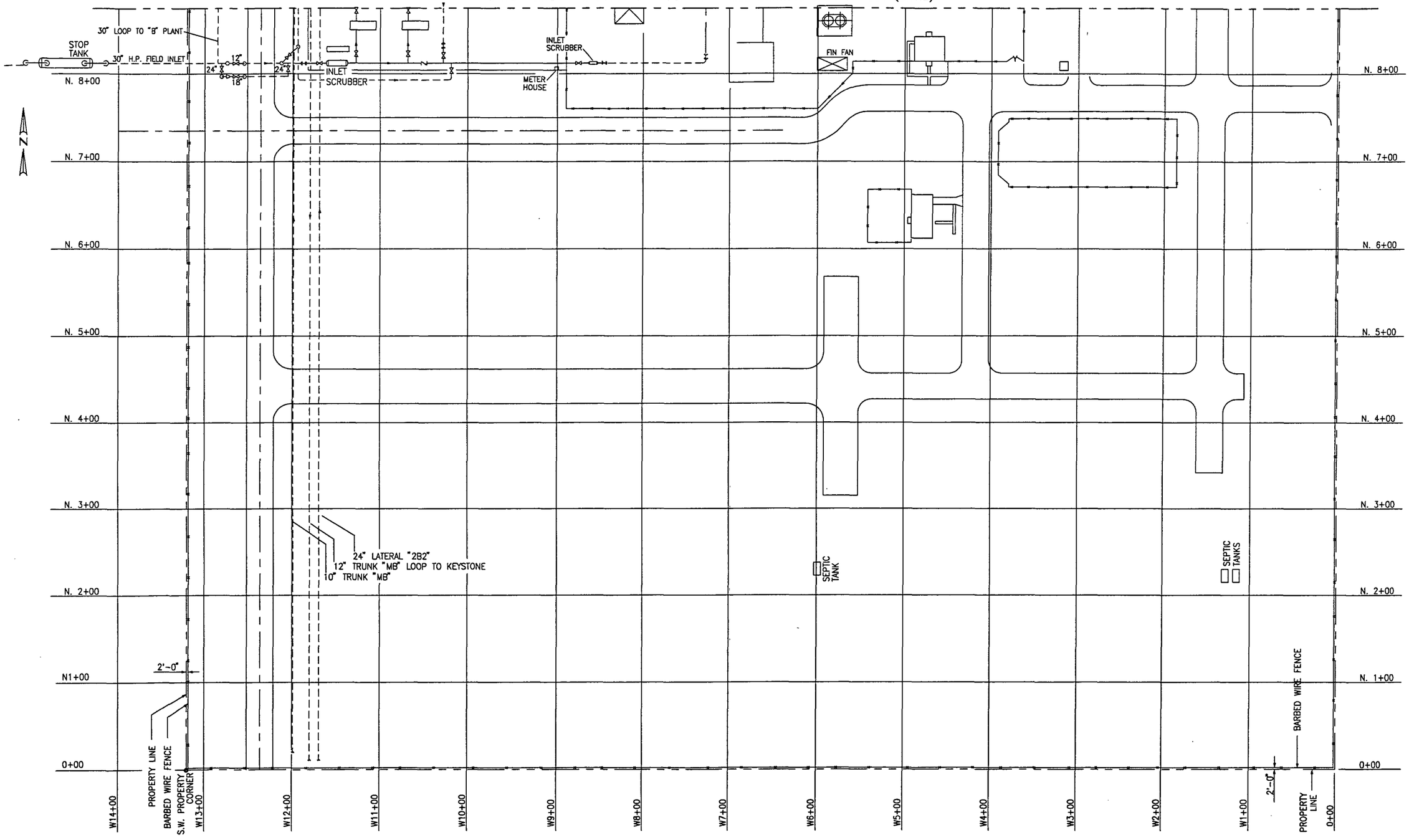
SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT

LEA COUNTY, NEW MEXICO

DES:	SCALE: 1"=50'	JOB No. 9234	
DR: MDC	FILE: 9234201A	DWG. No.	REV.
CH:	DATE: 8-28-92	9234-PP-201	3
APP:			

MATCH LINE – N. 8+90'-0" FOR CONT. SEE DRAWING 9234-PP-201 (SHT.2)



SHEET 3 OF 3

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	7/21/92	FOR CUSTOMER APPROVAL	MC			
1		ISSUED FOR BID	MC			
2	10/4/93	REVISED PER AS-BUILT	DRO			

OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT
LEA COUNTY, NEW MEXICO

DES:	SCALE: 1"=50'	JOB No. 9234	
DR: J.vonWAGNER	FILE: 92342018	DWG. No. 9234-P-201	REV. 2
CH:			
APP:	DATE: 9-09-92		

SID RICHARDSON GASOLINE CO.
JAL No. 3 PLANT
DRAIN LINES

REV.	DESCRIPTION	DATE	BY	APP.
3	AS-BUILT	10/93	MS	

DRAWN: 10-11-83 | SCALE: 1"=40'
BY: KAPKA | W.O.
DWG. No. 1J3-1-P69 | REV. 3

LEGEND :
- ◇ FILL & VENT TAPS
- ⬡ ISOLATION BLIND TAPS
- △ MECHANICAL JOINT

DISPOSAL WELL (S.W.D. #231)
SURGE TANK
INJECT. PUMP HOUSE
8" (PVC)
4" (PVC) LIQ.
CONTINGENCY TK.
FLARE
DRIP POT
CLASSIFIER
CHLORINE TK.
4" SEWER
VENT STK.
OIL TK.
WEATHERING TKS.
SKIMMER OUT OF SERVICE
SUMP PUMP
STOP TK.
BLIND FLG.
PROPANE STORAGE
PRODUCT STRG. TKS.
WASTE OIL STRG. TK.
STRG. TK.
PRODUCT PMP. HSE.
INTERMEDIATE INLET SCR'R.
SUMP
"C" PLANT (TURBINE)
INLET SCR.
GAS COOLING FIN FAN
GAS COOLER
SEP.
STRG. TKS.
DISCHARGE
CINDER BLOCK FENCE
J.W. & O.C.W. FIN FANS
"B" COMPR. BLDG. EXT.
SEPTIC TK.
AUXILIARY
LUBE OIL STRG.
"B" COMPR.
GAS COOLING FIN FAN
SCR'R.
GAS COOLERS
L.P. CHILLER
L.P. SCR'R.
H.P. SCR'R.
GAS COOLER
SWEET GAS SCR'R.
2 PH. SEP.
H.P. CHILLER
REBOILER
SURGE TK.
DEHY. CONT'RS.
L.P. SCR'RS.
L.O. CHILLER
GAS COOLING FIN FAN
GAS COOLER
WASH HSE.
PROCESS PUMP BLDG.
PROCESS AREA
6" DEETH. FEED LN. FM. DEETH. FEED TK.
4" VAPOR LN. FM. DEETH. FEED TK.
DEETHANIZER FEED TANK "B"
SULFUR PLANT
E-5104
2"-DR-647
E-5102
2"-SW-618 P.W. IN & A/B
4"-DR-635
INTERSTAGE FLASH TK.
PROP. SURGE DRUM
PRODUCT PIPELINE PUMPS
DEMETHANIZER
CRYO PLANT
DEMETH. BTTMS PUMPS
REGEN GAS COMP. SKID
2"-SW-606-A REFLUX ACCUM.
REFLUX PUMPS
6 CHAIN LINK FENCE
RECLAIMER
COND. FIN FAN
REBLR.
EXCHGR.
SOUR GAS TK.
GLYCOL-AMINE STRG. TKS.
CONTROL RM.
WASTE DRAIN BL-DN. TK.
STORAGE TANK
PUMP HOUSE
GAS CLR. & SOUR FIN FAN
COOLING TOWER
WASTE GAS TO STK.
METHANOL STO.
CINDER BLOCK FENCE
SCR'R.
"A" COMPR.
GAS COOLING FIN FAN
AUXIL. BLDG.
GAS COOLING FIN FAN
TURBINE COMP'S
C-9105
C-9106
INLET SCR'R.
AMBITROL & LUBE OIL STRG. TKS.
OFFICE
J.W. & O.C.W. FIN FAN
8" SEWER TO SEPTIC TANKS
BOILER PLANT
BRINE STRG. TK.
MACHINE SHOP STRG. & WTR. TKS.
BLIND
WASH HSE.
CONTROL RM.
AUXILIARY BLDG.
HOT WELL
SUMP
AIR RECVR.
STILL PREHEATERS
ACID GAS FLARE
F.G. HEATER
FLARE LINE KNOCKDOWN
BL-DN. TANK
VARSOL STO.
GASOLINE STO.
VARSOL TK.
BARREL DOCK
CONC. WASH PAD
TREATED WTR. TK.
OIL STRG. TKS.
RAW WATER TK.
ELEVATED WTR. TK.
FIN FAN
FIRE PMP. BLDG.
COND. TK.
STM. COND. FIN FAN
4" SEWER
6" CT. BL-DN. CBD-G"-L3
6" CT. BL-DN. CBD-G"-L2
4" CT. BL-DN.
8" TILE
4" L.P.
4" H.P.
3" H.P.
2" H.P.
6" H.P.
PD-4½"-L2
PD-6"-L7
PD-6"-L9
ODL-4"-L14
ODL-4"-L15
ODL-4"-L17
ODL-4"-L19
ODL-6"-L5
ODL-6"-L6
ODL-6"-L13
TDL-8"-L5
TDL-8"-L12
CBD-4"-L1
CBD-6"-L3
CBD-6"-L4
CBD-6"-L5
CBD-6"-L6
CBD-6"-L7
CBD-6"-L8
CBD-6"-L9
CBD-6"-L10
CBD-6"-L11
CBD-6"-L12
CBD-6"-L13
CBD-6"-L14
CBD-6"-L15
CBD-6"-L16
CBD-6"-L17
CBD-6"-L18
CBD-6"-L19
CBD-6"-L20
CBD-6"-L21
CBD-6"-L22
CBD-6"-L23
CBD-6"-L24
CBD-6"-L25
CBD-6"-L26
CBD-6"-L27
CBD-6"-L28
CBD-6"-L29
CBD-6"-L30
CBD-6"-L31
CBD-6"-L32
CBD-6"-L33
CBD-6"-L34
CBD-6"-L35
CBD-6"-L36
CBD-6"-L37
CBD-6"-L38
CBD-6"-L39
CBD-6"-L40
CBD-6"-L41
CBD-6"-L42
CBD-6"-L43
CBD-6"-L44
CBD-6"-L45
CBD-6"-L46
CBD-6"-L47
CBD-6"-L48
CBD-6"-L49
CBD-6"-L50
CBD-6"-L51
CBD-6"-L52
CBD-6"-L53
CBD-6"-L54
CBD-6"-L55
CBD-6"-L56
CBD-6"-L57
CBD-6"-L58
CBD-6"-L59
CBD-6"-L60
CBD-6"-L61
CBD-6"-L62
CBD-6"-L63
CBD-6"-L64
CBD-6"-L65
CBD-6"-L66
CBD-6"-L67
CBD-6"-L68
CBD-6"-L69
CBD-6"-L70
CBD-6"-L71
CBD-6"-L72
CBD-6"-L73
CBD-6"-L74
CBD-6"-L75
CBD-6"-L76
CBD-6"-L77
CBD-6"-L78
CBD-6"-L79
CBD-6"-L80
CBD-6"-L81
CBD-6"-L82
CBD-6"-L83
CBD-6"-L84
CBD-6"-L85
CBD-6"-L86
CBD-6"-L87
CBD-6"-L88
CBD-6"-L89
CBD-6"-L90
CBD-6"-L91
CBD-6"-L92
CBD-6"-L93
CBD-6"-L94
CBD-6"-L95
CBD-6"-L96
CBD-6"-L97
CBD-6"-L98
CBD-6"-L99
CBD-6"-L100
CBD-6"-L101
CBD-6"-L102
CBD-6"-L103
CBD-6"-L104
CBD-6"-L105
CBD-6"-L106
CBD-6"-L107
CBD-6"-L108
CBD-6"-L109
CBD-6"-L110
CBD-6"-L111
CBD-6"-L112
CBD-6"-L113
CBD-6"-L114
CBD-6"-L115
CBD-6"-L116
CBD-6"-L117
CBD-6"-L118
CBD-6"-L119
CBD-6"-L120
CBD-6"-L121
CBD-6"-L122
CBD-6"-L123
CBD-6"-L124
CBD-6"-L125
CBD-6"-L126
CBD-6"-L127
CBD-6"-L128
CBD-6"-L129
CBD-6"-L130
CBD-6"-L131
CBD-6"-L132
CBD-6"-L133
CBD-6"-L134
CBD-6"-L135
CBD-6"-L136
CBD-6"-L137
CBD-6"-L138
CBD-6"-L139
CBD-6"-L140
CBD-6"-L141
CBD-6"-L142
CBD-6"-L143
CBD-6"-L144
CBD-6"-L145
CBD-6"-L146
CBD-6"-L147
CBD-6"-L148
CBD-6"-L149
CBD-6"-L150
CBD-6"-L151
CBD-6"-L152
CBD-6"-L153
CBD-6"-L154
CBD-6"-L155
CBD-6"-L156
CBD-6"-L157
CBD-6"-L158
CBD-6"-L159
CBD-6"-L160
CBD-6"-L161
CBD-6"-L162
CBD-6"-L163
CBD-6"-L164
CBD-6"-L165
CBD-6"-L166
CBD-6"-L167
CBD-6"-L168
CBD-6"-L169
CBD-6"-L170
CBD-6"-L171
CBD-6"-L172
CBD-6"-L173
CBD-6"-L174
CBD-6"-L175
CBD-6"-L176
CBD-6"-L177
CBD-6"-L178
CBD-6"-L179
CBD-6"-L180
CBD-6"-L181
CBD-6"-L182
CBD-6"-L183
CBD-6"-L184
CBD-6"-L185
CBD-6"-L186
CBD-6"-L187
CBD-6"-L188
CBD-6"-L189
CBD-6"-L190
CBD-6"-L191
CBD-6"-L192
CBD-6"-L193
CBD-6"-L194
CBD-6"-L195
CBD-6"-L196
CBD-6"-L197
CBD-6"-L198
CBD-6"-L199
CBD-6"-L200
CBD-6"-L201
CBD-6"-L202
CBD-6"-L203
CBD-6"-L204
CBD-6"-L205
CBD-6"-L206
CBD-6"-L207
CBD-6"-L208
CBD-6"-L209
CBD-6"-L210
CBD-6"-L211
CBD-6"-L212
CBD-6"-L213
CBD-6"-L214
CBD-6"-L215
CBD-6"-L216
CBD-6"-L217
CBD-6"-L218
CBD-6"-L219
CBD-6"-L220
CBD-6"-L221
CBD-6"-L222
CBD-6"-L223
CBD-6"-L224
CBD-6"-L225
CBD-6"-L226
CBD-6"-L227
CBD-6"-L228
CBD-6"-L229
CBD-6"-L230
CBD-6"-L231
CBD-6"-L232
CBD-6"-L233
CBD-6"-L234
CBD-6"-L235
CBD-6"-L236
CBD-6"-L237
CBD-6"-L238
CBD-6"-L239
CBD-6"-L240
CBD-6"-L241
CBD-6"-L242
CBD-6"-L243
CBD-6"-L244
CBD-6"-L245
CBD-6"-L246
CBD-6"-L247
CBD-6"-L248
CBD-6"-L249
CBD-6"-L250
CBD-6"-L251
CBD-6"-L252
CBD-6"-L253
CBD-6"-L254
CBD-6"-L255
CBD-6"-L256
CBD-6"-L257
CBD-6"-L258
CBD-6"-L259
CBD-6"-L260
CBD-6"-L261
CBD-6"-L262
CBD-6"-L263
CBD-6"-L264
CBD-6"-L265
CBD-6"-L266
CBD-6"-L267
CBD-6"-L268
CBD-6"-L269
CBD-6"-L270
CBD-6"-L271
CBD-6"-L272
CBD-6"-L273
CBD-6"-L274
CBD-6"-L275
CBD-6"-L276
CBD-6"-L277
CBD-6"-L278
CBD-6"-L279
CBD-6"-L280
CBD-6"-L281
CBD-6"-L282
CBD-6"-L283
CBD-6"-L284
CBD-6"-L285
CBD-6"-L286
CBD-6"-L287
CBD-6"-L288
CBD-6"-L289
CBD-6"-L290
CBD-6"-L291
CBD-6"-L292
CBD-6"-L293
CBD-6"-L294
CBD-6"-L295
CBD-6"-L296
CBD-6"-L297
CBD-6"-L298
CBD-6"-L299
CBD-6"-L300
CBD-6"-L301
CBD-6"-L302
CBD-6"-L303
CBD-6"-L304
CBD-6"-L305
CBD-6"-L306
CBD-6"-L307
CBD-6"-L308
CBD-6"-L309
CBD-6"-L310
CBD-6"-L311
CBD-6"-L312
CBD-6"-L313
CBD-6"-L314
CBD-6"-L315
CBD-6"-L316
CBD-6"-L317
CBD-6"-L318
CBD-6"-L319
CBD-6"-L320
CBD-6"-L321
CBD-6"-L322
CBD-6"-L323
CBD-6"-L324
CBD-6"-L325
CBD-6"-L326
CBD-6"-L327
CBD-6"-L328
CBD-6"-L329
CBD-6"-L330
CBD-6"-L331
CBD-6"-L332
CBD-6"-L333
CBD-6"-L334
CBD-6"-L335
CBD-6"-L336
CBD-6"-L337
CBD-6"-L338
CBD-6"-L339
CBD-6"-L340
CBD-6"-L341
CBD-6"-L342
CBD-6"-L343
CBD-6"-L344
CBD-6"-L345
CBD-6"-L346
CBD-6"-L347
CBD-6"-L348
CBD-6"-L349
CBD-6"-L350
CBD-6"-L351
CBD-6"-L352
CBD-6"-L353
CBD-6"-L354
CBD-6"-L355
CBD-6"-L356
CBD-6"-L357
CBD-6"-L358
CBD-6"-L359
CBD-6"-L360
CBD-6"-L361
CBD-6"-L362
CBD-6"-L363
CBD-6"-L364
CBD-6"-L365
CBD-6"-L366
CBD-6"-L367
CBD-6"-L368
CBD-6"-L369
CBD-6"-L370
CBD-6"-L371
CBD-6"-L372
CBD-6"-L373
CBD-6"-L374
CBD-6"-L375
CBD-6"-L376
CBD-6"-L377
CBD-6"-L378
CBD-6"-L379
CBD-6"-L380
CBD-6"-L381
CBD-6"-L382
CBD-6"-L383
CBD-6"-L384
CBD-6"-L385
CBD-6"-L386
CBD-6"-L387
CBD-6"-L388
CBD-6"-L389
CBD-6"-L390
CBD-6"-L391
CBD-6"-L392
CBD-6"-L393
CBD-6"-L394
CBD-6"-L395
CBD-6"-L396
CBD-6"-L397
CBD-6"-L398
CBD-6"-L399
CBD-6"-L400
CBD-6"-L401
CBD-6"-L402
CBD-6"-L403
CBD-6"-L404
CBD-6"-L405
CBD-6"-L406
CBD-6"-L407
CBD-6"-L408
CBD-6"-L409
CBD-6"-L410
CBD-6"-L411
CBD-6"-L412
CBD-6"-L413
CBD-6"-L414
CBD-6"-L415
CBD-6"-L416
CBD-6"-L417
CBD-6"-L418
CBD-6"-L419
CBD-6"-L420
CBD-6"-L421
CBD-6"-L422
CBD-6"-L423
CBD-6"-L424
CBD-6"-L425
CBD-6"-L426
CBD-6"-L427
CBD-6"-L428
CBD-6"-L429
CBD-6"-L430
CBD-6"-L431
CBD-6"-L432
CBD-6"-L433
CBD-6"-L434
CBD-6"-L435
CBD-6"-L436
CBD-6"-L437
CBD-6"-L438
CBD-6"-L439
CBD-6"-L440
CBD-6"-L441
CBD-6"-L442
CBD-6"-L443
CBD-6"-L444
CBD-6"-L445
CBD-6"-L446
CBD-6"-L447
CBD-6"-L448
CBD-6"-L449
CBD-6"-L450
CBD-6"-L451
CBD-6"-L452
CBD-6"-L453
CBD-6"-L454
CBD-6"-L455
CBD-6"-L456
CBD-6"-L457
CBD-6"-L458
CBD-6"-L459
CBD-6"-L460
CBD-6"-L461
CBD-6"-L462
CBD-6"-L463
CBD-6"-L464
CBD-6"-L465
CBD-6"-L466
CBD-6"-L467
CBD-6"-L468
CBD-6"-L469
CBD-6"-L470
CBD-6"-L471
CBD-6"-L472
CBD-6"-L473
CBD-6"-L474
CBD-6"-L475
CBD-6"-L476
CBD-6"-L477
CBD-6"-L478
CBD-6"-L479
CBD-6"-L480
CBD-6"-L481
CBD-6"-L482
CBD-6"-L483
CBD-6"-L484
CBD-6"-L485
CBD-6"-L486
CBD-6"-L487
CBD-6"-L488
CBD-6"-L489
CBD-6"-L490
CBD-6"-L491
CBD-6"-L492
CBD-6"-L493
CBD-6"-L494
CBD-6"-L495
CBD-6"-L496
CBD-6"-L497
CBD-6"-L498
CBD-6"-L499
CBD-6"-L500
CBD-6"-L501
CBD-6"-L502
CBD-6"-L503
CBD-6"-L504
CBD-6"-L505
CBD-6"-L506
CBD-6"-L507
CBD-6"-L508
CBD-6"-L509
CBD-6"-L510
CBD-6"-L511
CBD-6"-L512
CBD-6"-L513
CBD-6"-L514
CBD-6"-L515
CBD-6"-L516
CBD-6"-L517
CBD-6"-L518
CBD-6"-L519
CBD-6"-L520
CBD-6"-L521
CBD-6"-L522
CBD-6"-L523
CBD-6"-L524
CBD-6"-L525
CBD-6"-L526
CBD-6"-L527
CBD-6"-L528
CBD-6"-L529
CBD-6"-L530
CBD-6"-L531
CBD-6"-L532
CBD-6"-L533
CBD-6"-L534
CBD-6"-L535
CBD-6"-L536
CBD-6"-L537
CBD-6"-L538
CBD-6"-L539
CBD-6"-L540
CBD-6"-L541
CBD-6"-L542
CBD-6"-L543
CBD-6"-L544
CBD-6"-L545
CBD-6"-L546
CBD-6"-L547
CBD-6"-L548
CBD-6"-L549
CBD-6"-L550
CBD-6"-L551
CBD-6"-L552
CBD-6"-L553
CBD-6"-L554
CBD-6"-L555
CBD-6"-L556
CBD-6"-L557
CBD-6"-L558
CBD-6"-L559
CBD-6"-L560
CBD-6"-L561
CBD-6"-L562
CBD-6"-L563
CBD-6"-L564
CBD-6"-L565
CBD-6"-L566
CBD-6"-L567
CBD-6"-L568
CBD-6"-L569
CBD-6"-L570
CBD-6"-L571
CBD-6"-L572
CBD-6"-L573
CBD-6"-L574
CBD-6"-L575
CBD-6"-L576
CBD-6"-L577
CBD-6"-L578
CBD-6"-L579
CBD-6"-L580
CBD-6"-L581
CBD-6"-L582
CBD-6"-L583
CBD-6"-L584
CBD-6"-L585
CBD-6"-L586
CBD-6"-L587
CBD-6"-L588
CBD-6"-L589
CBD-6"-L590
CBD-6"-L591
CBD-6"-L592
CBD-6"-L593
CBD-6"-L594
CBD-6"-L595
CBD-6"-L596
CBD-6"-L597
CBD-6"-L598
CBD-6"-L599
CBD-6"-L600
CBD-6"-L601
CBD-6"-L602
CBD-6"-L603
CBD-6"-L604
CBD-6"-L605
CBD-6"-L606
CBD-6"-L607
CBD-6"-L608
CBD-6"-L609
CBD-6"-L610
CBD-6"-L611
CBD-6"-L612
CBD-6"-L613
CBD-6"-L614
CBD-6"-L615
CBD-6"-L616
CBD-6"-L617
CBD-6"-L618
CBD-6"-L619
CBD-6"-L620
CBD-6"-L621
CBD-6"-L622
CBD-6"-L623
CBD-6"-L624
CBD-6"-L625
CBD-6"-L626
CBD-6"-L627
CBD-6"-L628
CBD-6"-L629
CBD-6"-L630
CBD-6"-L631
CBD-6"-L632
CBD-6"-L633
CBD-6"-L634
CBD-6"-L635
CBD-6"-L636
CBD-6"-L637
CBD-6"-L638
CBD-6"-L639
CBD-6"-L640
CBD-6"-L641
CBD-6"-L642
CBD-6"-L643
CBD-6"-L644
CBD-6"-L645
CBD-6"-L646
CBD-6"-L647
CBD-6"-L648
CBD-6"-L649
CBD-6"-L650
CBD-6"-L651
CBD-6"-L652
CBD-6"-L653
CBD-6"-L654
CBD-6"-L655
CBD-6"-L656
CBD-6"-L657
CBD-6"-L658
CBD-6"-L659
CBD-6"-L660
CBD-6"-L661
CBD-6"-L662
CBD-6"-L663
CBD-6"-L664
CBD-6"-L665
CBD-6"-L666
CBD-6"-L667
CBD-6"-L668
CBD-6"-L669
CBD-6"-L670
CBD-6"-L671
CBD-6"-L672
CBD-6"-L673
CBD-6"-L674
CBD-6"-L675
CBD-6"-L676
CBD-6"-L677
CBD-6"-L678
CBD-6"-L679
CBD-6"-L680
CBD-6"-L681
CBD-6"-L682
CBD-6"-L683
CBD-6"-L684
CBD-6"-L685
CBD-6"-L686
CBD-6"-L687
CBD-6"-L688
CBD-6"-L689
CBD-6"-L690
CBD-6"-L691
CBD-6"-L692
CBD-6"-L693
CBD-6"-L694
CBD-6"-L695
CBD-6"-L696
CBD-6"-L697
CBD-6"-L698
CBD-6"-L699
CBD-6"-L700
CBD-6"-L701
CBD-6"-L702
CBD-6"-L703
CBD-6"-L704
CBD-6"-L705
CBD-6"-L706
CBD-6"-L707
CBD-6"-L708
CBD-6"-L709
CBD-6"-L710
CBD-6"-L711
CBD-6"-L712
CBD-6"-L713
CBD-6"-L714
CBD-6"-L715
CBD-6"-L716
CBD-6"-L717
CBD-6"-L718
CBD-6"-L719
CBD-6"-L720
CBD-6"-L721
CBD-6"-L722
CBD-6"-L723
CBD-6"-L724
CBD-6"-L725
CBD-6"-L726
CBD-6"-L727
CBD-6"-L728
CBD-6"-L729
CBD-6"-L730
CBD-6"-L731
CBD-6"-L732
CBD-6"-L733
CBD-6"-L734
CBD-6"-L735
CBD-6"-L736
CBD-6"-L737
CBD-6"-L738
CBD-6"-L739
CBD-6"-L740
CBD-6"-L741
CBD-6"-L742
CBD-6"-L743
CBD-6"-L744
CBD-6"-L745
CBD-6"-L746
CBD-6"-L747
CBD-6"-L748
CBD-6"-L749
CBD-6"-L750
CBD-6"-L751
CBD-6"-L752
CBD-6"-L753
CBD-6"-L754
CBD-6"-L755
CBD-6"-L756
CBD-6"-L757
CBD-6"-L758
CBD-6"-L759
CBD-6"-L760
CBD-6"-L761
CBD-6"-L762
CBD-6"-L763
CBD-6"-L764
CBD-6"-L765
CBD-6"-L766
CBD-6"-L767
CBD-6"-L768
CBD-6"-L769
CBD-6"-L770
CBD-6"-L771
CBD-6"-L772
CBD-6"-L773
CBD-6"-L774
CBD-6"-L775
CBD-6"-L776
CBD-6"-L777
CBD-6"-L778
CBD-6"-L779
CBD-6"-L780
CBD-6"-L781
CBD-6"-L782
CBD-6"-L783
CBD-6"-L784
CBD-6"-L785
CBD-6"-L786
CBD-6"-L787
CBD-6"-L788
CBD-6"-L789
CBD-6"-L790
CBD-6"-L791
CBD-6"-L792
CBD-6"-L793
CBD-6"-L794
CBD-6"-L795
CBD-6"-L796
CBD-6"-L797
CBD-6"-L798
CBD-6"-L799
CBD-6"-L800
CBD-6"-L801
CBD-6"-L802
CBD-6"-L803
CBD-6"-L804
CBD-6"-L805
CBD-6"-L806
CBD-6"-L807
CBD-6"-L808
CBD-6"-L809
CBD-6"-L810
CBD-6"-L811
CBD-6"-L812
CBD-6"-L813
CBD-6"-L814
CBD-6"-L815
CBD-6"-L816
CBD-6"-L817
CBD-6"-L818
CBD-6"-L819
CBD-6"-L820
CBD-6"-L821
CBD-6"-L822
CBD-6"-L823
CBD-6"-L824
CBD-6"-L825
CBD-6"-L826
CBD-6"-L827
CBD-6"-L828
CBD-6"-L829
CBD-6"-L830
CBD-6"-L831
CBD-6"-L832
CBD-6"-L833
CBD-6"-L834
CBD-6"-L835
CBD-6"-L836
CBD-6"-L837
CBD-6"-L838
CBD-6"-L839
CBD-6"-L840
CBD-6"-L841
CBD-6"-L842
CBD-6"-L843
CBD-6"-L844
CBD-6"-L845
CBD-6"-L846
CBD-6"-L847
CBD-6"-L848
CBD-6"-L849
CBD-6"-L850
CBD-6"-L851
CBD-6"-L852
CBD-6"-L853
CBD-6"-L854
CBD-6"-L855
CBD-6"-L856
CBD-6"-L857
CBD-6"-L858
CBD-6"-L859
CBD-6"-L860
CBD-6"-L861
CBD-6"-L862
CBD-6"-L863
CBD-6"-L864
CBD-6"-L865
CBD-6"-L866
CBD-6"-L867
CBD-6"-L868
CBD-6"-L869
CBD-6"-L870
CBD-6"-L871
CBD-6"-L872
CBD-6"-L873
CBD-6"-L874
CBD-6"-L875
CBD-6"-L876
CBD-6"-L877
CBD-6"-L878
CBD-6"-L879
CBD-6"-L880
CBD-6"-L881
CBD-6"-L882
CBD-6"-L883
CBD-6"-L884
CBD-6"-L885
CBD-6"-L886
CBD-6"-L887
CBD-6"-L888
CBD-6"-L889
CBD-6"-L890
CBD-6"-L891
CBD-6"-L892
CBD-6"-L893
CBD-6"-L894
CBD-6"-L895
CBD-6"-L896
CBD-6"-L897
CBD-6"-L898
CBD-6"-L899
CBD-6"-L900
CBD-6"-L901
CBD-6"-L902
CBD-6"-L903
CBD-6"-L904
CBD-6"-L905
CBD-6"-L906
CBD-6"-L907
CBD-6"-L908
CBD-6"-L909
CBD-6"-L910
CBD-6"-L911
CBD-6"-L912
CBD-6"-L913
CBD-6"-L914
CBD-6"-L915
CBD-6"-L916
CBD-6"-L917
CBD-6"-L918
CBD-6"-L919
CBD-6"-L920
CBD-6"-L921
CBD-6"-L922
CBD-6"-L923
CBD-6"-L924
CBD-6"-L925
CBD-6"-L926
CBD-6"-L927
CBD-6"-L928
CBD-6"-L929
CBD-6"-L930
CBD-6"-L931
CBD-6"-L932
CBD-6"-L933
CBD-6"-L934
CBD-6"-L935
CBD-6"-L936
CBD-6"-L937
CBD-6"-L938
CBD-6"-L939
CBD-6"-L940
CBD-6"-L941
CBD-6"-L942
CBD-6"-L943
CBD-6"-L944
CBD-6"-L945
CBD-6"-L946
CBD-6"-L947
CBD-6"-L948
CBD-6"-L949
CBD-6"-L950
CBD-6"-L951
CBD-6"-L952
CBD-6"-L953
CBD-6"-L954
CBD-6"-L955
CBD-6"-L956
CBD-6"-L957
CBD-6"-L958
CBD-6"-L959
CBD-6"-L960
CBD-6"-L961
CBD-6"-L962
CBD-6"-L963
CBD-6"-L964
CBD-6"-L965
CBD-6"-L966
CBD-6"-L967
CBD-6"-L968
CBD-6"-L969
CBD-6"-L970
CBD-6"-L971
CBD-6"-L972
CBD-6"-L973
CBD-6"-L974
CBD-6"-L975
CBD-6"-L976
CBD-6"-L977
CBD-6"-L978
CBD-6"-L979
CBD-6"-L980
CBD-6"-L981
CBD-6"-L982
CBD-6"-L983
CBD-6"-L984
CBD-6"-L985
CBD-6"-L986
CBD-6"-L987
CBD-6"-L988
CBD-6"-L989
CBD-6"-L990
CBD-6"-L991
CBD-6"-L992
CBD-6"-L993
CBD-6"-L994
CBD-6"-L995
CBD-6"-L996
CBD-6"-L997
CBD-6"-L998
CBD-6"-L999
CBD-6"-L1000

New Mexico Oil Conservation Division
Discharge Plan GW-010

DISCHARGE PLAN

FOR

SID RICHARDSON ENERGY SERVICES CO. - JAL

JAL #3 PLANT
COMPRESSION FACILITY

LEA COUNTY, NEW MEXICO

Prepared By:
Sid Richardson Energy Services
Fort Worth, Texas
March 2004

(MANUALS/JAL)

INDEX

APPENDICES

A. Site Location Topographic

B. Facility Site Plans

C. Flow Schematics
   1. Water and Wastewater
   2. Waste Water Classifier
   3. "A" Plant Cooling Water Containment
   4. "B" Plant Cooling Water Containment

D. Analysis of Effluent Waste Stream

E. Hauling and Disposal Contractors

F. Chemicals Used Facility
   1. List and Quantities
   2. MSDS Index of All Chemicals Used at Facility

G. Drain System Drawings

H. Procedures for Testing Drain System

REVISIONS FOR DISCHARGE PLAN

Revision#	Revisions	Date
0	Original Issue – Rewrite of Entire Plan	09/10/93
1	Revised Paragraph 14, Page 4 of Appendix H – "Drain Line Testing Procedure"	10/22/93
2	Revisions for Renewal Application	06/29/98
3	Revised for Renewal Application	04/05/04

Sid Richardson Energy Services Co. – Jal
Jal #3 Plant – Natural Gas Processing
Discharge Plan GW-010

Natural Gas Processing Operation

The main purpose of the Jal #3 Plant facility is natural gas processing. The main processes that occur at the plant are compression, sweetening and dehydration, cryogenic extraction of ethane and heavier hydrocarbons, sulfur recovery, steam generation, and power generation.

Affirmation

I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

Wayne J. Farley (Signature) — 4-8-04 (Date)

Wayne J. Farley (Name) — Director of Gas Operations (Title)

I. TYPE OF OPERATION

The main purpose of the Jal #3 Plant facility is natural gas processing. The main processes that occur at the plant are compression, sweetening and dehydration, cryogenic extraction of ethane and heavier hydrocarbons, sulfur recovery, steam generation, and power generation. A brief description of the main processes follows:

A. Compression

Plant compressors are used for inlet, refrigeration and residue recompression. The plant has fifteen engine-driven compressor units totaling 27,200 horsepower and three gas turbine-driven centrifugal compressor units totaling 27,800 horsepower. Entrained liquids are removed form the inlet gas streams with gas-liquid separators. Compressor engines in the "A" and "B" Compressor buildings and Generator engines in the Auxiliary Building use water for lubricating oil cooling and engine-jacket cooling in closed-loops systems. The gas turbine-driven centrifugal compressors use Ambitrol in their cooling systems.

B. Sweetening

After compression of the inlet gas to approximately 600 psig, H_2S and CO_2 are removed by contacting the stream with an aqueous solution of diethanolamine (DEA) in two contactor vessels (V-50, V-4302). The rich amine is then stripped of the H_2S and CO_2 in two MEA stills (V-56, V-4301). The lean amine is re-circulated back to the two contactors. Sweetened gas leaves the overhead of the amine contactor and goes to the glycol contactor. The H_2S and CO_2 exit the still overhead and go to the Sulfur Recovery Unit.

C. Dehydration

Sweetened inlet gas enters two Glycol Contactors (V-5101, V-5102) for initial dehydration by contacting the stream with an aqueous solution of triethyleneglycol (TEG). The partially dehydrated gas leaves the overhead of the contactors and goes to the molecular sieve dehydration vessels (V-205A, B, C, D) in the Cryogenic Plant for final dehydration. The rich TEG solution is regenerated in the Glycol Reboiler (E-5101) and returned to the contactors. The molecular sieve is regenerated with hot inlet gas; the water-saturated regeneration gas is then cooled in the Regeneration Gas Cooler (E-209) and the water and gas are then separated in the Regeneration Gas Scrubber (V-206); removed water is sent to the closed drain system; recovered hydrocarbon liquid is sent to the Compressor Liquids Separator.

D. Cryogenic Plant

The Cryogenic Plant extracts 80 to 85 percent ethane (C_2) and heavier hydrocarbons from the dehydrated gas stream. Rich gas is cooled through a series of inlet heat exchangers and in the Chiller (E-202, C_3 refrigeration system) to approximately -35°F at the Chiller Separator (V-201) where the majority of the butanes and heavier hydrocarbons are separated. Liquids from V-201 are fed to the bottom feed of the Demethanizer (V-203). Vapors from V-201 continue through another set of heat exchangers and are cooled to approximately -95°F at the Expander Separator (V-202). Liquids separated at V-202 are fed to the Demethanizer and the vapors go to the Turbo-Expander (EK-201). The cold vapors enter the Turbo-Expander at approximately 540 psig and go to the top of the Demethanizer at approximately 160 psig and -165°F. The Demethanizer strips the methane from the ethane and heavier hydrocarbons; the methane residue gas leaves the top of the Demethanizer at approximately -165°F and is used to cool the gas through the inlet exchangers. The residue gas is then recompressed, first by the compressor driven by the Turbo-Expander, EK-201, and finally by the Recompressors in the "A" Compressor Plant and leaves the plant in the residue gas pipeline. The ethane and heavier hydrocarbons leave the bottom of the Demethanizer at approximately 35°F, are warmed to approximately 55°F by inlet gas in the Product/Inlet Exchanger (E-292) and are pumped into the liquid product pipeline at approximately 900 psig.

E. Sulfur Recovery

Hydrogen Sulfide and Carbon Dioxide from the Amine Unit flow to the Sulfur Recovery Unit (SRU). The unit uses a standard Claus, three-bed process to recover 95 percent of the sulfur in the inlet stream. The recovered elemental sulfur will be sold and trucked from the plant. Sulfur Dioxide, a byproduct of the Clause process, is burned in the incinerator.

F. Steam Generation

Three gas-fired boilers and a waste heat boiler utilizing the turbine exhaust gases from the compressor in the "C" Compressor Plant generate steam. The gas-fired boilers are capable of producing 80,000 pounds per hour of steam, and the waste heat boiler can produce 85,000 pounds per hour. The waste heat boiler is the primary steam source for the facility.

G. Power Generation

Electricity is generated with three 300 kW generators driven by three 449 – horsepower natural gas engines.

II. OPERATOR/LEGALLY RESPONSIBLE PARTY & LOCAL REPRESENTATIVE

A. Operator/Legally Responsible Party

Mr. Wayne Farley, Director of Gas Operations
Sid Richardson Energy Services Co.
201 Main Street, Suite 3000
Fort Worth, Texas 76102
Telephone: (817) 390-8686

B. Local Representative

Mr. David Maness, Plant Manager
Sid Richardson Energy Services Co. – Jal
Jal #3 Plant
P.O. Box 1311
Jal, New Mexico 88252
Telephone: (505) 395-2068

III. LOCATION OF DISCHARGE/FACILITY

Jal #3 Plant- $3^1/_2$ miles North of Jal, New Mexico, on Hwy #18 and 1 mile East. The plant consists of 90 acres located in Section 33, T-24-S, R-37-E, N.M.P.M., Lea County, New Mexico. See Appendix A – Topographic maps.

IV. LANDOWNERS

A. Lea Partners, Ltd., dba Sid Richardson Energy Services Co. – Jal
201 Main Street, Suite 3000
Fort Worth, TX 76102

B. El Paso Natural Gas Co.
P.O. Box 1492
El Paso, TX 79901

C. May Woolworth
403 West D. Ave.
San Angelo, TX

V. FACILITY DESCRIPTION

See Appendix B for the facility plot plan, Drawing No. 9234-P-201, sheets 1-3.

VI. SOURCES, QUANTITIES & QUALITY OF EFFLUENT & WASTE SOLIDS

A. SOURCES & QUANTITIES

1. SEPARATORS

Inlet, intermediate and discharge separators (scrubbers) separate gas, hydrocarbon liquid and water throughout the facility. Recovered hydrocarbon liquids average 483,500 gals/mo; produced water averages 198,300 gals/mo.

2. BOILERS

Three gas-fired boilers and a waste heat boiler utilizing the turbine exhaust gases in the "C" Compressor Plant generate steam. The boiler drums and evaporator vessels produce 108,000 gals/mo of high solids concentration blowdown water. Boiler water treatment chemicals are listed in Appendix F.

3. ENGINE COOLING WATER

Cooling water is used for engine jacket water and oil cooling in the engines in the "A" and "B" Compressor and the Auxiliary Building. The water is cooled in the coils of atmospheric (fin-fans) type coolers. The systems are closed loop, and evaporation accounts for almost all of the water losses. The turbine-driven compressors, "C" Compressor Plant and "A" compressor Plant Boosters, use a closed-loop system with Ambitrol as a coolant; the systems are drained only in unusual circumstances. Cooling water additives are listed in Appendix F.

4. COOLING TOWERS

Two cooling towers, "A" and "B" Plant, are used to provide gas and other process cooling in the facility. "A" Plant blowdown averages 172,800 gals/mo and "B" Plant blowdown averages 293,700 gals/mo. Cooling tower water-treating chemicals are listed in Appendix F.

5. *SEWAGE*

The quantity of sewage from the rest room and kitchen facilities in the plant office, recreation hall, washhouse and instrument technicians' house is very small and is not measured.

6. *WASTE LUBRICANTS AND MOTOR OILS*

Generation of used lubricants and motor oils averages 900 gals/mo. Lubricants and motor oils employed at the facility are listed in Appendix F.

7. *WASTE AND SLOP OIL*

Heavy hydrocarbons are recovered in the plant scrubbers and inlet separators; recovered heavy hydrocarbons average 19,995 gals/mo.

8. *USED FILTERS*

Used engine/compressor lube system oil filters (38/month), glycol dehydrator system sock filters (9/month), inlet scrubber sock filters (18/month), and inlet scrubber mist pads (1/month) are generated as a waste at the facility.

9. *SOLIDS AND SLUDGE*

Solids and sludge build up slowly in the inlet separators and the Classifier Tank. The quantity is very small and is not measured.

10. *CLEANING OPERATIONS w/ SOLVENTS/DEGREASERS*

Parts cleaning and degreasing generate approximately 100 gals/mo of waste solvent. The types of solvents/degreasers used are listed in Appendix F.

11. *WATER TREATING*

Water-treating filter backwashing and regeneration of the Zeolite Treater beds require 357,300 gals/mo. Water-treating chemicals are listed in Appendix F.

12. FLOOR AND EQUIPMENT DRAINS

Equipment will be washed approximately once a year, using approximately 10,000 gallons of raw water. The water may contain hydrocarbons from the lubricating oil and natural gas condensate, as well as solvents/degreasers. Heat exchanger bundles may require periodic cleaning.

B. Quality Characteristics of Effluent Waste Stream

All of the exempt and non-exempt wastewater flows into the plant drain system, which ends at the Classifier Tank. The wastewater is filtered and pumped into the disposal well. The non-exempt waste streams identified as item #10 Cleaning operations with solvents/degreasers are collected in the floor and equipment drains. Samples were collected from the 3 drain collection sumps and test for hazardous characteristics. The laboratory analyses for these samples are located in Appendix D.

VII. TRANSFER AND STORAGE OF PROCESS FLUIDS AND EFFLUENTS

A. Summary of On-Site Collection and Storage Systems

All drains in the facility, unless indicated otherwise below, flow to the Classifier Tank (20-foot diameter, steel below grade). The two-compartment tank, classifies incoming liquids by gravity separation. Oil rises to the surface, solids settle to the bottom and water passes through an opening in the lower section of the partition. The lighter liquids (oil and hydrocarbons) are decanted by overflowing into a below-grade Waste Oil Storage Tank. Periodically the hydrocarbons are removed by vacuum truck and sold. Classified wastewater is then pumped through a filter into a 1,500-barrel surge tank and then pumped into the disposal well. Appendices C and G contain flow schematics and plan drawing of the classifier area and drain system.

All vessels and separators are aboveground unless otherwise indicated. The below-grade tanks are protected from corrosion by a 4-coat epoxy paint system on all exterior surfaces; the classifier tank is coated internally with the same material. All below-grade piping is either plastic, coated and wrapped steel, or vitrified clay pipe. Equipment and piping are included in the plant cathodic protection system.

An epoxy-coated, 45-foot diameter by 16-foot deep, open-top steel tank with a working capacity of approximately 95,000 gallons is used as a contingency reservoir. The tank has a 1.7-day retention capacity in the event of equipment failure, well problems or other system-disabling occurrences. Wastewater is pumped back into the classifier when normal operation is resumed.

1. *SEPARATORS*

   Compression Liquids from the Second and Third Stage Discharge Separators in the "B" and "C" Compressor Plants, the Second Stage Discharge of Compressor #9 in the "A" Plant Amine Contactor Inlet Separator, the Inlet Separator (V-204) and Regeneration Gas Scrubber (V-206) in the Cryogenic Plant are sent to the Compression Liquids Separator. Water from the Compression Separator goes into the high-pressure drain system; recovered hydrocarbon liquids are sent to Product Storage Tanks (V-8117, V-8118) and trucked off-site. Liquids from the remainder of the separators are dumped into the high and low pressure drain systems.

2. *BOILERS*

   Boiler blowdown water flows into the boiler blowdown scrubber and then into a buried blowdown tank. The water then flows in an open-drain system line to the classifier tank. Water from the evaporator flows directly to the blowdown tank.

3. *ENGINE COOLING WATER*

   Normal engine maintenance requires periodic draining of the engine cooling water. The coolant is drained into a mobile holding tank. Upon completion of the maintenance, the coolant is then returned to the engine. If the coolant is not returned to the engine, it is poured into the open drain system.

4. *COOLING TOWERS*

   Cooling towers blowdown water goes into a cooling tower blowdown system line and flows to the classifier tank.

5. *SEWAGE*

   Sewage flows through a sewer line to the classifier tank.

6. *WASTE LUBRICANTS AND MOTOR OILS*

   Used waste lubricants an motor oils are collected in a mobile tank, then transferred to an aboveground storage tank until trucked off of the facility site by a waste oil reclaimer (See Appendix E).

7. *WASTE AND SLOP OIL*

   Used and slop oil flows through the high and low-pressure, closed drain system to the classifier tank.

8. *USED FILTERS*

   Used filters are allowed to drain for 48 hours in a skid-mounted drain system. Oil from this filter drainage system is transferred into the used oil storage tanks. Once the filters are drained, they will be transferred to a steel storage bin and await removal from the plant by an approved recycler.

9. *SOLIDS AND SLUDGE*

   Solids and sludge are removed from tanks and vessels using a vacuum truck form an approved hauler (See Appendix E); no solids or sludge are stored at the facility.

10. *CLEANING OPERATIONS w/ SOLVENTS/DEGREASERS*

    Solvents and degreasers are drained into the low-pressure drain system.

11. *WATER TREATING*

    Filter backwash water is piped to a buried collection sump, then flows into the boiler blowdown system line and the classifier.

12. *FLOOR AND EQUIPMENT DRAINS*

    Wash-down water runoff flows to the floor drains and into the open drain system. Hydrocarbons and wastewater from heat exchanger bundles are contained in curbed areas that are connected to the open drain system.

B. Water and Wastewater Flow Schematics

Flow schematics are contained in Appendix C.

C. Discharge Potential of Transfer and Storage Collection Unit

1. All tanks and separators are aboveground, unless indicated otherwise in above paragraph VII.A.

2. All machinery fluids are collected, transferred and processed as indicated in above paragraph VII.A.

D. Methods Used to Prevent Unintentional and Inadvertent Discharges from Reaching the Ground Surface and Polluting

1. All storage tanks within the plant, which contain fluids other than fresh water, have concrete containment walls around the tanks in accordance with OCD requirements.

2. Chemical and drum storage areas are paved, curbed and drained into the open drain system. Several individual storage tanks sit in fiberglass drip/spill containment basins.

3. All sumps and below-grade tanks are visually inspected annually.

4. All tanks are on gravel pads.

E. Underground Pipelines

The plant drain system is shown on Drawing No. 1J3-1-P69 in Appendix G. Details of existing testing procedures are contained in Appendix H.

VIII. EFFLUENT DISPOSAL

A. Existing On-Site Effluent Disposal Facilities

All wastewater is routed through the classifier to remove suspended solids and oil. The classified water is then filtered and pumped into the disposal well (Woolworth Estate – SWD No. 1E located in Unit E of Sec. 33, T-24-S, R-37-E). The average injected rate into the well is 1,662,000 gals/mo. The wastewater is injected into the San Andres Formation at a depth of approximately 4,700 feet. The well was completed in compliance with NMOCD administrative order No. SWD-231 dated November 6, 1980. The location of the well is shown on the Site Location Topographic (Appendix A) and on the Jal No. 3 Plot Plan, Dwg. No. 9234-P-201, sheets 1-3 (Appendix B).

B. **Off-Site Disposal**

All effluents with the exception of wastewater are trucked off-site and handled in accordance with OCD and NMED regulations. Recycling and disposal contractors will be approved by the NMED or OCD, as appropriate, for the hauling and final disposition of effluents. See Appendix E for a list of hauling and disposal contractors.

IX. INSPECTION, MAINTENANCE AND REPORTING

A. **Inspection Procedures for Collection, Storage and Disposal Units**

Annually, all open-top sumps and below-grade tanks will be inspected for leaks. The plant maintains inspection records and schedules and will notify OCD in the event of any reportable leak.

B. **Procedures for Containment of Precipitation and Runoff**

Areas where leaks or spills can occur are curbed to prevent precipitation from carrying contaminants out of the area; curbing and well-drained areas prevent precipitation runoff from flowing into and overflowing the drain system.

X. SPILL/LEAK PREVENTION AND REPORTING (CONTINGENCY PLAN)

The plant is manned 24 hours a day; operators and maintenance personnel are trained to be aware of spills and leaks and to take immediate action to prevent or mitigate pollution. Small spills will be adsorbed with soil and shoveled into drums. Large spills will be contained with temporary berms; free liquids will be removed with a vacuum truck and the contaminated soil shoveled into drums. Drums containing contaminated soil will be disposed off-site by an OCD-approved disposal contractor. Verbal and written notification of leaks and spills will be made to the OCD in accordance with OCD Rule 116.

XI. SITE CHARACTERISTICS

A. Hydrologic Features

1. BODIES OF WATER NEAR PLANT SITE

   There are no bodies of water or groundwater discharge sites within one mile of the facility. Watercourses in the area are generally ephemeral washes. The plant gets its water from water wells located in Secs. 5 and 7, T-25-s, R-38-E (Hubb 1 through 5) and Sec. 25 and 36, T-24-S, R-37-E (Cooper 1 through 8). Other water well in the vicinity is the Crawford Ranch well located in Sec. 31, T-24-S, R-37-E. See the Site Location Topographic in Appendix A for well locations.

2. GROUNDWATER MOST LIKELY AFFECTED BY DISCHARGE

   The Ogallala aquifer is the principal source of potable water in the area. The depth to the aquifer is approximately 90 feet; the total dissolved solids (TDS) concentration for the groundwater most likely to be affected by the discharge is 2,208 mg/l. See the Site Location Topographic in Appendix A for well locations.

3. FLOW DIRECTION OF GROUNDWATER MOST LIKELY AFFECTED BY DISCHARGE

   The Ogallala aquifer slopes to the southeast with a hydraulic gradient of about 10-12 feet per mile and imparts an easterly or southeasterly movement to the groundwater. References: Cronin, 1969; El Paso Natural Gas Company, Discharge Plan, March 1981.

B. Geologic Description of Discharge Site

Reference: El Paso Natural Gas Company, Discharge Plan, October 1983.

1. SOIL TYPES

   The Jal No. 3 facility is located on the Berino-Cacique loamy fine sands soil association and the Pyote and Maljamar soils series.

   The Pyote and Maljamar fine sands are well-drained soils with moderately rapid permeability formed in wind-deposited materials. The Pyote soil is fine sands over sandy loam subsoil to a depth of 48 to 60 inches where a fine sandy loam C-horizon is encountered. The Maljamar fine sand soil series has sandy clay loam subsoil with an indurated caliche horizon at approximately 50 inches.

   The Berino-Cacique association consists of approximately 50 percent Berino loamy fine sand and 40 percent Cacique loamy fine sand. Cacique soils occur only in association with Berino soils. Both Berino and Cacique soils are moderately permeable and have very slow runoff. The Berino soil has light sandy clay loam subsoil with caliche at depths ranging from 29 to 60 inches. Cacique loamy fine sand is a shallow soil with indurated caliche at 20 to 34 inches.

2. NAME OF AQUIFER

   The Ogallala formation is the principal source of potable groundwater in the area.

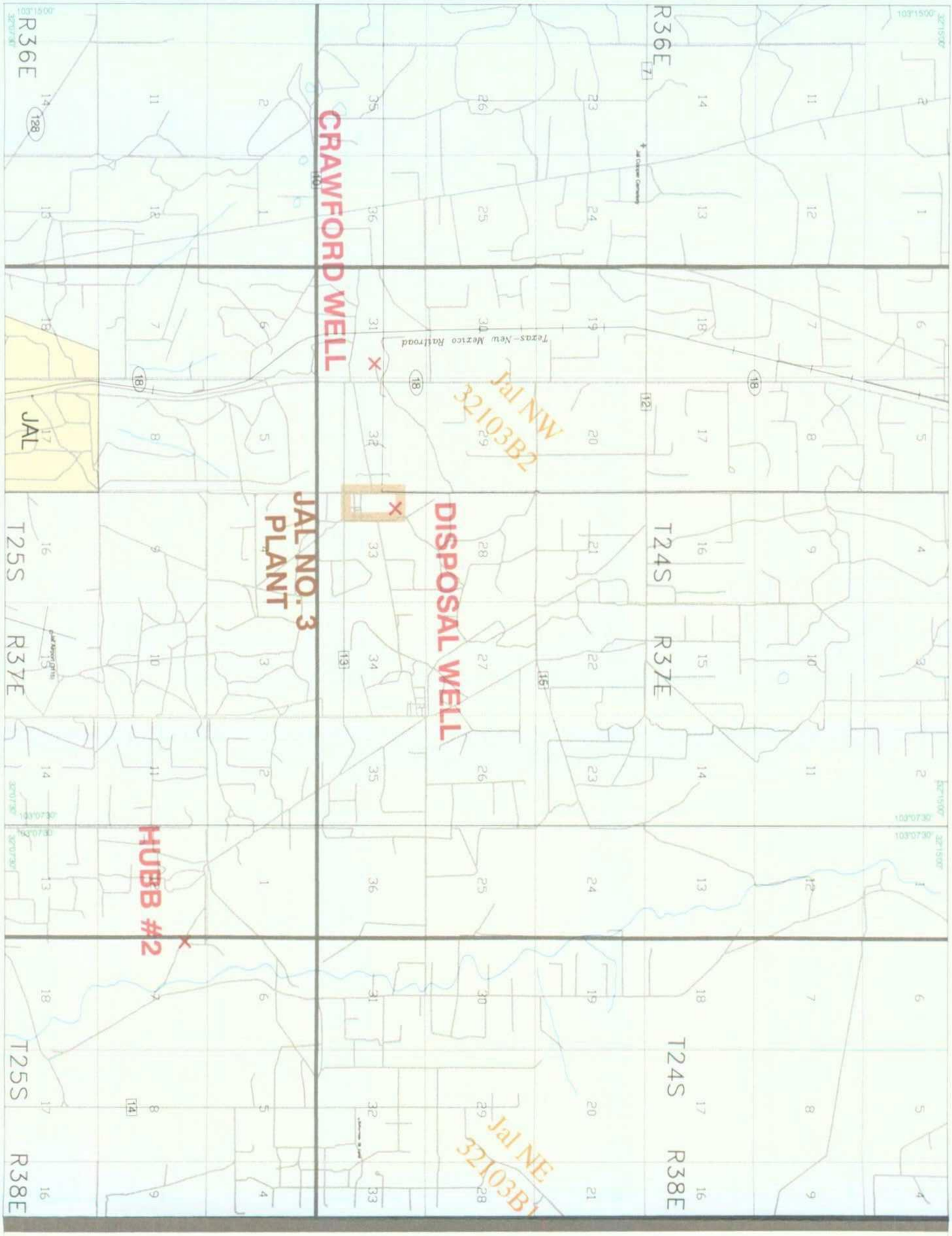
3. COMPOSITION OF THE AQUIFER

   The Ogallala formation is alluvial consisting of sand, gravel, silt and clay.

4. DEPTH TO ROCK AT BASE OF ALLUVIUM

   The Ogallala overlies the relatively impermeable Chicle Formation; however, the depth is unknown.

A – Jal #3 Site Topo



SID RICHARDSON ENERGY SERVICES CO. - JAL

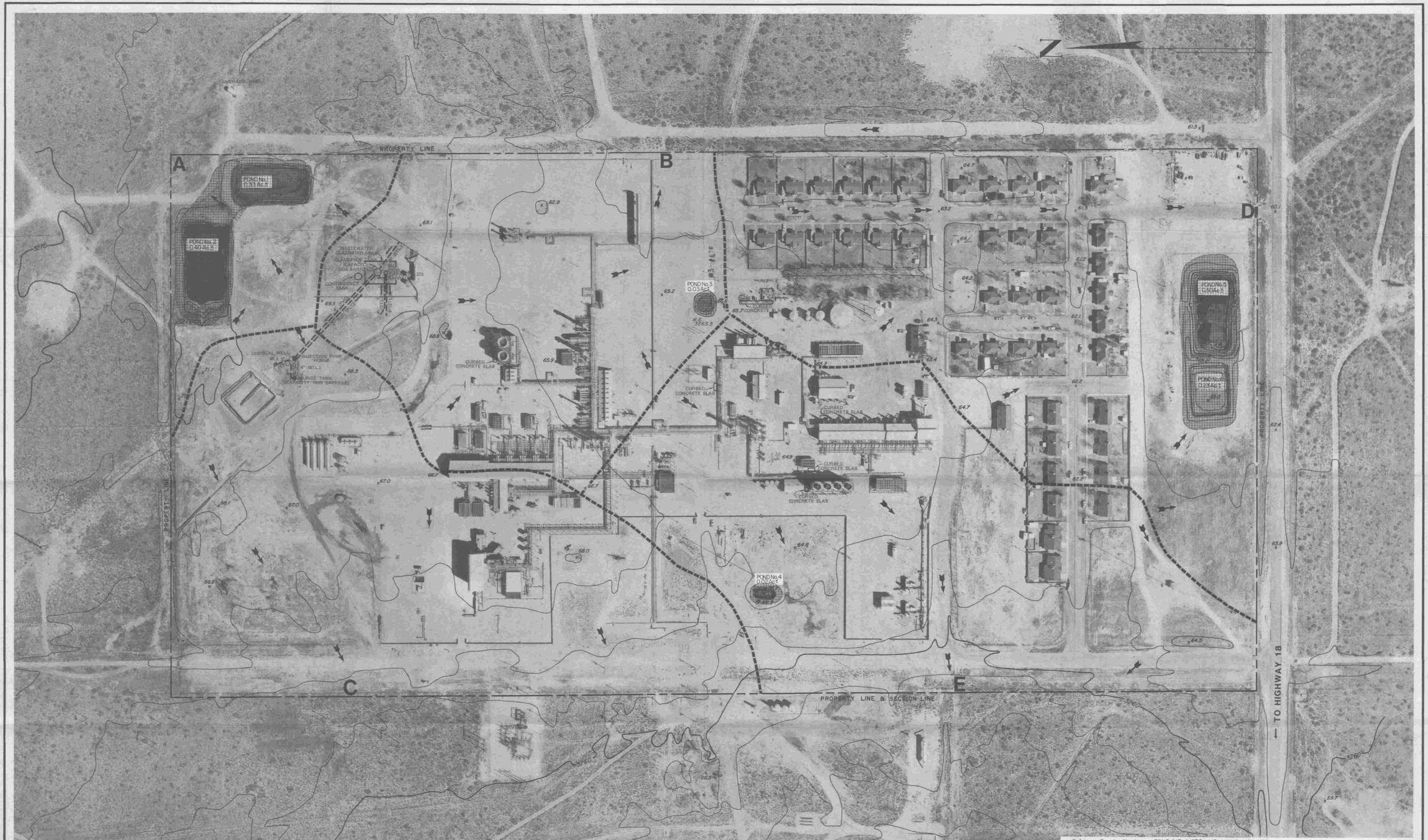
JAL #3 SITE TOPOGRAPHIC

Water Wells and Injection Well Location

Lea County, New Mexico

Date: March, 2004 Scale: None Drawn By: Adam Pacheco, Jr.

FILE NO.50033



Reference Drawing Numbers: EPNG 1J3-1-P30, JJ3-1-11 & JJ3-1-P2

ENGINEERING RECORD	
DRAWN BY	Aero-Graphics
TRACED BY	
CHECKED BY	J. T. C.
APPROVED	F. S.
DATE	3-4-81
PHOTO DATE	2-12-81
CONTOUR INTERVAL	2'

El Paso NATURAL GAS COMPANY
PIPELINE SERVICES DIVISION
EL PASO, TEXAS

SITE GRADING PLAN FOR
JAL NO. 3 PLANT
SEC. 32, 33, TWS. 24-S, RANGE 37-E
LEA COUNTY, NEW MEXICO

FIGURE 4

0 100 200 400
SCALE IN FEET

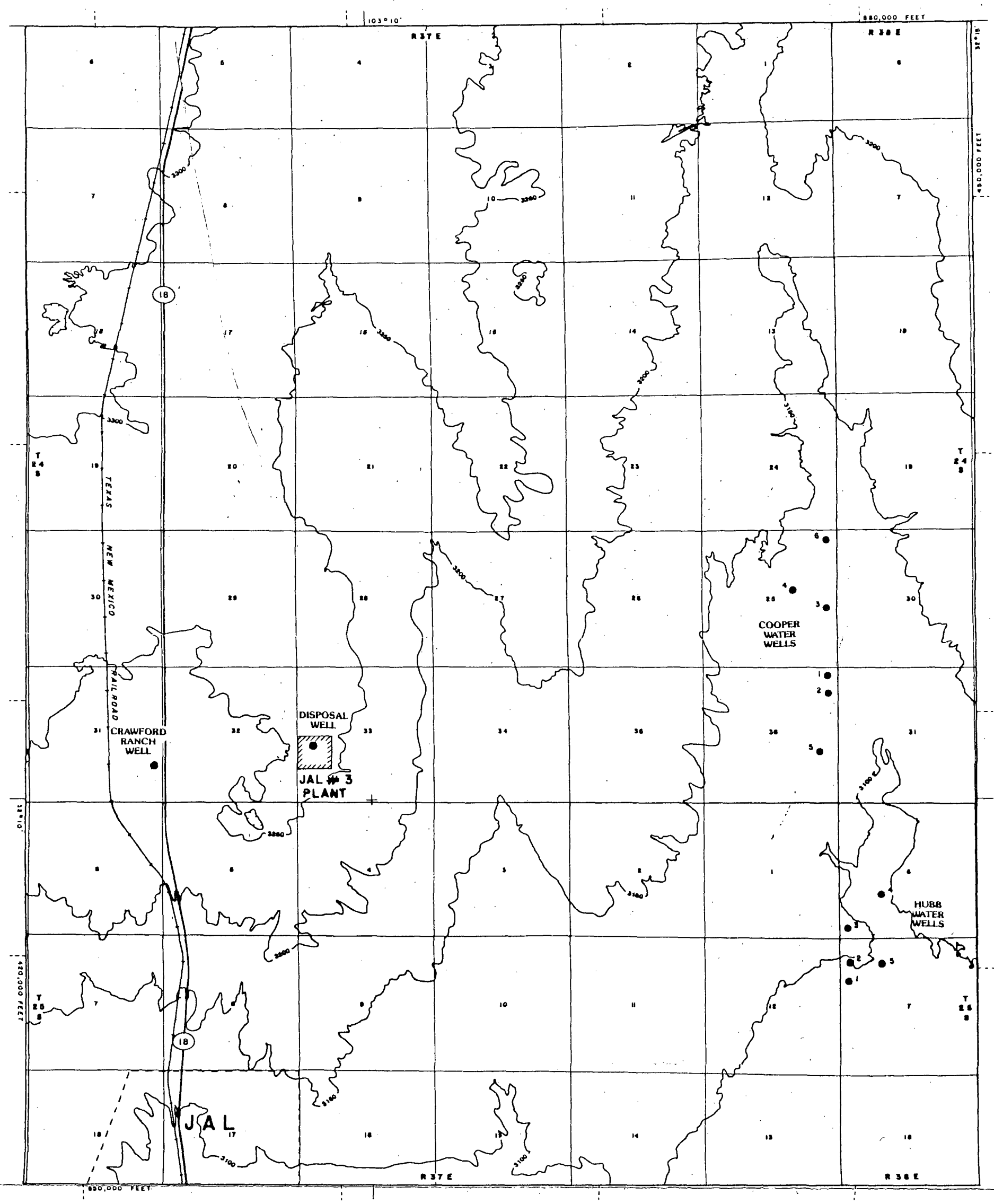
DWG. NO. 5003.19-1

B
REV.

Rev B - Added Area To Be Regraded, 10/8/83
Rev A - Added Wastewater Classifier Area & Curbed Concrete Slabs with Apron Drains, 3/2/83

REPRODUCTION BY aero-graphics

Contour Lines Have Been Adjusted To Match Rectified Photo Base



COMPILED FROM U.S.G.S. QUADRANGLES
CONTOUR INTERVAL: 50'

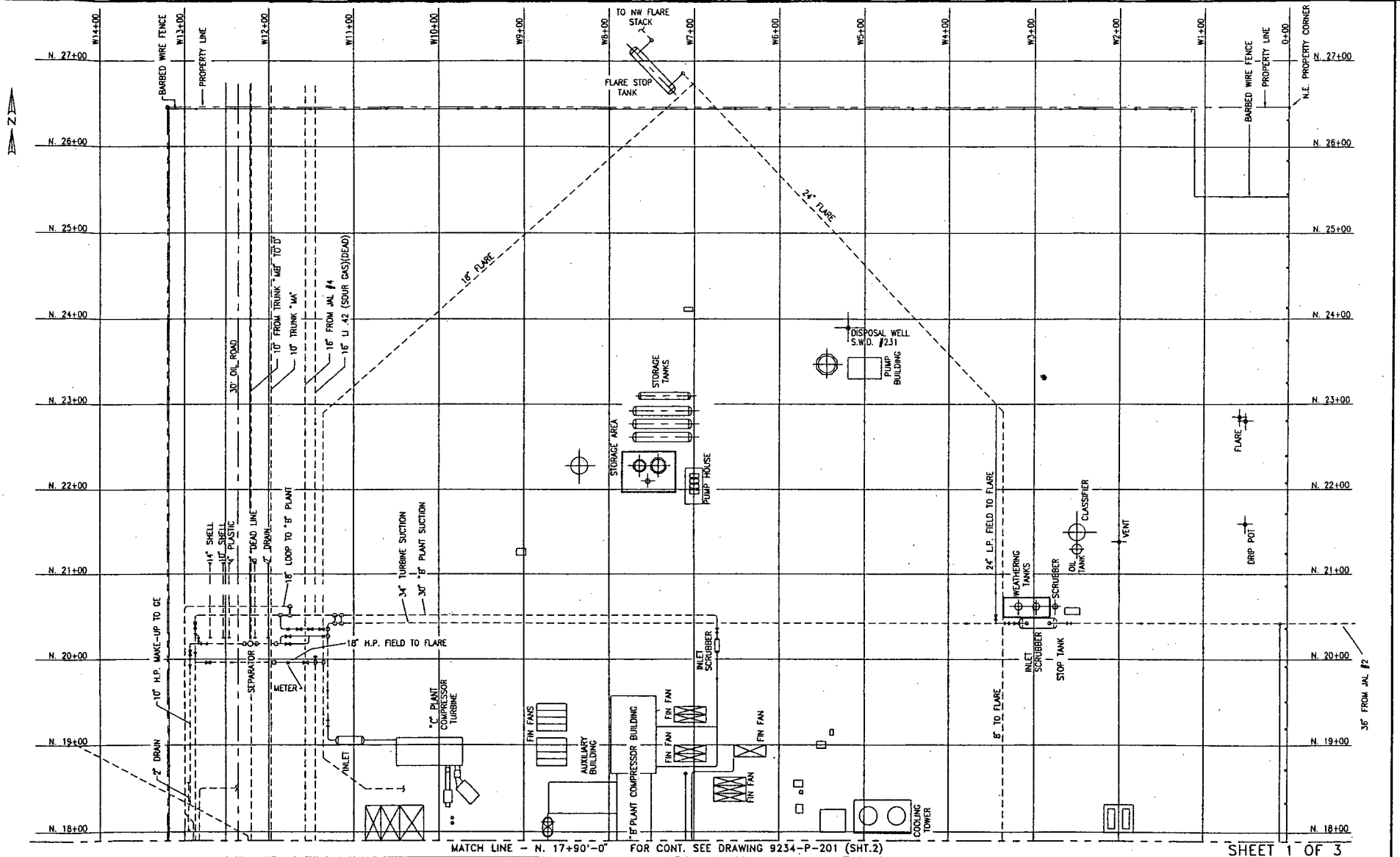
Sid Richardson Gasoline Co.

JAL #3 SITE LOCATION TOPOGRAPHIC

Portion of Lea County,
New Mexico

Scale: 1" = 4,000' Date: Aug. 1993 Drawn By: A.P.

B – Facility Site Plan



MATCH LINE – N. 17+90'-0" FOR CONT. SEE DRAWING 9234-P-201 (SHT.2)

SHEET 1 OF 3

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	10-9-81	FOR CUSTOMER APPROVAL	MC			
1		ISSUED FOR BID	MC			
2	5/10/82	ADDED 18" LOOP AS BUILT	JAM			
3	7-20-82	REVISED PER AS-BUILT	kbs			

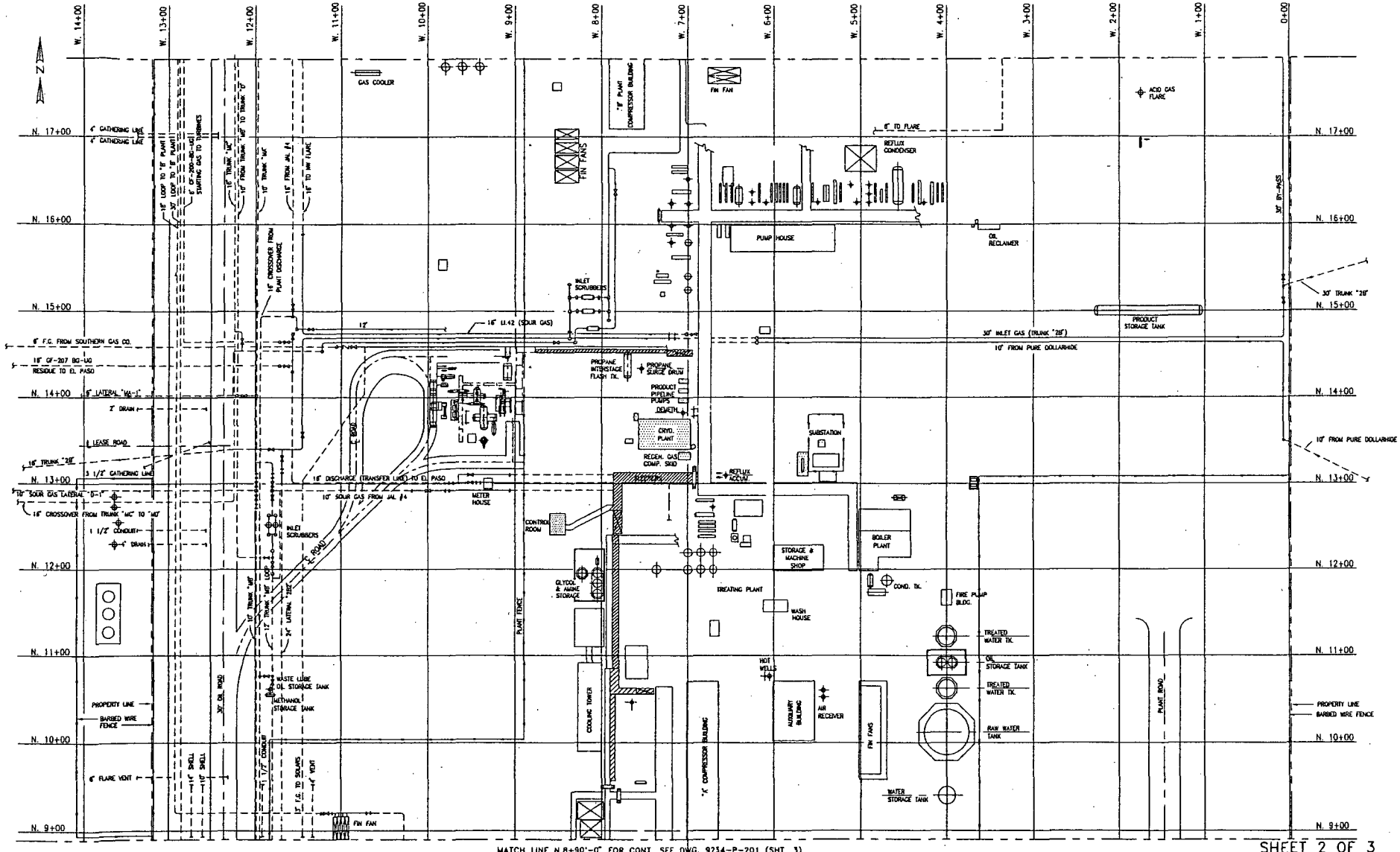
OPD

OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT
LEA COUNTY, NEW MEXICO

DES.	SCALE: 1"=50'	JOB No. 9234	
DR. J.vonWACHER	FILE: 9234P201	DWG. No. 9234-P-201	REV. 3
CH.	DATE: 7-20-82		
APP.			



MATCH LINE N.8+90'-0" FOR CONT. SEE DWG. 9234-P-201 (SHT. 3)

SHEET 2 OF 3

NOTES:

INDICATES EQUIPMENT BEING ADDED FOR OPD JOB NO. 9234

INDICATES PROPOSED PIPEWAY AS INDICATED.

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	7/21/92	FOR CUSTOMER APPROVAL	MC			
1	10/1/92	ISSUE FOR BID (PRELIM.)	MC			
2		ISSUE FOR BID	MC			
3	1/25/93	REVISED PER AS-BUILT	kbs			

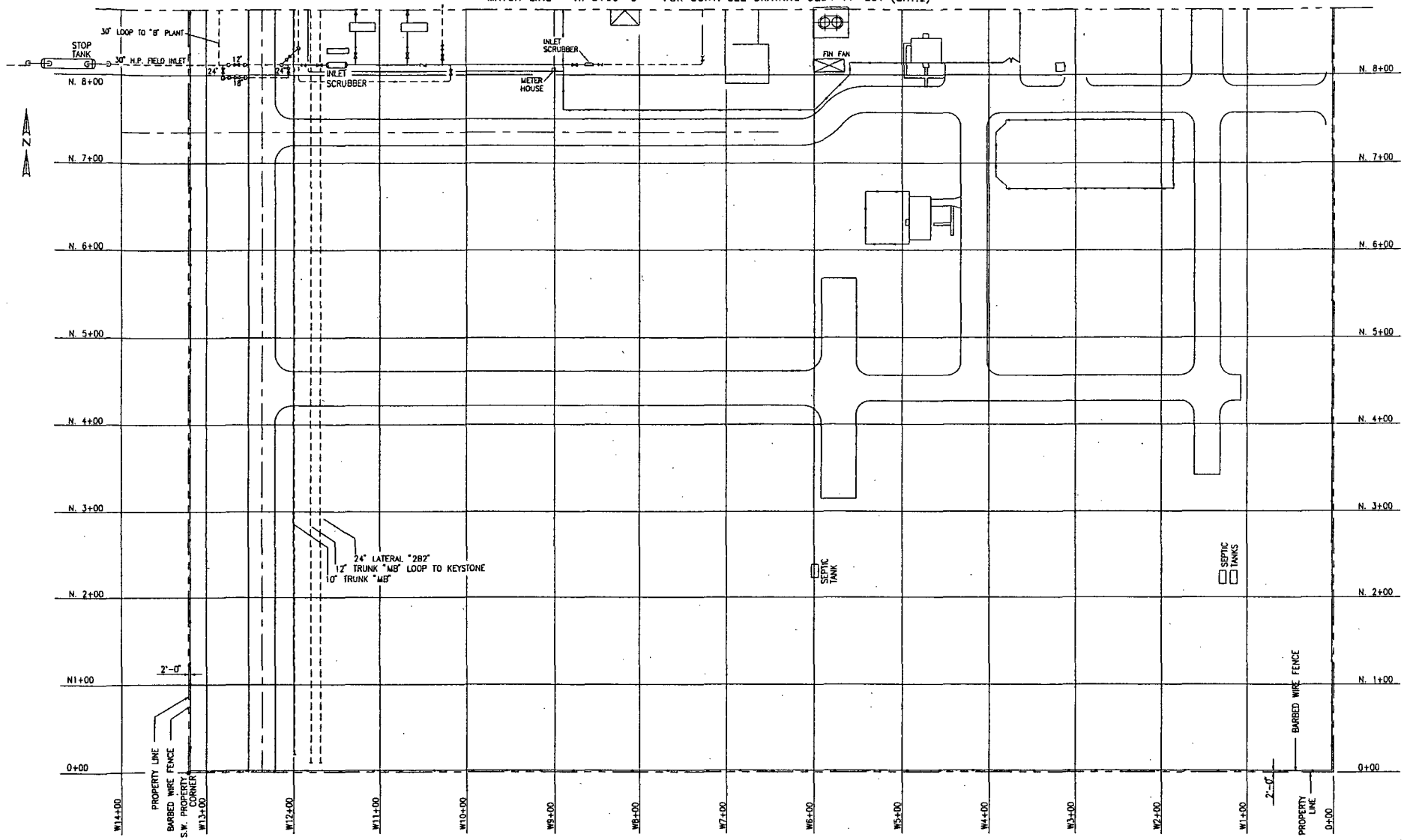
OPD

OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT
LEA COUNTY, NEW MEXICO

DES.		SCALE: 1"=50'	JOB No. 9234	
DR: MDC		FILE: 9234201A	DWG. No.	REV.
CH:		DATE: 8-28-92	9234-PP-201	3
APP:				



SHEET 3 OF 3

MK	DATE	REVISIONS	BY	APP	NUMBER	REFERENCE DRAWINGS
0	7/21/92	FOR CUSTOMER APPROVAL	MC			
1		ISSUED FOR BID	MC			
2	10/4/93	REVISED PER AS-BUILT.	DRO			

OPD

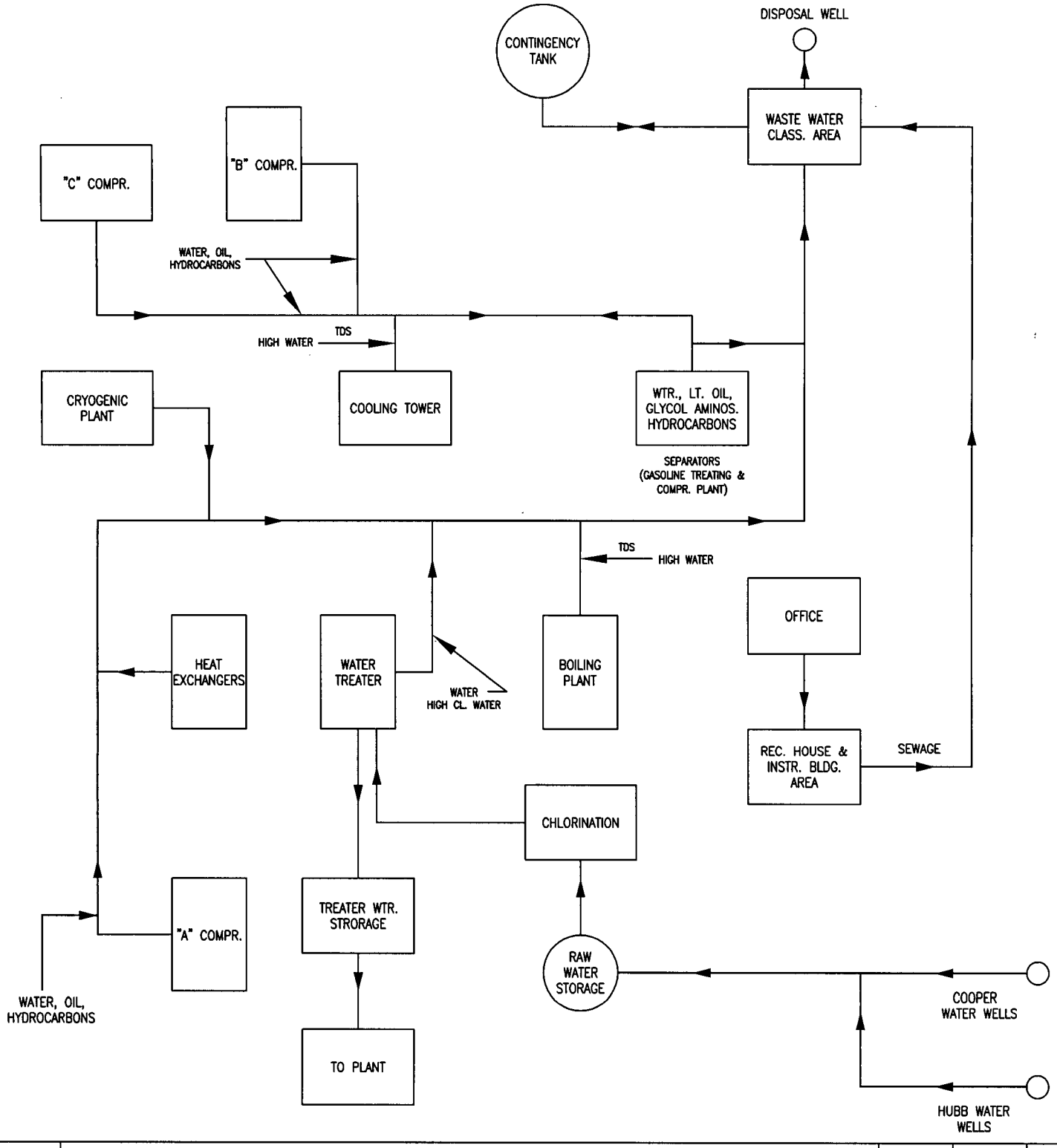
OPTIMIZED PROCESS DESIGNS
ENGINEERS AND CONSTRUCTORS
HOUSTON, TEXAS

SID RICHARDSON CARBON & GASOLINE CO.
FORT WORTH, TEXAS

PLOT PLAN
JAL No. 3 GASOLINE PLANT
LEA COUNTY, NEW MEXICO

DES.	SCALE: 1"=50'	JOB No. 9234	
DR. J.HOWAGNER	FILE: 92342018	DWG. No.	REV.
CH.	DATE: 9-09-92	9234-P-201	2
APP.			

C – Flow Schematics



NO.	REVISION	DATE	BY	APR
1	DRAWN ON CADD	3/24/04	CSL	

ENG. RECORD	DATE
DRAWN BY	AUG. 1993
CHECKED	
APPROVED	
APPROVED	
SCALE NONE	

SID RICHARDSON ENERGY SERVICES CO.

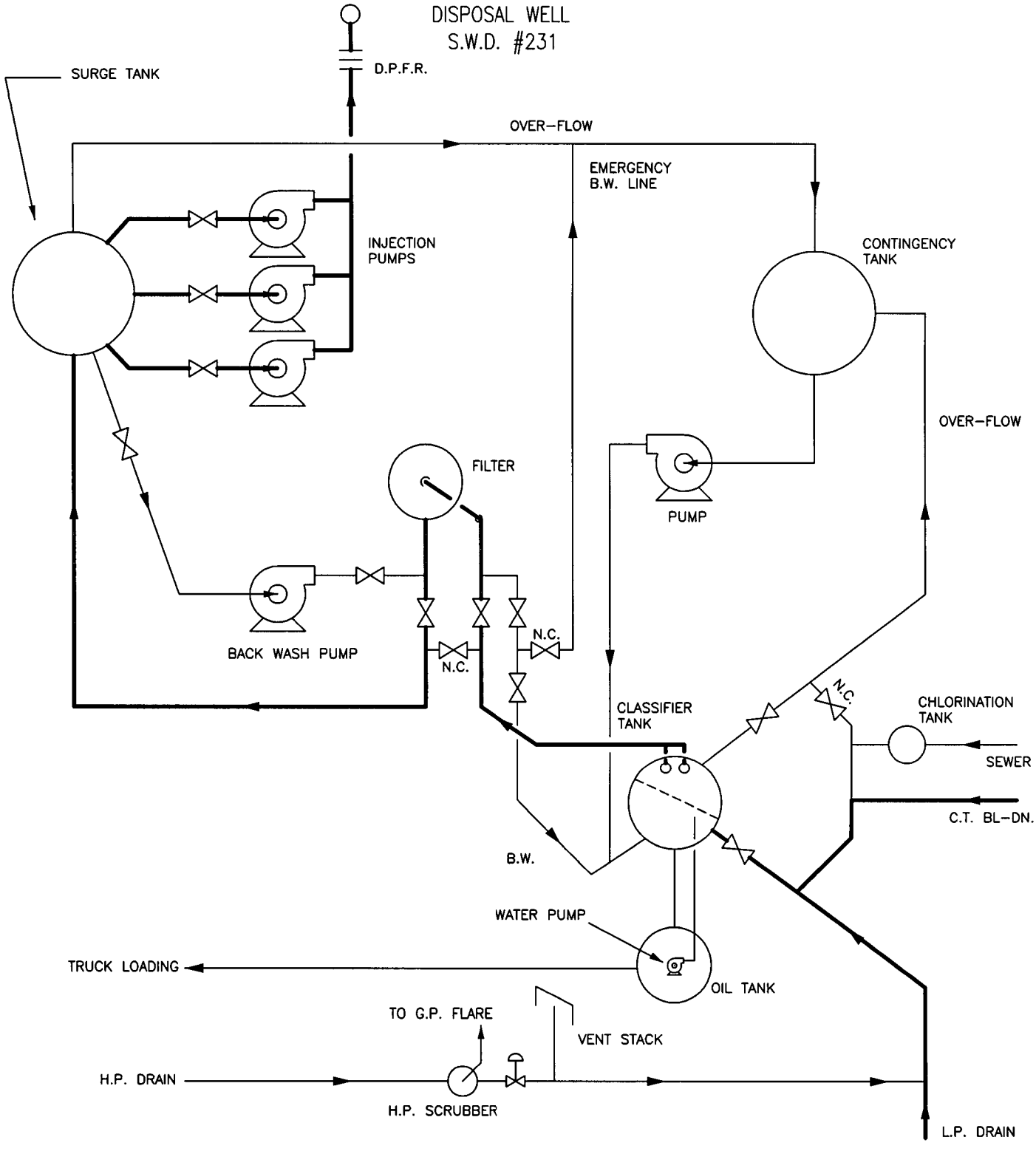
JAL NO. 3 PLANT

WATER & WASTE WATER FLOW SCHEMATIC

JOB NO.

DRAWING NO.

REV. 1



1	DRAWN ON CADD & ADDED WATER PUMP	3/24/04	CSL	
NO.	REVISION	DATE	BY	APR

ENG. RECORD	DATE
DRAWN BY	
CHECKED	
APPROVED	
APPROVED	
SCALE NONE	

SID RICHARDSON ENERGY SERVICES CO.

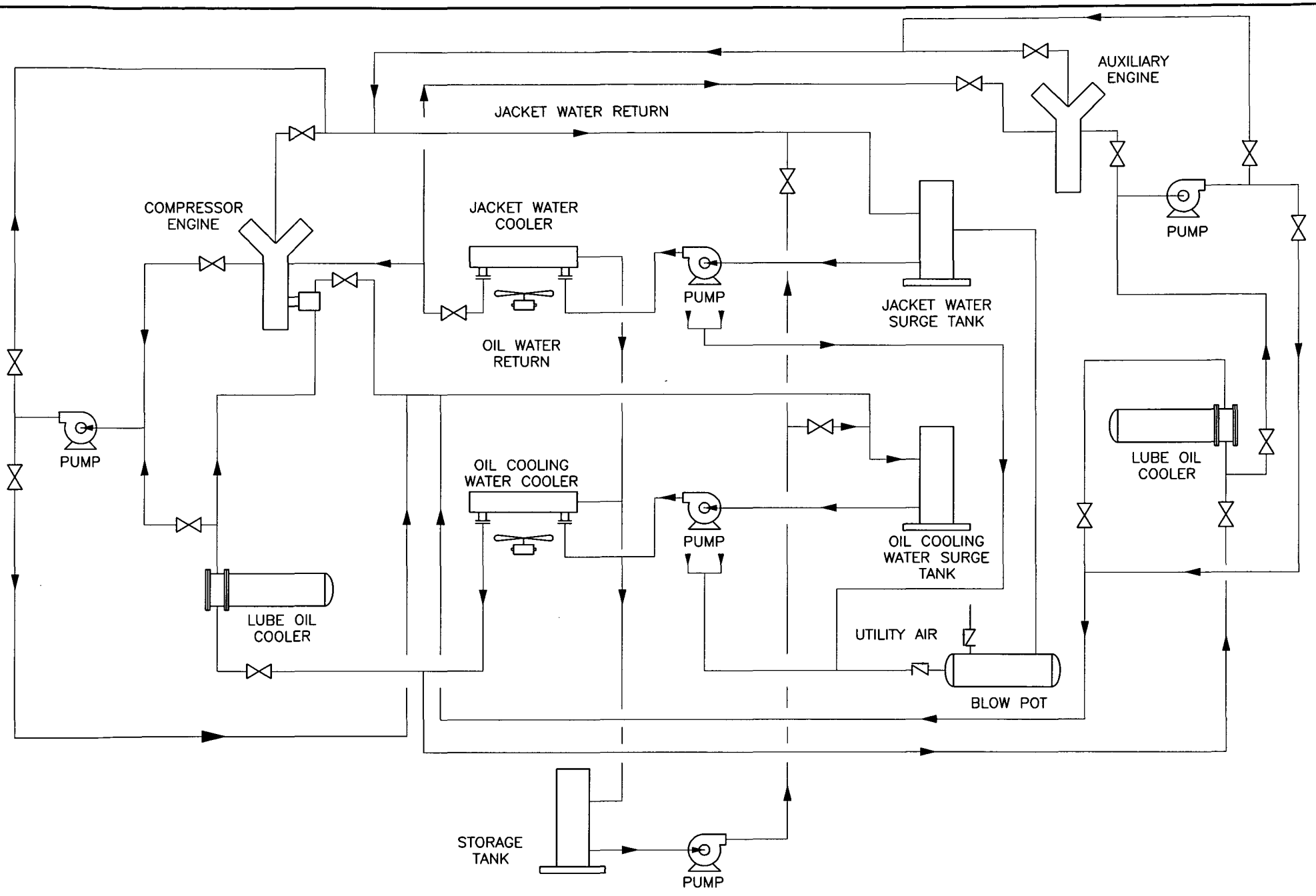
FIGURE 19

WASTEWATER CLASSIFIER AREA FLOW DIAGRAM

JOB NO.

DRAWING NO.

REV. 1



NOTES :

REFERENCE DRAWINGS

DRAWING NO.	TITLE	DRAWING NO.	TITLE

REVISIONS

NO.	DESCRIPTION	DATE	BY	APP.
1	DRAWN ON CADD	05/24/94	CSL	

SRES CO.

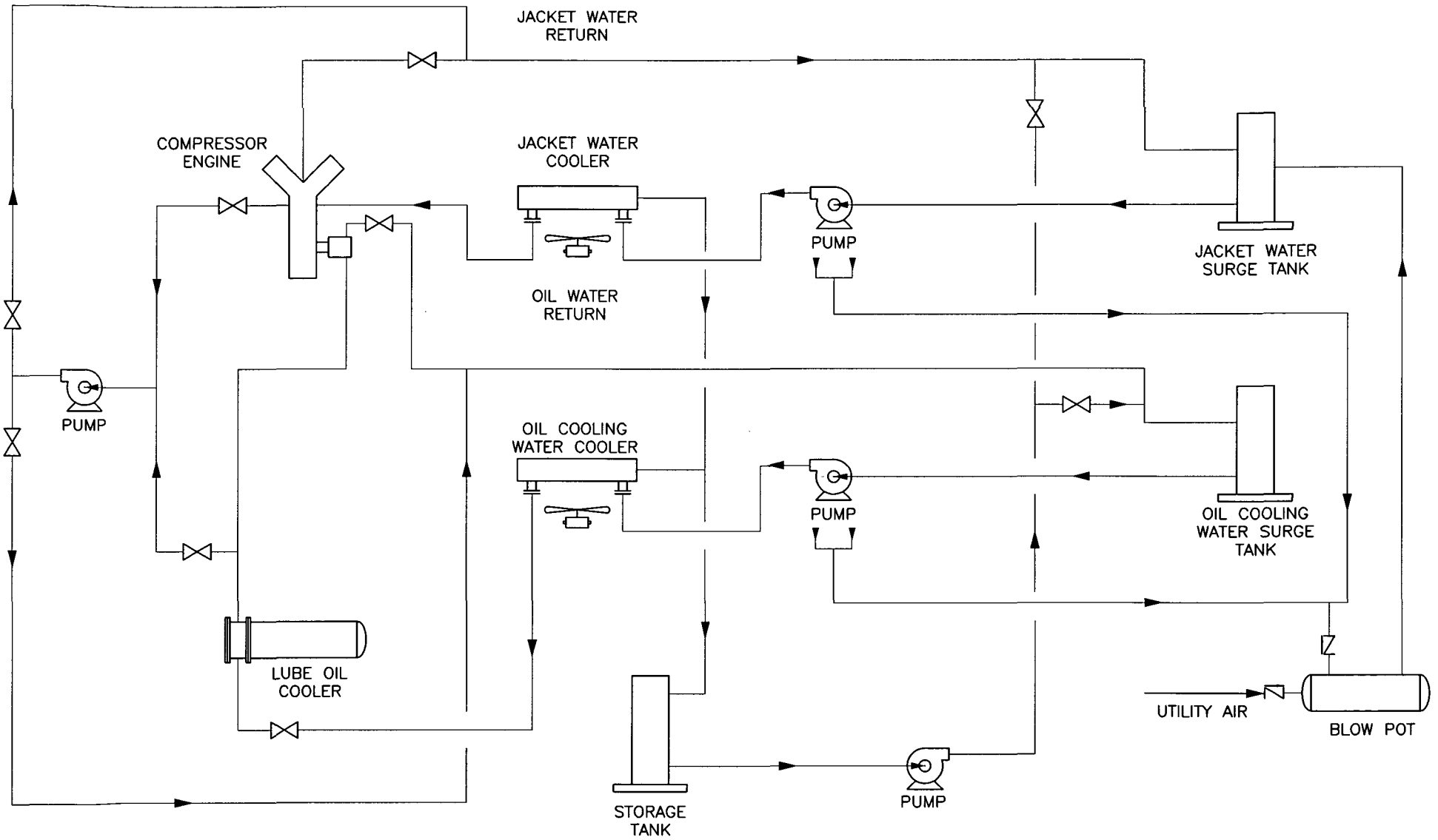
900 W. TEXAS - SUITE 920
MIDLAND, TEXAS 79701
Tel: (915) 571-4020
Fax: (915) 570-4076

CADD FILE NAME

SID RICHARDSON ENERGY SERVICES CO.

APPROVED	DATE	TITLE: JAL NO. 3 "A" COMPRESSOR PLANT & AUXILARY BLDG. COOLING WATER CONTAINMENT SCHEMATIC
CHECKED		
DESIGNED		
DRAWN	AUG. 1993	JAL NO. 3 LEA CO., NEW MEXICO

PROJ. NO.	SCALE	DWG. NO.	REV.
	NTS		1



NOTES :

REFERENCE DRAWINGS

DRAWING NO.	TITLE	DRAWING NO.	TITLE

REVISIONS

NO.	DESCRIPTION	DATE	BY	APP.
1	DRAWN ON CADD	03/24/94	CSL	

SRES CO.

CADD FILE NAME

SID RICHARDSON ENERGY SERVICES CO.

APPROVED	DATE	TITLE: JAL NO. 3 "B" COMPRESSOR PLANT & AUXILARY BLDG. COOLING WATER CONTAINMENT SCHEMATIC
CHECKED		
DESIGNED		JAL NO. 3 LEA CO., NEW MEXICO
DRAWN	AUG. 1993	PROJ. NO. / SCALE NTS / DWG. NO. / REV. 1

D – Analysis of Effluent Waste Stream

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Tony Savoie

Sid Richardson Energy Service Co.

P.O. Box 1226

Jal, NM 88252

Project: Jal #3 Plant

Project Number: None Given

Location: 3 mi North of Jal, NM

Lab Order Number: 4D19002

Report Date: 04/20/04

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Composite Engine Room Sumps (3)	4D19002-01	Sludge	04/19/04 08:30	04/19/04 11:20

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge									
Benzene	ND	0.0100	mg/L	10	ED42005	04/20/04	04/20/04	EPA 8021B	
Toluene	**J [0.00665]**	0.0100	"	"	"	"	"	"	J
Ethylbenzene	**0.0279**	0.0100	"	"	"	"	"	"	
Xylene (p/m)	**0.535**	0.0100	"	"	"	"	"	"	
Xylene (o)	**0.126**	0.0100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.1 %*	*80-120*		"	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge									
Reactive Cyanide	ND	0.0900	mg/kg	1	ED42002	04/19/04	04/19/04	SW846 9010B	
Ignitability by Flashpoint	>100		°C	"	ED41908	04/19/04	04/19/04	EPA 1010	
pH	**4.61**		pH Units	"	ED41911	04/19/04	04/19/04	EPA 9045B	
Reactive Sulfide	**6.86**	5.00	mg/kg	"	ED42003	04/19/04	04/19/04	SW846 9030B	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

TCLP Metals 1311 by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge										
Mercury	ND	0.000500	mg/L	1	ED42009	04/19/04 TCLP	04/20/04	04/20/04	EPA 7470A	
Arsenic	**0.0347**	0.00800	"	"	ED42008	"	04/20/04	04/20/04	EPA 6010B	
Barium	**0.0302**	0.00100	"	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	"	
Chromium	**0.0409**	0.00500	"	"	"	"	"	"	"	
Lead	**J [0.0107]**	0.0110	"	"	"	"	"	"	"	J
Selenium	**0.0216**	0.00400	"	"	"	"	"	"	"	
Silver	**0.00600**	0.00500	"	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42005 - EPA 5030C (GC)										
Blank (ED42005-BLK1)				Prepared & Analyzed: 04/20/04						
Benzene	ND	0.0250	mg/L							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*92.0*		*ug/l*	*100*		*92.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*84.4*		*"*	*100*		*84.4*	*80-120*			
LCS (ED42005-BS1)				Prepared & Analyzed: 04/20/04						
Benzene	88.3		ug/l	100		88.3	80-120			
Toluene	84.3		"	100		84.3	80-120			
Ethylbenzene	80.1		"	100		80.1	80-120			
Xylene (p/m)	160		"	200		80.0	80-120			
Xylene (o)	81.2		"	100		81.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*89.1*		*"*	*100*		*89.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*89.0*		*"*	*100*		*89.0*	*80-120*			
LCS Dup (ED42005-BSD1)				Prepared & Analyzed: 04/20/04						
Benzene	92.6		ug/l	100		92.6	80-120	4.75	20	
Toluene	88.1		"	100		88.1	80-120	4.41	20	
Ethylbenzene	83.6		"	100		83.6	80-120	4.28	20	
Xylene (p/m)	162		"	200		81.0	80-120	1.24	20	
Xylene (o)	81.6		"	100		81.6	80-120	0.491	20	
Surrogate: a,a,a-Trifluorotoluene	*93.7*		*"*	*100*		*93.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*92.6*		*"*	*100*		*92.6*	*80-120*			
Calibration Check (ED42005-CCV1)				Prepared & Analyzed: 04/20/04						
Benzene	85.4		ug/l	100		85.4	80-120			
Toluene	90.2		"	100		90.2	80-120			
Ethylbenzene	89.8		"	100		89.8	80-120			
Xylene (p/m)	176		"	200		88.0	80-120			
Xylene (o)	83.3		"	100		83.3	80-120			
Surrogate: a,a,a-Trifluorotoluene	*105*		*"*	*100*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*96.7*		*"*	*100*		*96.7*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED41908 - General Preparation (WetChem)										
Duplicate (ED41908-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Ignitability by Flashpoint	>100		°C		0.00				20	
Batch ED41911 - General Preparation (WetChem)										
Calibration Check (ED41911-CCV1)				Prepared & Analyzed: 04/19/04						
pH	4.68		pH Units	4.00		117	80-120			
Duplicate (ED41911-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
pH	4.57		pH Units		4.61			0.871	20	
Batch ED42002 - 9010B SW846										
Blank (ED42002-BLK1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	ND	0.0900	mg/kg							
LCS (ED42002-BS1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.105	0.0900	mg/kg	0.100		105	50-150			
LCS Dup (ED42002-BSD1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.111	0.0900	mg/kg	0.100		111	50-150	5.56	20	
Calibration Check (ED42002-CCV1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	1.15		mg/kg	1.00		115	80-120			
Duplicate (ED42002-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.00	0.0900	mg/kg		0.00				20	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42003 - 9030B SW846										
Blank (ED42003-BLK1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	ND	5.00	mg/kg							
LCS (ED42003-BS1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	21.0		mg/kg	22.2		94.6	50-150			
LCS Dup (ED42003-BSD1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	21.3		mg/kg	22.2		95.9	50-150	1.42	20	
Calibration Check (ED42003-CCV1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	690		mg/kg	680		101	80-120			
Duplicate (ED42003-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Reactive Sulfide	6.93	5.00	mg/kg		6.86			1.02	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42008 - EPA 1311/3005										
Blank (ED42008-BLK1)				Prepared & Analyzed: 04/20/04						
Arsenic	ND	0.00800	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00500	"							
Lead	ND	0.0110	"							
Selenium	ND	0.00400	"							
Silver	ND	0.00500	"							
LCS (ED42008-BS1)				Prepared & Analyzed: 04/20/04						
Arsenic	0.891	0.00800	mg/L	0.800		111	85-115			
Barium	0.218	0.00100	"	0.200		109	85-115			
Cadmium	0.218	0.00100	"	0.200		109	85-115			
Chromium	0.217	0.00500	"	0.200		108	85-115			
Lead	1.10	0.0110	"	1.10		100	85-115			
Selenium	0.431	0.00400	"	0.400		108	85-115			
Silver	0.100	0.00500	"	0.100		100	85-115			
LCS Dup (ED42008-BSD1)				Prepared & Analyzed: 04/20/04						
Arsenic	0.882	0.00800	mg/L	0.800		110	85-115	1.02	20	
Barium	0.217	0.00100	"	0.200		108	85-115	0.460	20	
Cadmium	0.216	0.00100	"	0.200		108	85-115	0.922	20	
Chromium	0.214	0.00500	"	0.200		107	85-115	1.39	20	
Lead	1.11	0.0110	"	1.10		101	85-115	0.905	20	
Selenium	0.406	0.00400	"	0.400		102	85-115	5.97	20	
Silver	0.103	0.00500	"	0.100		103	85-115	2.96	20	
Calibration Check (ED42008-CCV1)				Prepared & Analyzed: 04/20/04						
Arsenic	1.00		mg/L	1.00		100	90-110			
Barium	0.983		"	1.00		98.3	90-110			
Cadmium	0.975		"	1.00		97.5	90-110			
Chromium	0.976		"	1.00		97.6	90-110			
Lead	0.955		"	1.00		95.5	90-110			
Selenium	0.982		"	1.00		98.2	90-110			
Silver	0.456		"	0.500		91.2	90-110			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42009 - EPA 1311/7470A										
Blank (ED42009-BLK1)				Prepared & Analyzed: 04/20/04						
Mercury	ND	0.000500	mg/L							
LCS (ED42009-BS1)				Prepared & Analyzed: 04/20/04						
Mercury	0.000920	0.000500	mg/L	0.00100		92.0	85-115			
LCS Dup (ED42009-BSD1)				Prepared & Analyzed: 04/20/04						
Mercury	0.000970	0.000500	mg/L	0.00100		97.0	85-115	5.29	20	
Calibration Check (ED42009-CCV1)				Prepared & Analyzed: 04/20/04						
Mercury	0.00103		mg/L	0.00100		103	90-110			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

E – Hauling & Disposal Contractors

HAULING AND DISPOSAL CONTRACTORS

WATER:	Chaparral Service, Inc. PO Drawer 1769 Eunice NM 88231
LIQUIDS:	Petro Source Partners LTD 723 N Bridge Dumas, TX. 79029
OIL:	Chaparral Service, Inc PO Drawer 1769 Eunice, NM 88231
	Fulco Oil Services, LLC PO Box 578 Jal NM 88252
FILTERS:	Quell Petroleum Services, Inc PO Box 1552 Monahans, TX 79756
SOAKERS:	U S Filters 315 Pronto Odessa, TX 79762
WASTE OIL:	Quell Petroleum Services, Inc PO Box 1552 Monahans, TX 79756
GLYCOL FILTERS:	Quell Petroleum Services, Inc PO Box 1552 Monahans, TX 79756
AMINE FILTERS:	Quell Petroleum Services, Inc PO Box 1552 Monahans, TX 79756
SULFUR:	Martin Gas Transport, Inc. PO Box 191 Kilgore, TX 75663

F – Chemicals Used/MSDS Index

YEAR ENDING 2003

Major Chemicals and Lubricants

Chemical	Daily Amount		# of days on site	Peak Storage Qty. Gallons	Specific Gravity
	Maximum (Pounds)	Avg. (Pounds)			
DEA	241844	45700	365	26460	1.09
TEG	23529	16443	365	3000	1.117
MEA	n/a		365		
Black Gasoline	513882	207937	365	117152	0.74
Gasoline (Veh.)	3108	150	365	500	0.74
Diesel	1084	75	365	300	0.86
Varsol	10752	6720	365	1600	0.8
Kerosene	370	50	365	55	0.8
Methanol	5077	2256	365	1350	0.796
Acetone	4	3	365	5	0.793
Propane	50537	20215	365	28804	0.58
Propylene	n/a		365		
Sulphuric Acid	10	4	365	2	1.84
Sulphur	155471	69098	365	9000	2.07
Chlorine	1000	500	365	100	1.4
Caustic Soda	100	50	365	20 (dry)	0.213
Ethyl Alcohol	n/a		365		
Scrubber Oil	60964	4355	365	20000	0.9
Engine Oil	272916	187759	365	67000	0.9
Ethylene Glycol	54142	12263	365	17660	1.13
NGL	186763	70418	365	104339	0.74

NAME: Y. O. Olivas

PLANT: Jal #3

DATE: 1/13/2004

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
ABSORBENTS	Molsiv adsorbents 4A 1/4 TRISIV		UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-2123	UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-3189	Feb-01	[redacted]	0	1		CRYO UNIT			
ABSORBENTS	Molsiv adsorbents 4A DG 1/16		UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-2123	UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-3189	FEB-01	[redacted]	0	1		CRYO UNIT			
ABSORBENTS	1/2" CERAMIC SUPPORT MATERIAL		UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-2123	UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-3189	JAN-01	[redacted]	0	0		CRYO UNIT			
ABSORBENTS	1/4" CERAMIC SUPPORT MATERIAL		UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-2123	UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-3189	JAN-01	[redacted]	0	0		CRYO UNIT			
ABSORBENTS	1/8" CERAMIC SUPPORT MATERIAL		UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-2123	UOP LLC 25 ALGONQUIN RD DES PLAINES, IL 60017-5017 1-847-391-3189	JAN-01	[redacted]	0	0		CRYO UNIT			
ABSORBENT SOCKS	Instasorb	N/A	Cotton Unlimited, Inc. 1-806-495-3511	Pig Leak & Spill 1-800-468-4647	Jan-92	[redacted]	0	0	A	NONE IN STOCK			
ABSORBENT SOCKS	Original PIG Absorbents	N/A	New Pig Corporation 1-800-535-5053	Pig Leak & Spill 1-800-468-4647	Apr-02	[redacted]	0	0		WAREHOUSE ENGINE ROOMS	10 cases		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
ABSORBENT SOCKS	Super Pig Absorbents	N/A	New Pig Corporation 1-800-535-5053	Pig Leak & Spill 1-800-468-4647	Nov-99					Warehouse Engine Rooms	10 cases		
ACETONE	Dimethylketone	67-64-1	Mallinckrodt, Inc. 314-982-5000		Sep-85			0	G				
ACETYLENE	Ethyne	000 074 862	Big 3 Industries, Inc. 713-868-0202		Jul-83			4	1	WAREHOUSE OLD SHOP			
ACID	Acetic Acid Glacial	64-19-7	MALLINCKRODT 908-859-2151		May-96			1	C	LAB			
ACID	Citric Acid, Monohydrate	N/A	Mallinckrodt, Inc. 606-987-7000		May-72			2	J	LAB			
ACID	Hydrochloric Acid 37%	7647-01-0	Mallinckrodt, Inc 314-982-5000		Sep-86			0	B	LAB			
ACID	Sulfuric Acid	7664-93-9	Koch Sulfur Products Co. P.O. Box 2256 Wichita, KS 67201 316-832-6777		Dec-93			2	C	LAB			
AIR	Breathing Air, Compressed Air	132259-10-0	Air Liquide America Corp. 1-800-424-9300	Air Liquide	Jan-97			0	B	HOSE CART SHED			
ALCOHOL	Isopropyl Alcohol	0067-63-0	Allied Corp.		Oct-82			0	C	WHSE / M.O.	1 PINT		
ALUMINA	Activated Alumina	1344-28-1	The Kemp Company 352-237-1220	Vopak 1-800-777-3342	Nov-96			1	F				
ALUMINUM	Aluminum Alloys	N/A	Morris Steel & Aluminum Co.		Nov-85			0	A				
AMINE	DEA DIETHANOLAMINE	N/A	HUNTSMAN PETROCHEMICAL CORP BOX 27707 HOUSTON, TX 77227-7707 409-727-0831	CHEMTREC 800-424-9300 409-722-9673	JAN-02			0	D	N. OF T.P. PUMP ROOM	8820 gals		
AMMONIUM HYDROXIDE	Aqua Ammonia Ammonia Water	1336-21-6	Mallinckrodt, Inc. 314-982-5000		Jul-85			0	C				

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
ANTIFOAM	SP448 Antifoam	N/A	Nalco/Exxon Energy Chemicals, L.P. 1-800-462-5378	Vopak 1-800-777-3342	Feb-95			0	B		55 gals		
ANTIFREEZE	Ambitrol ® FL 50 Coolant	N/A	Dow Chemical 517-636-4400	Vopak 1-800-777-3342	Oct-95			0	B	A Plt 8820 gal B Plt 8820 gal	17640 gals		
BATTERY	Krylon Battery Protectant	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Feb-93			0	B	WAREHOUSE			
BATTERY	Lead Acid Battery	MS-L10	Alcad, Inc. 1-800-424-9300		Jan-95			2	D	IN VEHICLES			
BIOCIDE	Spectrus NX 1100	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-99			0	D				
BIOCIDE	Spectrus NX 1104	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	MAY-98			0	D				
BUTANE	Iso-Butane	75-28-5	Richardson Products Co. 1-800-424-9300		Apr-94			0	B				
BUTANE	N-Butane ISO-Butane "D" Grade Butane	N/A	Conoco, Inc. 1-800-424-9300		Aug-00			0	B				
BUTANE	Normal Butane Butane Liquified Butane	106-97-8	Richardson Products Co. 1-800-424-9300		Apr-94			0	B				
CAUSTIC SODA BEADS	Caustic Soda	N/A	Occidental Chemical Corp. 1-800-733-3665	Blaine Industrial Supply 1-800-999-9171	Oct-98			2	F	BOILER HOUSE	300 lbs		
CAUSTIC SODA BEADS	Caustic Soda	N/A	Van Waters & Rogers 1-800-424-9300	Vopak 1-800-777-3342	Mar-92			2	F	BOILER HOUSE	300 lbs		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CHLORINE	Liquid Chlorine	7782-50-5	OxyChem 716-278-7021		Jul-90		0	0	X	WATER TREATER COOLING TOWER			
CLEANER - DISINFECTANT	Absolute	N/A	Chemco Chemical Co. 1-800-752-7896		Jun-93		0	0	H	NO STOCK			
CLEANER - DISINFECTANT	Big D Liquid Deodorant, Lemon	N/A	Big D Industries, Inc. 1-800-535-5053 or 1-800-654-4752		Nov-90		0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Big D Deodorizer, Spray	N/A	Big D Industries, Inc. 1-800-535-5053 or 1-800-654-4752		Aug-99		0	0		WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Blaine Hospital Concept Disinfectant	N/A	Hysan Coporation 1-800-752-7869	Blaine Industrial Supply 1-800-999-9171	Oct-91		0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Blaine Orbit Germicidal SP	N/A	Blaine Industrial Supply	Blaine Industrial Supply 1-800-999-9171	Mar-95		0	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Blaine Kwik Bowl/Tile/Porcelain Cleaner	N/A	Blaine Industrial Supply	Blaine Industrial Supply 1-800-999-9171	May-90		0	0	B	WHSE / M.O.	6 CANS		
CLEANER - DISINFECTANT	Bleach, Calusa Bleach Laundry 5%, Sodium Hypochlorite	N/A	Van Waters & Rogers 1-800-424-9300		Dec-89		0	0	B	WHSE / M.O.	2 GALLONS		
CLEANER - DISINFECTANT	Chem-Aqua Aerosol	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco 1-800-752-7896	Sep-93		0	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Dust-All	N/A	Chemco Chemical Co. 1-800-255-3924	Chemco 1-800-752-7896	Jan-94		0	0	B	WHSE / M.O.	6 CANS		
CLEANER - DISINFECTANT	Eye Glass Cleaner Aqua Sol 20/20	N/A	Certified Labs 1-214-438-1381	Certified Labs 1-214-438-1381	Dec-93		0	0	G	NO STOCK			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CLEANER - DISINFECTANT	Fast Flow - Quarts	N/A	Chemco Chemical Co. 404-422-2071	ESSCO 1-800-441-0636	Oct-93		0	0	X	WHSE / M.O.	6 QUARTS		
CLEANER - DISINFECTANT	Fast Orange Lotion Hand Cleaner	N/A	Permatex Industrial	ESSCO 1-800-441-0636	May-95		2	0	B	WAREHOUSE	1 GALLON		
CLEANER - DISINFECTANT	Fresh Bowl	N/A	Chemco Chemical Co.	Chemco 1-800-752-7896	Jul-93		0	1	B	WHSE / M.O.	6 QUARTS		
CLEANER - DISINFECTANT	Glass Cleaner	N/A	Sprayway, Inc. 1-800-228-5635 X009	Blaine Industrial Supply 1-800-999-9171	Jan-94		2	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Hot Springs Cleaner	N/A	The Butcher Company		Jan-90		0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Joe's Hand Cleaner	N/A	Kleen Products, Inc. 1-800-424-9300		Apr-88		0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Lava Hand Soap	N/A	Procter & Gamble 513-983-1100	Blaine Industrial Supply 1-800-999-9171	Jun-90		0	0	A	WHSE / M.O.	24 BARS		
CLEANER - DISINFECTANT	VERDE HAND / DISHWASHER DETERGENT		CARROLL Company 1-800-535-5053				0	0	0				
CLEANER - DISINFECTANT	Orange Cleaner Concentrate	N/A	Lawson Products, Inc. 303-623-5716	ESSCO 1-800-441-0636	Aug-94		2	0	B	NO STOCK			
CLEANER - DISINFECTANT	Pine Odor Disinfectant	N/A	Carroll Company 1-214-278-1304	Blaine Industrial Supply 1-800-999-9171			1	0	B	WHSE / M.O.	2 GALLONS		
CLEANER - DISINFECTANT	Pretty Potty	N/A	Carroll Company 1-214-278-1304		Feb-91		0	1	B	NO STOCK			
CLEANER - DISINFECTANT	Pride with Pumice Hand Cleaner	N/A	Chemco 1-800-752-7896	Chemco 1-800-752-7896	Jul-92		0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Purafil	N/A	Purafil, Inc. 770-662-8545		Feb-98		0	0	B	NO STOCK			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CLEANER - DISINFECTANT	Quikleen II	N/A	Quest Chemical Corp. 713-896-8188		Aug-93		0	1	D	NO STOCK			
CLEANER - DISINFECTANT	Santec LCS 2002 Eye Glass Cleaner	N/A	Santec Specialties, Inc. 1-800-424-9300	NO	Jan-94		0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Shiney Bright	N/A	Mantek 214-438-1381		Aug-93		0	0	X	NO STOCK			
CLEANER - DISINFECTANT	Sparkle	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco 1-800-752-7896	Apr-93		2	0	A	NO STOCK			
CLEANER - DISINFECTANT	Speedtrack Clean & Burnish	N/A	The Butcher Company		Apr-92		0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Sure Step Sealer/Finish	111-77-3	Canberra Corp. 419-841-6616	Blaine Industrial Supply 1-800-999-9171	May-92		0	0	B	WAREHOUSE	2 GALLONS		
CLEANER - DISINFECTANT	Sure Strip Mop & Strip	N/A	Canberra Corp. 419-841-6616	Blaine Industrial Supply 1-800-999-9171	May-96		0	0	B	WAREHOUSE	2 GALLONS		
CLEANER - DISINFECTANT	Velva-Sheen Floor Wax	N/A	Majestic Wax Company 303-355-1606 Day 303-722-8081 Night	Blaine Industrial Supply 1-800-999-9171			2	1	B	WAREHOUSE ENGINE ROOMS	2 GALLONS		
CLEANER - DISINFECTANT	Zep Magnet Aerosol Dust Mop & Cloth Treatment	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Jul-89		0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Zep Meter Mist Green Apple Aerosol Deodorant	400 GAL	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Sep-92		0	1	A	NO STOCK			
CLEANER - DISINFECTANT	Zep MVP Hand Cleaner	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Apr-95		0	0	A	NO STOCK			
CO2	Carbon Dioxide	0124-38-9			Jul-79		0	0	A				
COMPRESSED GAS	Gas Mixture H2S									SULPHUR PLT	? CU FT		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
COMPRESSED GAS	Gas Mixture SO2	N/A	Air Liquide America Corp. 713-868-0302	Air Liquide America Corp. 713-868-0302	Jul-85		0	0	B	SULPHUR PLT	One Cylinder		
CORROSION CHEMICALS	Continuum AFC-3109 Water-Based Corrosion Inhibitor/Deposit Control Agent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jan-97		1	0	B	"A" COOLING TOWER "B" COOLING TOWER	450 GALLONS 450 GALLONS		
CORROSION CHEMICALS	Corrshield NT4201 Water-Based Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-97			0	B	"A" PLANT "B" PLANT	250 GALLONS 250 GALLONS		
CORROSION CHEMICALS	Cortrol IS1050 Powered Oxygen Scavenger	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Sep-99		0	0	B	N.E. SIDE OF #3 BOILER	500 LB DRUM		
CORROSION CHEMICALS	ESCUDERO PC-396 CLEANER	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85			0					
CORROSION CHEMICALS	ESCUDERO PI-500 CORROSION INHIBITOR	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85			0	G				
CORROSION CHEMICALS	ESCUDERO PI-500B CORROSION INHIBITOR / BIO-STAT	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85			0	G				

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CORROSION CHEMICALS	ESCUDERO PPP-3000 3 PHASE CORROSION INHIBITOR	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85			0	G				
CORROSION CHEMICALS	Inhibitor AZ8104 Water-Based Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Dec-99			0	D	"A" COOLING TOWER "B" COOLING TOWER	55 GAL. DRUM 55 GAL. DRUM		
CORROSION CHEMICALS	Max-Amine 70B Amine Solvent Antifoam	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-95			0	B	TREATING PLT	400 GALS.		
CORROSION CHEMICALS	Max-Amine 82B LPG Emulsion Breaker	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jun-98			0	B	CLASSIFIERS	5 GALLONS		
CORROSION CHEMICALS	Max-Amine GT741C Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Apr-98			0	D	TREATING PLT	400 GALS.		
CORROSION CHEMICALS	Optisperse ADJ1030 Antifoam Agent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-99			0	B	BARREL RACK W OF WHSE	5 GALLONS		
CORROSION CHEMICALS	Optisperse APO 200 Water-Based Internal Boiler Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	AUG-01			0	B	N SIDE OF #3 BOILER	500 GALS.		
CORROSION CHEMICALS	PHILMPLUS 5K7	N/A	GE BETZ, INC 800-877-1940	GE BETZ 4636 SOMERTON ROAD TREVOSE, PA 19053	AUG-01			0	B				
CORROSION CHEMICALS	Steamate NF770 Condensate Return Line Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jun-97			0	D	N SIDE OF #3 BOILER	55 GAL. DRUM		
CORROSION CHEMICALS	Steamate PAS4010 Water-Based Internal Boiler Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Feb-97			0	D	N SIDE OF #3 BOILER	250 GAL.		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CORROSION CHEMICALS	Tretolite	N/A	Petrolite Corp. 1-800-424-9300		May-96			0	H	WAREHOUSE			
CORROSION CHEMICALS	Zep Ironclad Aerosol Corrosion Inhibitor	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Apr-95			0	B	WAREHOUSE	12 CANS		
DIESEL FUEL	Diesel Fuel	68476-34-6	Conoco Inc P.O. Box 2197 Houston, TX 77252 1-800-441-3637		Jan-94			0	B	TANK WEST OF WAREHOUSE	300 GAL.		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Ceramic R-Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91			1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Ceramic S-Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Feb-91			1	C	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona E-Metal Solidifier	N/A	Belzona Molecular Ltd. 305-594-4994		Oct-90			1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Super Metal Base	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91			1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Super Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91			1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Lok-Cease Aerosol	N/A	Certified Labs 1-214-438-1381	ESSCO 1-800-441-0636	May-95			0	E	WAREHOUSE	12 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	M/M Quick Cure	N/A	Certified Labs 1-214-438-1381		Jan-92			0	C	WAREHOUSE			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
FILTERS	Anthracite Filter Media	N/A	Carbon Sales, Inc. 717-823-7664		Mar-84		0	0	E				
FIRE EXTINGUISHING AGENT	Halon 1211	N/A	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	G				
FIRE EXTINGUISHING AGENT	Halon 1301 Freon FE 1301	75-63-8	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	G				
FIRE EXTINGUISHING AGENT	Plus Fifty B Dry Chemical	N/A	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	E				
FIRE EXTINGUISHING AGENT	Purple-K Dry Chemical	N/A	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	E	WHSE-AP-BP-GP-TP-DCS			
FIRST AID	Burn Ointment Burn Compound	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	May-91		0	0	A	WHSE FIRST AID KITS	12 PKG		
FIRST AID	Burn Spray	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	Oct-91			0	A	NO STOCK			
FIRST AID	Eye Wash Buffered EyeLert	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	Sep-85		0	0	A	WHSE FIRST AID KITS	12 BOTTLES		
FIRST AID	Silica Gel	63231-67-4	Kemp Manufacturing Co. 1-800-424-9300		Jul-93		0	0	E	WHSE FIRST AID KITS			
FIRST AID	Water-Jel Burn Jel	N/A	Water Jel Technologies 201-507-8300	Affirmed 888-609-2303 Permian Sales 800-633-7793	May-92		0	0	A	WAREHOUSE	ASSRT. SIZES		
FREON 12	Dichlorodifluoromethane	N/A	Genium Publishing Corp.		Feb-86		0	0	B	IN REFRIG. A/C UNITS ONLY			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
FREON 22	Chlorodifluoromethane	N/A	Genium Publishing Corp.		Feb-86		0	0	B	IN REFRIG. A/C UNITS ONLY			
GASKETS	Break-Away Brush Top Gasket Remover	N/A	Mantek 214-438-1381		Dec-90		1	0	B	NO STOCK			
GASKETS	Buna O-Ring Gasket Material	N/A	International Seal Co., Inc. 714-834-0602	Gasco 505-393-6171	Mar-90		1	0	A	WAREHOUSE	VARIOUS		
GASKETS	Copper	7440-50-8	Hussey Copper LTD 412-857-4200	Gasco 505-393-6171	Mar-85		0	0	A	WAREHOUSE	VARIOUS		
GASKETS	Copper-Coat Gasket Compound	N/A	K & W Products 213-693-8228	Gasco 505-393-6171	May-72		1	0	G	WAREHOUSE	6 cans		
GASKETS	CS-301		Armstrong World Ind., Inc.	Gasco 505-393-6171	Sep-85		1	0	A	WAREHOUSE	1 roll		
GASKETS	DK-153 Accoseal	N/A	Armstrong World Ind., Inc.	Gasco 505-393-6171	Oct-85		1	0	A	WAREHOUSE	1 roll		
GASKETS	Dura-Carb I Spiroflex Gaskets	N/A	Standco Industries, Inc. 713-224-6311	Gasco 505-393-6171	Nov-80		0	0	A	WAREHOUSE			
GASKETS	Form-A-Gasket #2	N/A	Permatex Industrial		May-95		2	0	B	WAREHOUSE	4 tubes		
GASKETS	Gore-Tex Joint Sealant	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jun-89		0	0	A	WAREHOUSE	350'		
GASKETS	Gore-Tex Valve Stem Packing	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Mar-90		0	0	A	WAREHOUSE	100'		
GASKETS	Gore-Tex Gasket Tape	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jun-89		0	0	A	WAREHOUSE			
GASKETS	Gore-Tex Insertable Gasket	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	May-90		0	0	A	NO STOCK			
GASKETS	Gore-Tex Sheet Gasketing	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jan-91		0		A	NO STOCK			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
GASKETS	Green NON/ASB Gasket Material Donex Style Optite 560	N/A	Donit Industries 216-856-4635	Gasco 505-393-6171	Apr-89			0	A	WAREHOUSE	1 roll		
GASKETS	K1000 Gasket Material - Compressed Rubber Bonded Aramid Sheet Packing	N/A	Donex, Inc. 1-800-637-7733	Gasco 505-393-6171	May-72			0	A	WAREHOUSE	2' X 4"		
GASKETS	NABS Gasket Material Vellutherm 650	N/A	Vellumoid, Inc.	Gasco 505-393-6171	Jun-88			0	A	WAREHOUSE	1 roll		
GASKETS	Pink 825 Non/Asb Gasket Material 825" Compressed Graphite Sheet	N/A	Phelps Industrial Products 1-410-796-2222	Gasco 505-393-6171	Jan-94			0	A	WAREHOUSE	1 ROLL 4' X 6'		
GASKETS	Purple 925 Non/Asb Gasket Material 925" Compressed Graphite Sheet	N/A	Phelps Industrial Products 1-410-796-2222	Gasco 505-393-6171	Jan-94			0	A	NO STOCK			
GASKETS	Rectorseal #5 Pipe Thread Sealing Compound	N/A	The Rectorseal Corp. 1-800-424-9300	ESSCO 1-800-441-0636	Jan-91			0	B	WAREHOUSE	6 CANS		
GASKETS	Silicone - 732® Multi Purpose Sealant	N/A	Dow Corning Corp. 517-496-5900	ESSCO 1-800-441-0636				0	B	WAREHOUSE	12 TUBES		
GASKETS	Silicone - 736 Heat Resistant Sealant	N/A	Dow Corning Corp. 517-496-5900	ESSCO 1-800-441-0636				0	B	WAREHOUSE	12 TUBES		
GASKETS	Silite RTV Silicone	N/A	ITW Devcon 1-800-424-9300	ESSCO 1-800-441-0636	Jun-92			1	B	WAREHOUSE			
GASKETS	Slic-Tite Tape with Teflon	N/A	LA-CO Industries, Inc. 312-826-1700	ESSCO 1-800-441-0636	Apr-89			0	A	WAREHOUSE	12 ROLLS		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
GASKETS	Viton O'Rings Vulcanized Fluoroelastomer	N/A	International Seal Co., Inc. 714-834-0602	Gasco 505-393-6171	May-78			0	A	WAREHOUSE	MADE UP VARIOUS		
GASKETS	Zep-Off Gasket Remover	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	May-97			0	X	NO STOCK			
GLYCOL	Ashland Permanent Antifreeze	N/A	Ashland Chemical Co. 606-324-1133	Ashland Chemical Co. 1-800-583-6265	May-89			0	C				
GLYCOL	Compressor Engine Coolant 50-50	107-21-1	Ashland Distribution Co. & Ashland Specialty Chemical Co. 1-800-274-5263	Ashland Chemical Co. 1-800-583-6265	Mar-03			0					
GLYCOL	Ethylene Glycol	107-21-1	Mallinckrodt Baker, Inc. 1-800-424-9300	Ashland Chemical Co. 1-800-583-6265	Dec-96			1	B				
GLYCOL	Monoethanolamine 85%	141-43-5	Ashland Distribution Co. & Ashland Specialty Chemical Co. 1-800-274-5263	Vopak 800-777-3342 Ashland 800-583-6265	Oct-98					N. OF T.P. PUMP ROOM			
GLYCOL	Treithylene Glycol TEG	112-27-6	Ashland Chemical Co. 1-800-274-5263	Ashland Chemical Co. 1-800-583-6265	Mar-02			0	B	N. OF T.P. PUMP ROOM	2976 gals		
GREASE	Defender	N/A	Chemco Chemical Co.		Jan-93			0	B	NO STOCK			
GREASE	Lubriplate "100" Series Lubricating Grease	N/A	Fiske Brothers Refining Co. 419-691-2491		Nov-85			0	B	WAREHOUSE	12 TUBES		
GREASE	Lubriplate "930" Series Lubricating Grease	N/A	Fiske Brothers Refining Co. 419-691-2491		Nov-85			0	B	NO STOCK			
GREASE	Mobilth SHC100	N/A	Exxonmobil Oil Corp. 3225 Gallows Rd Fairfax, VA 22037 609-737-4411					0	0	WAREHOUSE	12 TUBES		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
GREASE	Premalube	N/A	Certified Labs 1-214-438-1381	Certified Labs 1-214-438-1381	Sep-97		1	0	A	WAREHOUSE	12 STICKS		
GREASE	Timesaver Lapping Compounds	N/A	Timesaver Products Company		Apr-86		0	1	E	WAREHOUSE	4 CANS		
GREASE	Ultra Shield Silicone Grease & Sealing Compound	N/A	Hydrotex, Inc. 1-800-424-9300		Feb-95		1	0	B	WAREHOUSE	2 TUBES		
GREASE	Val-Tex Valve Flush	N/A	Val-Tex 10600 FALLSTONE RD HOUSTON, TX 770997 13-530-4848	Val-Tex 713-530-4848	Jan-02		1	0	A	WAREHOUSE	12 STICKS 5 GAL. BUCKET		
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component A	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92		1	1	G				
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component B	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92		1	1	H				
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component C	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92		0	0	G				
HELIUM	Helium	007-440-597	Big Three Industries, Inc. 713-868-0202	Burke Welding 915-943-4142	Apr-84		0	0	A				
HYDROGEN SULFIDE	H2S	7783-06-4			Feb-93		4	1	X				
INK	High Intensity Nylon Wick Ink Aqueous Ink	N/A	Graphic Controls 716-853-7500	The Foxboro Company 508-543-8750	Mar-88		0	0	B	MAIN OFFICE			
INSECTICIDE	Amdro Fire Ant Insecticide	67485-29-4	American Cyanamid Co.		Aug-83		1	0	E	WAREHOUSE	1 JUG		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
INSECTICIDE	Begone	N/A	Chemco Chemical Co. 404-422-2071	Chemco 1-800-752-7896	Mar-95			0	C	WAREHOUSE	12 CANS		
INSECTICIDE	North Insect Repellent	N/A	ARI 1-800-241-5064		Jun-90			0	A	NO STOCK			
INSECTICIDE	Sniper	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco 1-800-752-7896	Jan-94			0	A	WAREHOUSE	12 CANS		
INSECTICIDE	Wasp Hornet Spray	N/A	North Health Care 815-877-2531	Chemco 1-800-752-7896	Nov-91			0	B	WAREHOUSE	12 CANS		
INSULATION	CAL-CIL Insulation	1344-95-2	Pabco Insualation 1-303-858-7554					0	E	OLD SHOP	3 BOXES		
INSULATION	Foamglas Insulation	N/A	Pittsburgh Corning Corp. 412-327-6100		Nov-91			0	X	OLD SHOP	1 ROLL		
INSULATION	KAO-WOOL Inswool Blanket	N/A	A.P. Green Industries, Inc.		Apr-90			0	E	OLD SHOP	1 ROLL		
INSULATION	Mineral Wool Insulation	N/A	Partek Insulations, Inc. 1-800-265-7514		Aug-89			0	X	OLD SHOP	1 ROLL		
INSULATION	Nokorode Low Temp Moisture & Vapor Barrier Bedding Compound	N/A	Lion Oil Company		Jan-74			0	B	OLD SHOP	1 CAN		
INSULATION	Trymer ® 9501 Rigid Foam Insulation	N/A	Dow Chemical 517-636-4400		Mar-92			0	B	NO STOCK			
LAB CHEMICALS	All Ricca Buffer Solutions	N/A	Ricca Chemical Co.	Thermal Scientific	Apr-95			0	A	Lab			
LAB CHEMICALS	Bioscan Free ATP Pen L6587 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-97			0	B	Lab			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LAB CHEMICALS	Bioscan Total ATP Sampling Pens L6586 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Oct-98		0	0	B	Lab			
LAB CHEMICALS	Buffer Solution PH 4.0 L1860 Field Test Reagent	N/A	G.E. BETZ 1-800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	0CT-02		0	0	B	Lab	1 GAL		
LAB CHEMICALS	Buffer Solution L1861 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jan-00		0	0	B	Lab	1 GAL		
LAB CHEMICALS	Buffer Solution PH 10.0 L1862 Field Test Reagent	N/A	G.E. BETZ 1-800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	Jan-00		0	0	B	Lab	1 GAL		
LAB CHEMICALS	CHLORINE CHEMETS 0.1-1.0 & 1-5PPM	67-64-1	GE BETZ 800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	FEB-98			0	B				
LAB CHEMICALS	Conductivity STD L1918	N/A	Betz Industrial Div. 1-800-877-1940	BetzDearborn	Feb-91		0	0	B	Lab	1 GAL		
LAB CHEMICALS	Hardness Indicator L290 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95		0	0	B	Lab	1 QUART		
LAB CHEMICALS	Lead Acetate	6080-56-4	Del Mar Scientific, Inc.		Feb-98		0	0	B	Lab	1 GAL		
LAB CHEMICALS	Methyl Purple Indicator L297 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95		0	0		Lab	1 QUART		
LAB CHEMICALS	Microhardness Titrant L834 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95		0	0	B	Lab	1000 ML		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LAB CHEMICALS	Potassium Iodide-Iodate L237 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-96		0	0	B	Lab	1000 ML		
LAB CHEMICALS	STARCH INDICATOR ACCULUTE	N/A	CHEMTREC 800-424-9300 ANACHEMIA 1-518-297-4444	ANACHEMIA CHEMICALS, INC 3 LINCOLN BLVD ROUSES POINT, NY 12979	OCT-98								
LAB CHEMICALS	Sulfite Indicator Plus L219 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Apr-97			0		Lab	1000 ML		
LAB CHEMICALS	Sulfuric Acid Solution N/50 (0.02 N)	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95			0	0	Lab			
LAB CHEMICALS	Superox 712 Methyl Ethyl Ketone Peroxide	N/A	Reichhold Chemicals, Inc. 1-800-424-9300		May-94			3	D	Lab	1000 ML		
LAB CHEMICALS	Universal Hardness Buffer Solution L1566 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	May-98			0		Lab	1000 ML		
LEAD	Lead (SOLDER)	7439-92-1	Vulcan Lead Products Co. 414-645-2040		Jan-92		0	0	B	WAREHOUSE	2 ROLLS		
LEAD	Lead Acetate Trihydrate	6080-56-4	Genium Publishing Corp.		Apr-86		0	0	B	NO STOCK			
LEAD	Lead Acetate Paper Tape - CHEMFILM	6080-56-4	Del Mar Scientific, Inc. P.O. Box 486 Addison, TX 75001 972 661-5160	Del Mar Scientific, Inc. P.O. Box 486 Addison, TX 75001 972 661-5160	Feb-98		0	0	0	WAREHOUSE			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LEAK DETECTOR	AR-GLO 4/OL		CHEMTREC 800-424-9300	M SHAH, SPECTRONICS CORP 956 BRUSH HOLLOW RD WESTBURY, NY 11590 800-274-8888	MAY-01								
LEAK DETECTOR	Snoop	7732-18-5	Nupro Company 1-800-424-9300	ESSCO 1-800-441-0636	Sep-91		0	0	B	WAREHOUSE	1 GALLON		
LUBRICANT	AR-GLO 4/OL		CHEMTREC 800-424-9300	M SHAH, SPECTRONICS CORP 956 BRUSH HOLLOW RD WESTBURY, NY 11590 800-274-8888	MAY-01								
LUBRICANT	Dri-Gard Aerosol	N/A	Mantek 214-438-1381		Jul-93			0	E	WAREHOUSE	6 CANS		
LUBRICANT	Knock'er Loose Penetrating Oil (Aerosol)	N/A	K&W Products 8319 S. Allport Av. Santa Fe Springs, CA 90670 213-693-8228	ESSCO 1-800-441-0636	Nov-85		2	0	H	WAREHOUSE	12 CANS		
LUBRICANT	Kopr-Kote Tool Joint & Drill Collar Compound Anti-Seize Jacking Lubricant	N/A	Jet-Lube, Inc. 1-800-424-9300	ESSCO 1-800-441-0636	Aug-96		1	1	B	WAREHOUSE	6 CANS		
LUBRICANT	Krylon Belt Dressing	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Feb-93		1	0	B	WAREHOUSE	6 CANS		
LUBRICANT	Sealweld Valve Cleaner Valve Lubricant	N/A	Sealweld Corporation 1-800-255-3924	Permian Valve 915-381-1313	Aug-94		1	0	B	WAREHOUSE	12 STICKS		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LUBRICANT	Tap Magic Aluminum Cutting Fuid	N/A	The Steco Corporation 501-375-5644	ESSCO 1-800-441-0636	May-86		2	1	B	WAREHOUSE	2 CANS		
LUBRICANT	Tap Magic Protap Cutting Fluid	N/A	The Steco Corporation 501-375-5644	ESSCO 1-800-441-0636	Jul-89		1	0	B	WAREHOUSE	2 CANS		
LUBRICANT	Val-Tex 80 & 80's	N/A	Val-Tex 281-530-4848	Val-Tex 713-530-4848	Jun-00		0	0	A	WAREHOUSE	24 STICKS		
LUBRICANT	WD-40 Aerosol Organic Mixture	N/A	WD-40 Company 1-800-424-9300	ESSCO 1-800-441-0636	Mar-90		2	0	B	WAREHOUSE	1 GALLON		
LUBRICANT	Zepreserve Aerosol Penetrant Spray	N/A	Zep Manufacturing Co. 1-800-424-9300		Aug-90		1	1	X	NO STOCK			
MERCURY	Mercury	7439976	Magnetrol International 708-969-4000		Oct-86		0	0	H	NO STOCK			
METAL	1/2" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 847-391-3189	Jan-03		0	0		Cryo Plant			
METAL	1/4" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 847-391-3189	Jan-03		0	0		Cryo Plant			
METAL	1/8" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 847-391-3189	Jan-03		0	0		Cryo Plant			
METHANE	Methane	74-82-8	Liquid Air Corp. 1-800-424-9300				4	0	A	ENG. SHACK	3 CYLINDERS		
METHANE - ETHANE	Methane - Ethane	N/A	Parker & Parsley Development Co. 915-563-8432		Jul-94		4	0	A	A PLT B PLT PROCESS			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
METHANOL	Methyl Alcohol	67-56-1	Mallinckrodt, Inc. 314-982-5000	Eddins-Walcher LSI	May-86			0	C	Cryo, SRU, Plant Storage	1050 gals		
NATURAL GAS	Field Sales Gas - Unprocessed	8006-14-2	Oryx Energy Co. 214-357-1082		Oct-91			0	B	A PLT B PLT			
NATURAL GAS	GPA Natural Gas Reference and Calibration Standard	N/A	Phillips 66 Co. 918-661-8118	Burke Welding 915-943-4142	Oct-93			0	A	ENG. SHACK	1 CYLINDER		
NATURAL GAS	GPA-NGL Blend #5	N/A	Phillips 66 Co. 918-661-8118		Sep-93			0	A	NO STOCK			
NATURAL GAS	Natural Gas Fuel Gas	N/A	Gruy Petroleum Management		Feb-98			0	B	A PLT B PLT PROCESS			
NATURAL GAS	Natural Gas - Dry	N/A	Marathon Oil Co. 1-800-424-9300		Jan-96			1	A	CRYO PLT A PLT			
NATURAL GAS	Natural Gas Residue	8006-14-2	Richardson Products Co. 1-800-424-9300		Feb-00			0	B	CRYO PLT A PLT			
NATURAL GAS	Sour Natural Gas Poison Gas Hydrogen Sulfide Gas Acid Gas	N/A	Gruy Petroleum Management		Feb-98			0	B	SULPHUR PLT B PLT A PLT			
NATURAL GAS	Sweet Natural Gas Methane Residue Gas	8006-14-2	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	SEP-00			0	B	T. P. A PLT CRYO PLT			
NATURAL GAS	Wellhead Natural Gas Sour Natural Gas Sour Gas Sour Raw Gas	8006-14-2	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Sep-00			0	B	B PLT C PLT SOLAR #9			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
NATURAL GAS - CONDENSATE	Natural Gas Condensate	68919-39-1	Richardson Products Co. 1-800-424-9300		Feb-00			0	X	PLANT SCRUBBERS			
NATURAL GAS - CONDENSATE	Natural Gasoline Condensate	64741-47-5	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Oct-00			0	X	3-PHASE & PRODUCT STORAGE			
NATURAL GAS - CONDENSATE	Petroleum Distillate	8002-05-9	Richardson Products Co. 1-800-424-9300		Apr-94			0	X	PROCESS			
NATURAL GAS - ETHANE	Ethane	74-84-0	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Aug-00			0	B	CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane 60005	74-84-0	Texaco Natural Gas Plants and Liquid Divison 1-800-782-7852	Texaco Natural Gas Plants	Oct-95			4		CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane Liquified Petroleum Gas (LPG)	74-84-0	Richardson Products Co. 1-800-424-9300		Apr-94			0	B	CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane/Propane/Butane PBC Mix/EPBC Mix	N/A	Conoco, Inc. 1-800-424-9300		Aug-00			0	B	CRYO & PRODUCT P/L			
NATURAL GASOLINE	Natural Gasoline	68425-31-0	Richardson Products Co. 1-800-424-9300		Apr-94			0	B	SCRUBBERS			
NATURAL GASOLINE	Super Regular - Unleaded Gasoline	N/A	Shell 1-800-424-9300	KW Fuel	May-83			0	B	WAREHOUSE	570 gals		
NITROGEN	1,10-Phenanthroline in Ethanol Heterocyclic Nitrogen	N/A	E-C Apparatus Corp.	Burke Welding 915-943-4142	Sep-88			0	B	SULPHUR PLANT			
NITROGEN	Nitrogen	007 727 379	Big Three Industries, Inc. 713-868-0202		Apr-84			0	A	SULPHUR PLANT			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OFFICE SUPPLIES	Black Dry Ink Black Toner	N/A	Xerox Corp. 716-422-2177	Xerox 800-822-2200 I Got It 505-393-3676	Apr-93		0	0	A	WHSE / M.O.	2		
OFFICE SUPPLIES	Copy Cartridge	N/A	Xerox Corp. 716-422-2177	Xerox 1-800-822-2200	Jun-93		0	0	A	WHSE / M.O.	1		
OFFICE SUPPLIES	Magic Markers	N/A	Precision Dynamics Corp.	I Got It 505-393-6171	Jan-93		0	0	X	WHSE / M.O.	48		
OIL	Aviation Hydraulic Fluid A	N/A	Chevron 415-233-3737	Eddins-Walcher 505-393-2197	Dec-80		1	0	E	WAREHOUSE	110 gals		
OIL	Citgo Gas Engine Oils, SUS 450-2000 GE-S1A	N/A	Citgo Petroleum Corp. 1-800-424-9300		May-97		1	0	A	WAREHOUSE	DRUM CONTAIN.		
OIL	Crude Oil	8002-05-9	Parker & Parsley Development Co. 915-563-8432		Jun-94		2	0	B				
OIL	Diesel Fuel Oil #2-D	068-476-346	General Electric Co.		Oct-81		2	0	B	WAREHOUSE	300 GALLONS		
OIL	Imperial Grade 30	N/A	Imperial Oil Co., Inc. 201-591-9400		Apr-89		1	0	B	WAREHOUSE			
OIL	Light Cycle Oil	64741-59-9	Phillips 66 Co. 918-661-8118		Aug-96		2	0		WAREHOUSE	12 CANS		
OIL	Marvel Mystery Oil	N/A	Marvel Oil Company, Inc. 914-937-4000	B-Line Filter 1-800-594-5606	May-69		0	0	B	B-Line Filter	55 gals		
OIL	Mobil Almo 527	N/A	Mobil Oil Corp. Health = 1-609-737-4411 Transport = 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-89		1	0	A	WAREHOUSE CONTAIN.	110 gals		
OIL	Mobil DTE Oil Heavy	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-92		1	0	A	WAREHOUSE CONTAIN.	110 gals		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OIL	Mobil DTE Oil Heavy Medium	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	Eddins-Walcher 505-393-2197	Jan-89			0	A	DISPOSAL WELL	55 gals		
OIL	Mobil Pegasus 390	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	NOT IN USE	Aug-83			0	B	NOT IN USE			
OIL	Mobil Pegasus 490	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	Eddins-Walcher 915-586-5803	Oct-82			0	B	A Plt 8820 gals B Plt (2) 8820 gals B Plant 8820 gals	35280 gals		
OIL	Mobil Rarus 427	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-92			0	A	Air Comp.	55 gals		
OIL	Mobil Rarus 827	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Oct-96			0	A	Air Comp.	55 gals		
OIL	Mobilgear 629	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Nov-93			0	A	DISPOSAL WELL	220 gals		
OIL	Pennzoil HD Motor Oil SAE 10W-40	N/A	Pennzoil Company 1-713-236-6070	Eddins-Walcher 505-393-2197				0	B	WAREHOUSE	12 CANS		
OIL	Ridgid Dark Thread Cutting Oil	N/A	Ridge Tool Company 216-323-5581	ESSCO 1-800-441-0636	Dec-91			0	B	WAREHOUSE	6 CANS		
OIL	Shell Tellus Oil 100	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Nov-91			0	B	"B" PLANT WHSE BBL RACK	55 gals		
OIL	Shell Tellus Oil 32	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Dec-94			0	B	NO STOCK			
OIL	Shell Tellus Oil 68 Lubricating Oil	N/A	Shell Oil Company 713-473-9461	KW Fuel 505-393-5135	Apr-79			0	B	WAREHOUSE "B" PLANT	55 gals		
OIL	Shell Turbo Oil 150	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Oct-91			0	A	NO STOCK			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OIL	Shell Turbo Oil 220	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Mar-87			0	B	NO STOCK			
OIL	Shell Turbo Oil 32	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Dec-87			0	B	B PLANT	8820 gals		
OIL	Shell Turbo Oil 46 Lubricating Oil	N/A	Shell Oil Company 713-473-9461	KW Fuel 505-393-5135	Apr-79			0	B	CENTAURS	275 gals		
OIL	Thermalane 600	N/A	Coastal Chemical Co., Inc. 337-893-3862	Coastal Chemicals 800-424-9300 / 713-477-6675	Jan-01			0	B	SRU	55 gals		
OIL	Tractor Hydraulic Oil	N/A			May-86			0	B	WAREHOUSE	5 GALLONS		
OIL	Tribol Molub-Alloy 90/220 Gear Oil	N/A	Tribol Inc. 1-800-424-9300		Sep-90			0	B	DOCK "B" PLANT	3 DRUMS		
OIL	Turbo T Oil 32	N/A	Equilon Enterprises, LLC 1-877-276-7283		Jan-01			0	?				
OIL	Van Straaten 4163	64742-53-6	Van Straaten Chemical Co.		May-86			0	B				
OXYGEN	Oxygen	007 782 447	Big Three Industries, Inc. 713-868-0202	Burke Welding 915-943-4142	Jul-83			2	B				
PAINT	#600 Pipe Primer	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-92			0	G	PAINT SHED	16 GALLONS		
PAINT	#600 Pipe Tape	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Jan-93			0	B	PAINT SHED	12 ROLLS		
PAINT	#800 Pipe Primer	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Nov-91			0	G	PAINT SHED	16 GALLONS		
PAINT	#800 Pipe Tape	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-92			0	B	PAINT SHED	12 ROLLS		
PAINT	Carbothane 139 Rustarmor 139	N/A	Carboline Company 1-800-424-9300	Geo. S. Thompson 915-337-7324	Mar-00			0	G	PAINT SHED	8 GALLONS		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
PAINT	Krylon Spray Paint	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Jan-94		4	0	B	WAREHOUSE	60 CANS		
PAINT	Paint Product	N/A	Valspar Corporation 1-800-424-9300		Jul-81		3	1	G	PAINT SHED			
PAINT	Paint Thinner	N/A	Mobil Chemical 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-84		3	1	G	PAINT SHED	16 GALLONS		
PAINT	Spray Paint Spray Coating	N/A	Rust-Oleum Corp. 316-864-8200	Geo. S. Thompson 915-337-7324			3	0	G	PAINT SHED			
PAINT	Strypeeze Paint Remover	N/A	The Savogran Company of California		Sep-80		2	1	C	PAINT SHED			
PAINT	Sur-Prep Rust Converter	N/A	Coronado Paint Co., Inc. 904-428-6461		Apr-92		0	0	A	PAINT SHED			
PAINT	Toluene	0108-88-3			Apr-86		3	0	G	NOT IN USE			
PAINT	Val-Chem Epoxy Enamel Floor Paint	N/A	Valspar Product Data 1-800-228-5635	Geo. S. Thompson 915-337-7324	Nov-91		2	1	G	PAINT SHED	24 GALLONS		
PROPANE	Propane	74-98-6	Conoco, Inc. 1-800-424-9300	Eddins-Walcher 505-393-2197	Jun-00		4	0	B	PROPANE STORAGE N OF PLANT	28803 gals		
PROPANE	Propane Without Odorant Liquified Petroleum Gas	74-98-6	Richardson Products Co. 1-800-424-9300		Apr-94		4	0	B	"B" PRODUCT SURGE TANK			
SEALANT	Aluminum Caulking Foster 95-44 Foster 95-44C Elastolar Sealant	N/A	H.B. Fuller Company 1-800-228-5635		Jun-91		3	0	B	SUPPLIED BY VENDOR WHEN IN USE			

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
SOAP	Cougar Super Blast	7758-29-4	Cougar Cleaning Equipment 1-800-535-5053	Cougar Cleaning Equipment Box 13985 Odessa, TX 79768-3985 915-381-5450	Feb-98		0	0	0	WAREHOUSE	"A"-440 gal "B"- 440 gal		
SOAP	Powder Hand Soap Thervo	N/A	Blaine Chemical & Ind. Supply Company, Inc. 505-392-7146	Blaine Industrial Suppy 1-800-999-9171	Jun-90		0	0	A	WAREHOUSE	12 CANS		
SOAP	Spectrus BD 1501 Water-Based Deposit Control Agent	N/A	BetzDearborn 1-800-877-1940	Betz Dearborn	Jun-97		1	0	B				
SOAP	Sum-Clean	N/A	Summit Oil Company		Feb-96		0	0	B	NO STOCK			
SOAP	Super Blast	N/A	Cougar Cleaning Equipment 1-800-535-5053	Cougar Cleaning Equipment	Feb-98		0	0	C	Warehouse 110 gals A Pit (2) 220 gals B Pit (2) 220 gals	990 gals		
SOAP	Sur-Clean	N/A	Summit Industrial Products, Inc.		Aug-95		0	0	B	NO STOCK			
SODA ASH	Sodium Carbonate	N/A	Van Waters & Rogers 1-800-424-9300	Vopak	Jul-93		0	1	E				
SOLVENT	Chem Solve	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco	Apr-94		1	1	B	NO STOCK			
SOLVENT	Cold Kill	N/A	Chemco Chemical Co. 1-800-535-5035	Chemco	Mar-93		0	0	B	NO STOCK			
SOLVENT	Essol D60 Solvent SC 140 Solvent Var-Sol	64742-47-8	Exxon Chemical Co. 1-800-424-9300		May-96		2	0	C				
SOLVENT	Pro Power Fin Fan Cleaner	N/A	Mantek 214-438-1381		Dec-94		1	0	X		35 gals		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable	Reactivity	PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
SOLVENT	Varsol	8052-41-3	Exxon Chemical Co. 1-800-424-9300	Eddins-Walcher 505-393-2197	May-92		2	0	B	Treating Plt 1000 gals B Plt 500 gals	1500 gals		
STEEL	Stainless Steel	N/A	Morris Steel & Aluminum Co.		Nov-85		0	0	A				
STEEL	Steel	N/A	Bob Martin Company		Dec-85		0	0	A				
SULFUR	Molten Sulfur	N/A	Sid Richardson Gasoline Co. 1-800-424-9300		Feb-00		1	0	B				
SULFUR	Sulfur	7704-34-9			Feb-93		1	0	B				
SULFUR	Sulfur Dioxide	7446-09-5			Feb-93		1	0	B				
TAPE	Duct Tape	N/A		ESSCO 1-800-441-0636	Jan-95		0	0	A	WHSE / M.O.	6 ROLLS		
TAPE	Packing Tape	N/A		I Got It 505-393-6171			0	0	A	WHSE / M.O.	6 ROLLS		
WATER	Produced Water Sour Water	N/A	Parker & Parsley Development Co. 915-563-8432		Aug-94		0	0	B				
WEED KILLER	Clean Crop MSMA 6 Plus	N/A	Piatte Chemical Co.		Feb-90		0	0	X	WAREHOUSE	1 GALLON		
WELDING RODS	Airco Code Arc 7018 MR	N/A	The Lincoln Electric Company		Mar-90		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Airco Easy Arc 6011C	N/A	The Lincoln Electric Company		May-91		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Fleetweld 5P	N/A	The Lincoln Electric Company		May-90		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Jetweld LH-70	N/A	The Lincoln Electric Company	Burke Welding 915-943-4142	Jun-90		0	0	X	WAREHOUSE	1 BOX		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!						Health	Flammable	Reactivity	PPE			Start	Stop

G – Drain System Drawings

W-14+00 W-13+00 W-12+00 W-11+00 W-10+00 W-9+00 W-8+00 W-7+00 W-6+00 W-5+00 W-4+00 W-3+00 W-2+00 W-1+00 0+00 E-1+00

N-26+00 N-25+00 N-24+00 N-23+00 N-22+00 N-21+00 N-20+00 N-19+00 N-18+00 N-17+00 N-16+00 N-15+00 N-14+00 N-13+00 N-12+00 N-11+00 N-10+00 N-9+00 N-8+00 N-7+00 N-6+00

DISPOSAL WELL (S.W.D. #231)
INJECT. PUMP HOUSE
SURGE TANK
8"(PVC)
3"-L107
4"(PVC)-L100
4"(PVC)-L103
CONTINGENCY TK.
4"-L104
6"(PVC)-L102
FLARE
6" TILE (ABANDONED IN PLACE)
4"
DRIP POT
CLASSIFIER
CHLORINE TK.
4" SEWER
8"(PVC)
VENT STK.
4"-L105
4"-L106
OIL TK.
PROPANE STORAGE
PRODUCT STRG. TKS.
WASTE OIL STRG. TK.
STRG. TK.
PRODUCT PMP. HSE.
ODL-4"-L14
4" VENT
2%
NEATHERING TKS.
SCR'R.
6"H.P.
BLIND FLG.
PD-6"-L6
6" TILE
STOP TK.
SKIMMER OUT OF SERVICE
SUMP PUMP
6" PD-6"-L1
PD-4½"G"-L2
6"H.P.
INTER MEDIATE INLET SCR'R.
SUMP
4½"G"-L12
2" (GAS)
6" ODL-6"-L6
2"-L13
PD-6"-L13
6" TILE
INLET SCR'R.
"C" PLANT (TURBINE)
SEP.
GAS COOLING FIN FAN
GAS COOLER
G"L.P. ODL-6"-L1
STRG. TKS.
GE DISCHARGE
J.W. & O.C.W. FIN FANS
SEPTIC TK.
"B" COMPR. BLDG. EXT.
AUXILIARY
LUBE OIL STRG.
"B" COMPR.
4"H.P. ODL-4"-L12
GAS COOLING FIN FAN
GAS COOLERS
SCR'R.
GAS COOL. F.F.
PIT
ODL-4"-L14
GAS COOLING FAN FAN
GAS COOLER
WASH HSE.
TDL-8"-L4
8"TILE
4" CT. BL-DN
4" PVC
PUMP HOUSE
COOLING TOWER
SCR'R.
STILL PREHEATERS
3"H.P.
8"TILE TDL-8"-L2
6"TILE PD-6"-L6
CINDER BLOCK FENCE
J.W. & O.C.W. FIN FANS
PD-4"-L4
G"L.P. ODL-6"-L3
4"H.P.
4"L.P. ODL-4"-L4
AGID GAS FLARE
F.G. HEATER
2-PR-63-A
FLARE LIQ. K.O. DRUM
6" ABANDONED IN PLACE
GAS COOLERS
L.P. CHILLER
L.P. SCR'R.
L.P. ABS.
H.P. SCR'R.
GAS COOLER
SWEET GAS SCR'R.
3PH. SEP.
H.P. CHILLER
SOUR CONT.
PROCESS PUMP BLDG.
WASH HSE.
PROCESS AREA
6" DEETH. FEED LN. FM. DEETH. FEED TK.
4" VAPOR LN. FM. DEETH. FEED TK.
REBOILER
SURGE TK.
DEHY. CONT'S.
L.Q. CHILLER
L.P. SCR'RS.
PD-6"-L5
ODL-4"-L15
4"L.P.
4"H.P.
INTERSTAGE FLASH TK.
PROP. SURGE DRUM
PRODUCT PIPELINE PUMPS
DEMETHANIZER
DEMETH. BTTMS PUMPS
CRYO PLANT
REGEN GAS COMP. SKID
2"-SW-606-A
REFLUX ACCUM.
REFLUX PUMPS
PDL-3"-L103
2"-DR-647
2"-SW-618
P-3103 A/B
1½"-DR-639
E-5104
E-5102
SULFUR PLANT
6' CHAIN LINK FENCE
DEETHANIZER FEED TANK "B"
BL-DN. TANK
VARSOL STO.
GASOLINE STO.
C"CT. BL-DN. CBD-G"-L2
RECLAIMER
COND. FIN FAN
STILL
REBOIL
EXCH'R
SCR'R.
CONTROL ROOM
GLYCOL-AMINE STRG. TKS.
WASTE DRAIN BL-DN. TK.
3"(STL)
3"(PVC) ODL-3"-L17
4"CT. BL-DN. (PVC)
ODL-4"-L13
BRINE STRG. TK.
MACHINE SHOP STRG. & WTR. TK.
BOILER PLANT
4"L.P.
ODL-8"-L12
4" OVER-FLOW
5" Over-flow fm Chem. Tanks
TO BOILER BLDG.
ABANDONED
4"(TILE)
WASH HSE.
CONTROL RM.
SEP.
EVAP.
COND. TK.
BTM. COND. FIN FAN
4"L.P. (Out of Service)
Cut & Cap
FIRE PMP. BLDG.
CONC. WASH PAD
TREATED WTR. TK.
8" (Open End)
OIL STRG. TKS.
TREATED WTR. TK.
RAW WATER TK.
ELEVATED WTR. TK.
4" SEWER
PUMP HOUSE
2"H.P.
2" GAS WTR. FIN FAN
HOT WELL
SUMP
G"L.P.
AUXILIARY BLDG.
AIR REC'VR.
FIN FAN
"A" COMPR.
2"H.P.
8" SEWER
WASTE LUBE OIL STO.
METHANOL STO.
CINDER BLOCK FENCE
30' ROAD
STORAGE TANKS
GAS COOLING FIN FAN
AUXIL. BLDG.
TURBINE COMPR'S.
G-9105
G-9106
INLET SCR'R.
1"H.P.
SCR'R.
2"H.P.
PD-2"-L18
CLNG. IN ABANDONMENT
AMBITROL & LUBE OIL STRG. TKS.
2" LIQT IN OFF
OFFICE
J.W. & O.C.W. FIN FAN
8" SEWER TO SEPTIC TANKS

LEGEND :
- FILL & VENT TAPS
- ISOLATION BLIND TAPS
- MECHANICAL JOINT

REV	DESCRIPTION	DATE	BY	APP
3	AS-BUILT	10/13	Mes	

EL PASO NATURAL GAS CO.
JAL No. 3 PLANT
DRAIN LINES

DRAWN: 10-11-83 | SCALE: 1"=40' | DWG. No.: NJ3-1-P69 | REV. 3
BY: KAPKA | W.O.

H – Procedures for Testing Drain System

DRAIN LINE TESTING PROCEDURE

FOR

SID RICHARDSON ENERGY SERVICES CO. – JAL

JAL #3 PLANT

JAL, NEW MEXICO
LEA COUNTY, NEW MEXICO

March 2004

DRAIN LINE TESTING PROCEDURE
JAL #3 PLANT

SCOPE

This drain line testing plan sets forth the methods and procedures which Sid Richardson Energy Services Co.-Jal proposes to use to verify the integrity of the underground drain system at Jal #3 Plant.

The purpose of this testing is to ensure that waste water flowing through this piping system is contained and does not contribute to the degradation of groundwater quality in the general area of Jal #3 Plant.

The plan has attempted to allow the flexibility for testing some smaller, low-volume sections of drain piping without a total plant shutdown. This will decrease the amount of time required for testing during shutdown.

Record keeping and reporting have been addressed in the General Instructions sections. All charts, worksheets and resulting reports will be retained for a minimum of five years.

Detailed instructions are given for testing each major section of drain line. As each section is tested, all smaller drains, which flow into the main header, will be subjected to the same test pressure. This will assure that all underground piping is tested.

INTRODUCTION

The following procedures are arranged to allow testing of various sections of the drain system with the plant in operation. Some sections will require a plant shutdown to allow for drain line testing.

If the total system is to be tested during a plant shutdown, the test sequence will be arranged so that water from one section can be routed into the next section to be tested where possible. This should shorten filling time and provide more economical use of water.

Water used in testing will be raw water form the plant water system. Use of fire hydrants and hoses will be required in some locations to provide sufficient volume and pressure for filling and testing. In most cases, test pressures will be below normal line pressure in plant water mains making use of hydrostatic test pump unnecessary. Some higher pressures may require the use of a hydrostatic test pump.

The test pressures and duration used in this procedure exceed those specified for drainage and vent systems as set forth in the 1979 ICBO Code, Sections 1004 (a) 1 and 1005. The international Conference of Building Officials (ICBO) Plumbing Code of the Uniform Plumbing Code describes the procedures to be utilized in this testing procedure. The pressures and duration required in the ICBO Code are 4.3 psig and 15 minutes, respectively.

GENERAL INSTRUCTIONS

1. Before attempting to test any section of drain line, verify the sources of effluent and vapors entering the line. Any line, which could contain significant amounts of Hydrogen Sulfide (H_2S), will be opened and tested observing all prescribed safety precautions and procedures.

2. Line numbers and sizes, tap numbers and locations on valves, stopple fittings and containment aprons are shown on drawing No. 1J3-1-P69 "Drain Lines". The entire test procedure is directly related to information on this drawing.

3. All drain and block valves, which are lubricated plug valves, shall be lubricated in the closed position to minimize possibility of leakage.

4. Before installing expandable plugs, clean the interior portion of the pipe where plug seal will contact pipe wall to assure proper sealing.

5. Use new gaskets when installing blind plates in flange unions and tighten flange bolts evenly to prevent tilting of flange faces and leakage.

6. Filling a test section of drain line should always be from the lowest tap, venting at the higher taps to displace as much air or gas from the line as possible. Air or gas in the line, especially large amounts, may cause instability in pressure readings.

7. Test pressures given for each section to be tested are 10 psig above the maximum-recorded pressure for that section of drain line. Test pressure should be applied only after system pressure is stabilized at some lower pressure. The test duration will be one (1) hour.

   NOTE: Vitrified clay tile lines will be an exception to this procedure. Test pressure on clay tile lines will *not exceed* 5 psig.

8. After test pressure has been applied and stabilized, the system will be isolated and the test will begin. This is to be a static pressure test. Introduction of additional pressure will void the previous time interval and will require restarting test.

GENERAL INSTRUCTIONS continued

9. If a section of drain line will not maintain the static test pressure for the required time, provided there is no valve, fitting or flange leakage, the section of drain line will be considered faulty. At that point it may be necessary to further isolate smaller sections of the line or expose the entire line until the leaking portion can be located and replaced or repaired.

    a. It should be noted that leakage could occur around the plug of a valve unless sealing type grease is used to lubricate the valve in the closed position.

    b. Leakage will occur around the seal of an expandable plug unless the surfaces inside the pipe are thoroughly cleaned prior to inserting the plug.

    c. Improper tightening of flange unions or faulty, used, or dirty gasket will cause leakage at the blind plate installations.

    d. Other points to check for system leakage are: loose screwed fittings and valves, stem packing (or bonnet), leakage on gate or globe valve, worn seating surfaces in ball valves, unseated gate or globe valves, and faulty resilient seats in butterfly valves.

10. Test pressures will be recorded on a circular chart, which will be retained as a permanent record.

11. At the end of testing interval, remove chart from recorder before unscrewing unit from pressure tap to prevent irrelevant pen markings, ink spillage, or other chart damage.

12. Each chart will have the following information recorded on the back:

    a. Date
    b. Tap number
    c. Line number
    d. Initials of person changing chart
    e. Signature of person supervising testing

    Charts will be retained on file at the plant office for reference and inspection as required.

13. When the integrity of the drain system or a section of the system has been verified, the system, or section, will be returned to normal service.

GENERAL INSTRUCTIONS continued

14. All drains will be tested every 5 years and a written report sent to Sid Richardson Energy Services Co. Engineering Manager in Midland, Texas and filed at the plant.

15. The classifier tank is intended to be operated at atmospheric pressure. Any pressure or vacuum testing of this tank can cause damage to the tank and/or coating system. Therefore, the only possible method of testing the classifier tank will involve filling the tank with water and gauging any drop in level over an 8- hour period. This test will be performed annually.

16. Pressure or vacuum testing of the oil tank is precluded for the same reason specified for the classifier tank. The tank will be filled with water and gauged to verify the maintenance of a constant level for a 4-hour period. This test will also be performed annually.

LINE TEST GUIDELINES FOR

COOLING TOWER BLOWDOWN (CBD)

Line: CBD-4/6"- L1
"A" Plant Cooling Tower Blowdown Line to Junction of CBD-6"-L2.

1. Close 2" gate valve at the "A" Plant cooling tower. Open valve on tap F39.
2. Install expandable plug in apron drain north of the water treating building.
3. Close 4" valve at junction with ODL-8"-L12.
4. Close 6" valve at junction with CBD-6"L2. Open valve on tap F38.
5. Using tap F38, fill the line with water until all air/gas is displaced through vent valve.
6. Close valve on tap F39 and install properly zeroed 60# recorder on this tap. Stabilized system pressure using fill tap, F38.
7. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
10. Release test pressure. Open 6" valve at junction with CBD-6"L2 (if CBD-6"L2 is to be tested leave valve closed).
11. Remove expandable plugs from apron drain: North of water treating building.
12. Return to normal operating position the two block valves on drains at:
    a. Cooling tower blowdown line
    b. 4" valve at junction with ODL-8"-L12
13. Close and plug all fill and vent valves.

Line: CBD-6"- L2 – A" Plant Cooling Tower Blowdown Line From Junctions of CBD-6"-L1 to CBD-6"-L3.

1. Close 6" valve at junction with CBD-6"-L1. Close 4" valve at sump northwest of the Boiler Plant. Install blind plate at 6" ANSI 150# flanges at junction with CBD-6"-L3, (28).

2. Open valve on Tap F51.

3. Using Tap F48, fill the lines with water until all air/gas is displaced though the vent valve.

4. Close the valve on Tap F51 and install properly zeroed 60# recorder on the taps. Stabilize the system pressure-using fill Tap F48.

5. Raise the pressure to 20 psig on the system, stabilize the test pressure and then begin static pressure test as specified in the General Instructions, Item 8.

6. If test pressure cannot be maintained on the isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the test period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, item 12. Remove the recorder. Release the test pressure. Open 6" and 4" valves. Remove blind plate. Close and plug all fill and vent valves.

Line: CBD-6"- L3 - Cooling Tower Blowdown Line from Junction with CBD-6"-L2 (at East Side of Plant to Classifier) and 4" CT BL-DN from the Gasoline Plant Cooling Tower Side Stream Filter.

1. Install blind plate in 6" ANSI 150 flange union at junction with CBD-6"-L2, (28). Open valve on tap F50.

2. Close valve on 4" drain from side stream filter at Gasoline Plant cooling tower. Open valve on tap F95.

3. Open valve on vent tap F53 at check valve east of classifier.

4. Close 2" ball valve on pump discharge on flare line drip pot.

5. Close (2) valve at classifier for:
   a. 8" Primary Inlet Line
   b. 8" Emergency By-Pass to Contingency Tank

6. Install blind plate in 8" ANSI 150 flange union on discharge line from sewage effluent contact tank. Install blind plate on 6" ANSI 150 flange union at connection with ODL-6"-L6. Open vent valve on tap F54A.

7. Close valve at junction of 8" steel inlet line with 8" tile line in 4' diameter x 8' deep valve box. Open vent valve on tap F54.

8. Using tap F54, fill the line with water until all air/gas is displaced through vent valve. Close valves on taps F59, F53, and F54A.

9. Close valve on tap F50 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F54.

10. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

11. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

12. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

13. Release test pressure. Open 8" valve on primary inlet to classifier.

Line: CBD- 6"- L3 continued

14. Return to normal operating position valves at: Junction of Steel Line and Tile Line in 4'X8' Deep Valve Box – 8" (1). Emergency By-pass to Contingency Tank 8" (1). Pump Discharge from Flare Line Drip Pot 2" (1).

15. Remove blind plates from the following locations:
    a. 8" discharge from sewage effluent contact.
    b. Tank 4" drain from side stream filter at Gasoline Plant cooling tower blowdown.
    c. 6" at junction with CBD-6"-L2 at ease side of plant.
    d. 6" at junction with ODL-6"-L6.

16. Close and plug all fill and vent valves.

LINE TEST GUIDELINES FOR

OPEN DRAIN LINES
(ODL)

Line: ODL- 6"- L1 – Open Drain from "B" Plant Area to North Drain Sump.

1. Install vented expandable plug in open drain in box at inlet scrubber (V9101). Open valve on plug vent (F71).

2. Install vented expandable plug in apron drain under west end of "C" Plant building. Open valve on plug vent (F70).

3. Install (2) vented expandable plugs in apron drains at 3rd stage gas cooler (E9104) south of fin fan unit. Open valve on plug vent (F69).

4. Install vented expandable plug in apron drain at east end of "C" Plant building. Open valve on plug vent (F68).

5. Install expandable plug in funnel drain at condensate blowdown vessel. (V6104).

6. Close 2" valve on sump pump discharge in basement of "B" compressor building.

7. Install blind flange in 6" ANSI 150 flange union at north drain sump, (21). Open valve on tap F67.

8. Using tap F67, fill the line with water until all air/gas is displaced through vent valves. Close and plug valves on vents at taps F68, F69, and F70.

9. Close valve on tap F71 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F67.

10. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

11. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

12. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

13. Release test pressure. Remove blind plate from 6" flange union at drain sump.

Line: ODL- 6"- L1 continued

14. Remove (6) expandable plugs from open drains at:
    a. Condensate Blowdown Vessel (V6104) – (1)
    b. Apron Drain East End of "C" Plant Building – (1)
    c. Apron Drains 3rd Stage Discharge Scrubber – (2)
    d. Apron Drain West End of "C" Plant Building – (1)
    e. Open Drain in Box at Inlet Scrubber (V9101) – (1)

15. Open valve on sump pump discharge in "B" Plant building basement.

16. Close and plug all fill and vent valves.

Line: ODL- 4"- L2 Open Drain from "B" Plant Auxiliary Building to West Drain Sump South of "B" Compressor Building.

1. Install (2) expandable plugs in funnel drains in building at:
   a. Air Compressor Coolant Drain
   b. Drinking Fountain Drain

2. Close (5) ball valves on drains from vertical vessels on north side of Auxiliary Building. Open valve on tap F73.

3. Lubricate in closed position (2) plug valves on drains from lube oil storage tanks south of building.

4. Install expandable plug in funnel drain at low surge tank (V9106).

5. Close (2) gate valves on oil cooling water and jacket waterside stream filters.

6. Install (2) expandable plugs in open floor drains on south side of Auxiliary Building.

7. Install expandable plug in open drain at jacket water surge tank.

8. Install blind plant in 4" ANSI 150 flange union at west drain sump, (10). Open valve on tap F72.

9. Using tap F72, fill the line with water until all air/gas is displaced through valve.

10. Close valve on tap F73 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F72.

11. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

12. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

13. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

14. Release test pressure. Remove blind plate from 4" flange union at drain sump.

Line: ODL- 4"- L2 continued

15. Remove (6) expandable plugs from open drains at:
    a. Jacket Water Surge Tank – (1)
    b. Low Surge Tank (V9106) – (1)
    c. Auxiliary Building-South Side Floor Drains North Side Air Compressor and Drinking Fountain – (4)

16. Return to normal operating position (9) block valves at:
    a. Vertical Air Receivers North of Building – (5)
    b. Lube Oil Storage Tanks – (2)
    c. Oil Cooling and Jacket Water Side stream Filters – (2)

17. Close and plug vent and full valves.

Line: ODL- 6"-L3 – Open Drain from Gasoline Plant Process Area to North Drain Sump.

1. Install blind plate in 6" ANSI 150 flange union at west sump at south end of "B" compressor building (12). Open valve on tap F50.

2. Install blind flange in 4" ANSI 150 flange union at junction with ODL-4"-L7 (13).

3. Install vented expandable plugs in (2) apron drains at inter coolers (E4303, E8101, E8102) and open valve on south plug (F82).

4. Install expandable plug in open drain at "B" compressor 2nd stage scrubber. Install vented expandable plug in open drain to "B" compressor 3rd stage scrubber and open valve on vent F59.

5. Install expandable plug in open drain under cold rich oil flash tank (V8105).

6. Install expandable plug in funnel drain from re-absorber.

7. Close 2" gate valve in open drain from fuel gas scrubber. Open valve on tap F81.

8. Install vented expandable plug in (2) apron drains at oil-oil exchangers (E8104) and open valve on south plug F83.

9. Install vented expandable plug in open drain under hot rich oil flash tank (V8104) and open valve on vent F84.

10. Install vented plug in funnel drain at hot vent condenser separator (V8109) and open valve on vent F25.

11. Install expandable plug in funnel drain from still (V8111).

12. Install expandable plug in open drain from still water draw-off (V8112).

13. Install vented expandable plug in open drain from still reflux accumulator (V8113) and open valve on vent F85.

14. Install vented expandable plug in funnel drain from deethanizer feed tank "A" (V8114) and open valve on vent F86.

15. Install (3) expandable plugs in funnel drains at deethanizer (V8115). Install (2) vented expandable plugs in funnel drains at reflux condenser and open valves on vents F79, F80.

Line: ODL- 6"- L3 continued

16. Install blind plate in 6" ANSI 150 flange union at north drain sump (17). Open valve on tap F75.

17. Using tap F75, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on all taps and vents except F50.

18. Close valve on tap F50 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F75.

19. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

20. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

21. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

22. Release test pressure. Remove blind plate from 6" flange union at north drain sump.

23. Remove blind plate from 6" flange union at west drain sump.

24. Remove blind plate from 4" flange union at junction with ODL-4"-L7.

25. Remove (17) expandable plugs from funnels and open drains at:
    a. Reflux condenser – (2)
    b. Deethanizer – (3)
    c. Deethanizer feed tank – (1)
    d. Still reflux accumulator – (1)
    e. Still water drain-off – (1)
    f. Still – (1)
    g. Hot vent condenser separator – (1)
    h. Hot rich oil tank – (1)
    i. Oil-oil exchangers – (2)
    j. Re-absorber – (1)
    k. Cold rich oil flash tank – (1)
    l. Inter coolers – (2)

26. Return to normal operating position block valve on drain at fuel gas scrubber.

27. Close and plug all vent valves at taps.

Line: ODL- 4"- L4 – Open Drain from Process Pump Building to North Drain Sump.

1. Install (18) 2" expandable plugs in funnel drains from pump base drains along north wall of process pump building.
2. Close 1" ball valve on drain from air volume bottle on south side of pump building. Open valve on tap F77.
3. Install blind in 4" ANSI 150 flange union at north drain sump (16). Open valve on tap F76.
4. Using tap F76, fill the line with water until all air/gas is displaced through vent valve.
5. Close valve on tap F77 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F76.
6. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
9. Release test pressure. Remove blind plate from 4" flange union at north drain sump (16).
10. Remove (18) expandable plugs from pump drains.
11. Return to normal operating position the block valve on volume bottle drain.
12. Close and plug fill and vent valves.

Line: ODL- 4"- L5 – Open Drain from Inlet Scrubbers to Sump.

1. Lubricate in closed position (5) plug valves on dumps of inlet scrubber. Close (2) globe valves on control valve by-pass piping. Open valve on tap F88.

2. Install blind plate 4" ANSI 150 flange union at drain sump south of "B" Compressor Building (11). Open valve on tap F87.

3. Using tap F87, fill the line with water until all air/gas is displaced through vent valve.

4. Close valve on tap F88 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F87.

5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure. Remove blind plate from 4" flange union at drain sump (11).

9. Return to normal operating position block valves on drains of inlet scrubbers.

10. Close and plug fill and vent valves.

Line: ODL- 6"- L6 – Open Drain from North Drain Sump to 8" Classifier Feed Line.

1. Install blind plate in 4" ANSI 150 flange union at north side of drain sump (18). Open valves on tap F73.

2. Install blind plate in 4" ANSI 150 flange union at tie into 8" classifier feed line. Open valve on tap F74A (first test will require hot tapping new connection).

3. Using tap F74A, fill the line with water until all air/gas is displaced through vent valve.

4. Close valve on tap F73 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F74A.

5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure. Remove (2) blind plate from flange unions.

9. Close and plug fill and vent taps.

Line: ODL- 4"- L7 – Open Drain from Area of Refrigeration Surge Tank to Junction with ODL-6"-L3.

1. Install expandable plugs in the following funnel drains at:
   a. Dehydration Contactors – (2) 2"
   b. Solution Contactor – (1) –2"
   c. Sweet Gas Scrubber – (1) 2"
   d. High Pressure Absorber – (1) 2"
   e. High Pressure Scrubber – (1) 2"
   f. Low Pressure Absorber – (1) 2"
   g. Low Pressure Scrubber – (1) 2"
   h. "B" Compressor 3rd Stage Final Scrubber

2. Install expandable, vented plugs in the following apron drains at:
   a. Lean Oil Chiller – (1)
   b. Low Pressure Chiller – (1)
   c. "B" Compressor 3rd Stage Gas Coolers – (2)

3. Open valve on tap F48 in old refrigeration compressor area. Open valve on expandable plug vent at lean oil chiller apron drains F49. Open valve on expandable plug vent at 3rd stage gas coolers drain apron F55.

4. Install blind plate in 4" ANSI 150 flange union at junction with ODL-6"-L3 (13). Open valve on tap F57.

5. Using tap F57, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on taps F49 and F55.

6. Close valve on tap F48 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F57.

7. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

10. Release test pressure. Remove blind plate from flange union at junction with ODL-6"-L3, (unless ODL-6"-L3 is next section to be tested).

Line: ODL- 4"- L7 continued

11. Remove (10) expandable plugs from funnel drains at:
    a. Dehydration Contactors – (2)
    b. Solution Contactor – (1)
    c. Sweet Gas Scrubber – (1)
    d. High Pressure Absorber – (1)
    e. High Pressure Scrubber – (1)
    f. Low Pressure Absorber – (1)
    g. Low Pressure Scrubber – (1)
    h. "B" Compressor 3rd Stage Final Scrubber – (1)

12. Remove (4) vented expandable plugs form apron drains at:
    a. Lean Oil Chiller – (1)
    b. Low Pressure Chiller – (1)
    c. "B" Compressor 3rd Stage Gas Coolers – (2)

13. Close and plug all fill and vent valves.

Line: ODL- 4"- L9 – Open Drain from Barrel Dock to Blowdown Tank.

1. Install blind flange in 4" ANSI 150 flange union on east side of fiberglass sump (3). Open valve on tap F40.

2. Close 2" valve on crossover from 10" boiler blowdown line.

3. Install (3) expandable plugs in apron drains at aprons on storage docks east of fire pump building. Open vent valve in plug at wash pad.

4. Install blind flange in flange union on south side of boiler blowdown tank (2). Open valve on tap F41.

5. Using tap F41, fill the line with water until all air/gas is displaced through vent valve. Close and plug valve on tap F40.

6. Close valve on tap F42 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F41.

7. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

10. Release test pressure. Remove blind flange at south side of boiler blowdown tank (2).

11. Remove (3) expandable plugs from apron drains.

12. Remove blind flange at east side of fiberglass sump (3).

13. Close and plug fill and vent valves.

Line: ODL- 8"- L10 – Open Drain from "A" Compressor to Junction with ODL-8"-L12 at Boiler Plant.

1. Open valve on Tap 29A
2. Close 2" ball valve on discharge of sump pump in north end of compressor building basement. Open valve on tap F32.
3. Install expandable plug in apron drain at northeast corner of compressor building.
4. Install expandable plug in drain off "A" Plant Cooling Tower blowdown.
5. Install expandable plug in apron drain at south end of evaporator.
6. Install blind plate in 8" ANSI 150 flange union at junction with ODL-8"-L12 (102). Open valve on tap F31.
7. Using tap F31, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on tap F32.
8. Close valve on tap F29 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F31.
9. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
10. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
11. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
12. Release test pressure. Remove blind plate from 8" flange union at junction with ODL-8"-L12 (leave plate in place if ODL-8"-L12 is the next section to be tested {102}).
13. Remove expandable plugs from apron drains at:
    a. North east corner of compressor building
    b. South end of evaporator
14. Open block valves on discharge of (2) sump pumps in basement of compressor building.
15. Close and plug fill and vent valves.

Line: ODL- 8"- L12 – Open Drain from Treating Plant Area to Fiberglass Sump

1. If blind plate is not in position from test of ODL-8"-L10, install blind plate in 8" ANSI 150 flange union at junction with ODL-8"L10. Open valve on tap F33.

2. Install 2" expandable plug in open drain at south end of boiler building. Install 1" expandable plugs in drains off boiler feed water pump. Close ½" gate valve on drain line form pump packing.

3. Install 8" expandable plug in drain from water treater back wash sump at east end of water treating building.

4. Install 2" expandable plugs in drains on South side of machine shop.

5. Close (2) 1" valves on pump drains through south side of water treating building.

6. Lubricate in closed position 4" plug in sump West of South side of the water treating building. Open valves on tap F35.

7. Install (3) expandable plugs in open drains at solution heat exchangers. Open valves in (2) west plugs F37.

8. Close 4" valve at junction with cooling tower blowdown line.

9. Install blind plate in 8" ANSI 150 flange union at fiberglass sump inlet (4). Open valve on tap F36.

10. Using tap F36, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on all taps F33 and F37.

11. Close valve on tap F35 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F36.

12. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

13. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

14. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

Line: ODL- 8"- L12 continued

15. Release test pressure. Remove blind plate from flange union at fiberglass sump (4).

16. Remove expandable plugs from:
    a. Exchanger drain aprons – (3)
    b. Water treater building sump and trench – (2)
    c. South end of boiler building – (3)

17. Return to normal operating position (4) block valves on drains at:
    a. Drain line from pump packing at boiler building – (1)
    b. Pump drains at south side of water treater building – (2)
    c. Sump outlet at west side of treating plant – (1)

18. Remove blind plate from 8" ANSI 150 flange union at junction with ODL-8"-L10 (102).

19. Close and plug all fill and vent valves.

Line: ODL- 4"- L14 – Open Drain from Product Storage Tanks to North Drain Sump

1. Install (3) expandable plugs in funnel drains under product storage tanks. Open valve on tap F61.

2. Close 2" valve on south east corner of product pump house.

3. Install blind plate in 4" ANSI 150 flange union at north drain sump (19). Open valve on tap F62.

4. Install (2) vented expandable plugs in apron drains at chemical and acid storage areas on north side of gasoline plant cooling tower. Open valves on plug vents F93 and F94.

5. Using tap F62, fill the line with water until all air/gas is displaced through vent valve. Close valve on taps F93 and F94.

6. Close valve on tap F61 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F62.

7. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

10. Release test pressure. Remove blind plate from 4" flange union at north drain sump (19).

11. Remove expandable plugs from drains at product storage tanks and in apron drains at chemical and acid storage areas.

12. Open 2" valve at product pump building.

13. Close and plug fill and vent taps.

Line: ODL- 6"- L15 – Open Drain from "B" Compressor Area to North Drain Sump

1. Install (2) vented expandable plugs in pit drains at "B" Plant 3rd stage discharge cooler E9129. Open valve on east plug vent F65.

2. Install expandable plug in pit drain at 3rd stage discharge scrubber V9131.

3. Install expandable plug in pit drain for automatic drainers on header liquid boots DR-9114, DR-9115.

4. Install expandable plug in pit drain for automatic drainer (DR-9113) on header liquid boot north of 2nd and 3rd stage scrubbers.

5. Install (2) vented expandable plugs in pit drains at 2nd stage suction scrubber V9127 and 3rd stage scrubber V9128. Open vent on plug in 3rd stage suction scrubber pit F64.

6. Install (2) vented expandable plugs in pit drains at 2nd stage suction scrubber V9127 and 3rd stage scrubber V9130. Open vent on plug 3rd stage suction scrubber pit F63.

7. Install expandable plug in pit drain at intermediate inlet scrubber V9126.

8. Open drain block valves and high point vents on gas cooling fin fans.

9. Install blind plate in 6" ANSI 150 flange union at north drain sump (20). Open valve on tap F66.

10. Using tap F66, fill the line with water until all air/gas is displaced through valves. Close block valves on tap F63 and F64. Close block valves on gas cooling fin fans.

11. Close valve on tap F65 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F66.

12. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

13. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

14. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

Line: ODL- 6"- L15 continued

15. Release test pressure. Remove blind plate from 6" flange union at north drain sump (20).

16. Remove expandable plugs from drains at:
    a. Intermediate inlet scrubber V9126 – (1)
    b. North 2nd and 3rd stage scrubbers V9129, V9130 – (2)
    c. South 2nd and 3rd stage scrubbers V9127, V9128 – (2)
    d. Header drains north of scrubber V9127 – (1)
    e. Header drains west of 3rd stage gas cooing fin fan – (1)
    f. 3rd stage gas coolers – (2)

17. Close and plug vent and fill valves.

Line: ODL- 4"- L16 – Open Drains to Steel Sump West of the Treating Plant Pump House

1. Close 2" ball valve on drains from MEA reclaimer vessel.
2. Close 2" ball valve on drain from MEA Reboiler.
3. Close 2" gate valve on drain from elevated condensate receiver.
4. Install expandable plugs in (2) open drains at west end of vessels. Install expandable plug in (1) open drain at east end of vessels. Open vent valve in plug F43.
5. Install (2) 2" expandable plugs in funnel drains on pumps.
6. Install blind plate in 4" ANSI 150 flange union at steel sump. Open valve on tap F44 (9).
7. Using tap F44, fill the line with water until all air/gas is displaced through vent valves.
8. Close valve on tap F43 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F44.
9. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
10. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
11. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
12. Release test pressure. Remove blind plate from 4" flange union at sump (9).
13. Remove (5) expandable plugs from:
    a. 2" funnel drains at pumps – (2)
    b. West open drains – (2)
    c. East open drain – (1)

Line: ODL- 4"- L16 continued

14. Return to normal operating position block valves on drains at:
    a. MEA reclaimer
    b. MEA Reboiler
    c. Condensate receiver

15. Close and plug all fill and vent valves.

Line: ODL- 3"- L17 – Open Drain from Treating Plant Pump House to the Steel Sump at West of the Treating Plant Pump House

1. Open valve on tap F60.
2. Close 2" valve on pump drains at north end of treating plant pump house.
3. Install blind flange between check valve and 2" ANSI 150 flange at west end of solution sump.
4. Install blind flange in 3" ANSI 150 flange union at steel sump (8). Open valve on tap F45.
5. Using tap F45, fill the line with water until all air/gas is displaced through vent valve.
6. Close valve on tap F60 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F45.
7. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
10. Release test pressure. Remove blind plate from 8" flange union at steel sump (8).
11. Remove blind plate from 2" check valve/flange.
12. Return to normal operating position block valves on drains at pump drains at north end of pump building.
13. Close and plug all fill and vent valves.

Line: ODL- 8"- L18 – Evaporator Blowdown Line to Blowdown Tank

1. Close valve on evaporator blowdown/drains at bottom of vessel. Open valve in tap F47.

2. Install blind plate in 8" ANSI 150 flange union at blowdown tank (1). Open valve on tap F46.

3. Using tap F46, fill the line with water until all air/gas is displaced through vent valve.

4. Close valve on tap F47 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F46.

5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure. Remove blind plate (1) from 8" flange union at tank.

9. Return blowdown valve to normal operating position.

10. Close and plug all fill and vent valves.

Line: ODL-4"-L19 – Open Drain from Boiler Blowdown Tank to Gasoline Plant Drain Sump

1. Close valve on discharge of transfer pump and deactivate electrical circuit to pump motor. Open valve on tap F49.

2. Install blind plate in 4" ANSI 150 flange union at gasoline plant drain sump (29). Open valve on tap F78.

3. Using tap F78, fill the line with water until all air/gas is displaced through vent valve.

4. Close valve on tap F49 and install properly zeroed 60# recorder on this tap. Stabilize system pressure using fill tap, F78.

5. Raise pressure to 20 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure. Remove blind plate from 4" flange union at sump (29).

9. Return 4" valve to normal operating position and reactivate electrical circuit to pump motor.

10. Close and plug all fill and vent valves.

LINE TEST GUIDELINES FOR

PRESSURE DRAIN LINES
(PD)

Line: PD- 6"- L1 – Pressure Drain from "C" Compressor Area to Junction with PD-4"/6"-L2

1. Close 1" ball valve on line from automatic drainer from fuel gas separator V9117. Open valve on tap F20.
2. Close (3) 1" gate valves on lines from automatic drainers from header boots at pulsation dampener PD-9101.
3. Lubricate in closed position 2" plug valve on dump from 2nd stage line separator V9103.
4. Lubricate in closed position 2" plug valve on dump from 3rd stage line separator V9104.
5. Close (2) 1" ball valves on lines from automatic drainers from header boots South of line separators.
6. Close (3) 2" ball valves on drains from outlet of 2nd stage fin fan coils.
7. Lubricate in closed position 2" plug valve on automatic drainer from fin fan 3rd stage outlet header.
8. Lubricate in closed position 1½" plug valve on dump from 3rd stage final separator. Open valve on tap F19.
9. Close 1" ball valve on line from automatic drainer from horizontal boot under inlet scrubber V9101.
10. Close valve on GE discharge line drain.
11. Install blind plate in 6" ANSI 150 flange union at junction with PD-4"/6"-L2 (22). Open valve on tap F18.
12. Using tap F18, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on all taps F19 and F21.
13. Close valve on tap F20 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F27.
14. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
15. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

Line: PD- 6"- L1 continued

16. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

17. Release test pressure. Remove blind plate from 6" flange union at junction with PD-4"/6"-L2 (22).

18. Return to normal operating position (14) block valves on drains at:
    a. Inlet scrubber dump
    b. 3rd stage final separator dump
    c. 3rd stage fin fan header drainer
    d. 2nd stage fin fan coils
    e. Header boots South of 2nd and 3rd stage line separators
    f. 2nd stage line separator dump V9103
    g. 3rd stage line separator dump V9104
    h. Header boots at pulsation dampener PD-9101
    i. Fuel gas separator drainer V9117

19. Close and plug all fill and vent valves.

Line: PD- 4"/6"- L2 – Pressure Drain from "B" Compressor Area to High Pressure Blowdown Scrubber

1. Close (2) 1" gate valves from inlet header drainers in pit at east end of $1^{st}/2^{nd}$ stage fin fan unit F9106.

2. Close 2" ball valve and 2" gate valve on drain from 3^{rd} stage discharge scrubber. Open valve on tap F14.

3. Close (2) ball valves on 3^{rd} stage suction scrubber V9128 and 2^{nd} stage suction scrubber (V9127) dumps. Open valve on tap F15.

4. Close 1" gate valve from header drainer in pit at east end of $1^{st}/2^{nd}$ stage fin fan unit F9107.

5. Close (2) ball valves on 3^{rd} stage suction scrubber V9130 and 2^{nd} stage suction scrubber (V9129) dumps. Open valve on tap F16.

6. Close (2) ball valves and (2) gate valves on drains from intermediate inlet scrubber.

7. Install blind plate in 6" ANSI 150 flange union at junction with PD-6"-L1 near intermediate scrubber (22).

8. Close 2" gate valve on pump discharge at open drain collection sump near intermediate scrubber.

9. Install blind plate between 6" ANSI 150 flange and check valve in line at High Pressure Blowdown Scrubber (25). Open valve on tap F17.

10. Using tap F14, fill the line with water until all air/gas is displaced through vent valves F15, F16, and F17. Close and plug all vent valves.

11. Close valve on tap F17 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F14.

12. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

13. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

14. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

Line: PD- 4"/6"- L2 continued

15. Release test pressure. Remove blind plate from 6" check valve joint at High Pressure Blowdown Scrubber (25). Remove blind plate from 6" ANSI 150 flange union at junction with PD-6"-L1 near intermediate scrubber (22). (Leave blind plate in place if PD-6"-L1 is the nest section tested.)

16. Return to normal operating position block valves on drains at:
    a. Discharge of sump pump – (1) 2"
    b. Intermediate inlet scrubber drains – (4) 2"
    c. Vessel drains on (2) 3rd stage and (2) 2nd stage suction scrubbers – (4) 2"
    d. Vessel drains on 3rd stage discharge scrubber – (2) 2"
    e. Header drains at fin fans – (3) 1"

17. Close and plug all fill and vent valves.

Line: PD- 4"- L3 – Pressure Drain from Gasoline Plant Area to High Pressure Blowdown Scrubber in Classifier Area

1. Install blind plate in 4" ANSI 150 flange union at northeast corner of gasoline plant process area (15). Open valve on tap F11.

2. Lubricate in the closed position (2) 2" plug valve and close (2) glove valve in the drain piping from the (2) still pre-heaters.

3. Install blind plate between 4" ANSI 150 flange and check valve at high-pressure blowdown scrubber (24). Open valve on tap F13.

4. Using tap F11, fill the line with water until all air/gas is displaced through vent valves, F12 and F13. Close and plug valve on tap F12.

5. Close valve on tap F13 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F11.

6. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

9. Release test pressure. Remove blind plate from 4" flange/check valve union (24). Remove blind plate from 4" flange union at gasoline plant junction with PD-4"-L4 (leave in place if PD-4"-L4 is to be tested).

10. Return to normal operating position (4) block valves on drains at (2) still preheaters (oil heaters).

11. Close and plug all fill and vent valves.

Line: PD- 4"- L4 – Pressure Drain Through North Side of Process Area of Gasoline Plant to Junction with PD-4"-L3

1. Install blind plate in 4" ANSI 150 flange union at junction with PD-4"-L15 (14). Open valve on tap F23.
2. Close 2" gate valve on drain from cold rich oil flash tank V8105. Open valve on tap F23.
3. Close 2" ball valve on drain from hot rich oil flash tank V8180. Open valve on tap F25.
4. Close 2" ball valve on drain from hot vent condenser E9106. Open valve on tap F26.
5. Close 2" gate valve on drain from still stripping steam evaporator E8114. Open valve on tap F26.
6. Close 2" ball valve on drain from oily condensate classifier V8121.
7. Close 2" ball valve on drain for oil reclaimer V8110.
8. Close 2" globe valve on drain from still V8111. Open valve on tap F27.
9. Close valve on drain from deethanizer V8115. Open valve on tap F29.
10. Install blind plate in 4" ANSI 150 flange union (north of low pressure drain sump) at junction with PD-4"-L3 (15). Open valve on tap F28.
11. Using tap F22, fill the line with water until all air/gas is displaced through vent valve. Close and plug valves on taps F23, F24, F25, F26, F27, and F29.
12. Close valve on tap F28 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F22.
13. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
14. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
15. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

Line: PD- 4"- L4 continued

16. Release test pressure. Remove blind plate from 4" flange union at junction with PD-4"-L3 (15). (Leave plate in place if PD-4"-L3 is next section to be tested.)

17. Return to normal operating position (7) block valves on drains at:
    a. Deethanizer V8115 – (1)
    b. Still V8111 – (1)
    c. Oily condensate classifier V8121 – (1)
    d. Still stripping steam evaporator E8114 – (1)
    e. Hot vent condenser E8106 – (1)
    f. Hot rich oil flash tank V8108 – (1)
    g. Cold rich oil flash tank V8105 – (1)

18. Close and plug all fill and vent valves.

Line: PD- 4"- L5 – Pressure Drain from Propane Interstage Flash Tank to Junction with PD-4"-L4

1. Lubricate in closed position (3) plug valves on drains at:
   a. Propane surge tank – (1)
   b. Interstage flash tank – (1)
   c. Conversion to sulfur plant drains

2. Open valve on tap F56A (requires hot tap for new connection).

3. Close (8) valves on drains from the following vessels:
   a. Lean oil chiller – (1) 2" gate
   b. High pressure chiller – (1) 2" gate
   c. Gas cooler at high pressure absorber – (1) 2" globe
   d. High pressure scrubber – (1) 1" gate
   e. High pressure absorber – (1) 1" gate
   f. Low pressure scrubber – (1) 1"gate
   g. Low pressure absorber – (1) 2" gate
   h. Low pressure chiller – (1) 2" gate

4. Install blind plate in 4" ANSI 150 flange union at junction with PD-4"-L4 (14). Open valve on tap F58.

5. Using tap F58, fill the line with water until all air/gas is displaced through vent valve.

6. Close valve on tap F56 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F58.

7. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

10. Release test pressure. Remove blind plate from 4" flange union at junction with PD-4"-L4. (Leave plate in place if required for next section.)

11. Return to normal operating position (17) block valves on drains from equipment listed in items 1, 2, and 3 above.

12. Close and plug fill and vent valves.

Line: PD- 6"- L6 – Pressure Drain Header to Classifier

1. Install blind plate in 6" ANSI 150 flange union in header north of reclaimer. (Plate may be in place from previous test of PD-6"-L7.) Open valve on tap F9.

2. Close block valve where 2" DR-1103-A enters cryogenic skid and all block valves on product pipeline and booster pumps.

3. Close block valves on 2" DR-613-A at discharge of the flare liquids knock out drum pump.

4. Install blind plate in 6" ANSI 150 flange union at high-pressure blowdown scrubber in classifier area (26). Open valve on tap F10.

5. Using tap F9, fill the line with water until all air/gas is displaced through vent valve.

6. Close valve on tap F10 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F9.

7. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

10. Release test pressure. Remove blind plate from high-pressure blowdown scrubber and flange union north of reclaimer.

11. Open all block valves on 2" DR-1103-A and 2" DR-613-A.

12. Close and plug all fill and vent valves.

Line: PD- 6"- L7 – Pressure Drain in Treating Plant Area

1. Install blind plate between flange and 2" check valve at junction with PD-2"-L8 (7). Open valve on tap F4.

2. Lubricate in the closed position one (1) 1½" plug valve and close one (1) ball valve on the dumps from the high-pressure inlet scrubber.

3. Lubricate in the closed position the plug valves on the drains from the following vessels:
   a. Remote absorber "A" V-80 – (1) 1½"
   b. Remote absorber "B" V-81 – (1) 1½"
   c. MEA still, V-56 – (1) 1½"
   d. MEA contactor, V-50 – (1) 1½"
   e. Sweet gas scrubber "A", V-51, (1) 2"
   f. Residue gas scrubber, 102" I.D. – (3) 2"

4. Open valves on tap F5, F6 and F7.

5. Close drain valves on Amine Reflux pumps and Amine Reflux accumulator vessel.

6. Close valve on 2" DR-709-B were it enters the dehydration skid at the Cryogenic plant.

7. Install blind plate in 6" ANSI 150 flange union in header north of reclaimer. Open valve on tap F8.

8. Using tap F8, fill the line with water until all air/gas is displaced form lines. Close and plug vent valves on taps F4, F6 and F7.

9. Close valve on tap F5 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F8.

10. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

11. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

12. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

Line: PD- 6"- L7 continued

13. Release test pressure. Remove blind plate from 2" check valve/flange at junction with PD-2"-L8. Remove blind plate from 6" flange union north of reclaimer. (Leave blind plate in place if PD-6"-L6 is the nest section to be tested.)

14. Return to normal operating position (12) block valves on vessel drains at:
    a. Remove absorbers, A&B
    b. MEA still
    c. MEA contactor
    d. Sweet gas scrubber
    e. Residue gas scrubber
    f. High pressure inlet scrubbers

15. Close and plug all fill and vent valves.

Line: PD- 2"- L8 – Pressure Drain at West Side of "A" Compressor

1. Close 1" ball valve on bottom of accumulator vessel south of turbine unit No. C-9106.

2. Close (2) 1" ball valves, (1) gate valve and lubricate in closed position (1) 2" plug valve on scrubber south of gas cooling fin fan. Open valve on tap F3.

3. Lubricate in closed position 2" plug valves on drains at north and south end of compressor headers. Open valve on tap F2.

4. Lubricate in closed position (2) 2" plug valves on gas cooling fin fan header drains.

5. Lubricate in closed position (6) 2" plug valves on drains of intermediate scrubber.

6. Lubricate in closed position 2" plug valve on south end of header at cooling tower.

7. Install blind plate between 2" ANSI 150 flange and check valve at junction with line PD-6"L7 (7). Open valve on tap F1.

8. Using tap F1, fill the line with water until all air/gas is displaced from lines. Close and plug vent valves F2 and F3.

9. Close valve on tap F3 and install properly zeroed 100# recorder on this tap. Stabilize system pressure using fill tap, F1.

10. Raise pressure to 50 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

11. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

12. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

13. Release test pressure. Remove blind plate from 2" check valve/flange at junction with PD-2"-L7. (Unless PD-6"-L7 is next section to be tested.)

Line: PD- 2"- L8 continued

14. Return to normal operating position block valve on drains at:
    a. Sound end of cooling tower
    b. Intermediate scrubber
    c. Gas cooling fin fan header
    d. North and south ends of compressor headers
    e. Scrubber south of gas cooling fin fan
    f. Accumulator vessel south of turbine, C9106

15. Close and plug all fill and vent valves.

LINE TEST GUIDELINES FOR

TILE DRAIN LINES
(TDL)

Line: TDL- 15"- L1 – 15" Vitrified Clay Pipe Header on Backwash Drain System from Gasoline Plant Process Area Exchangers to Drain

NOTE: **Extreme care should be exercised when inserting expandable plugs in all tile lines or funnels to avoid over tightening or over expanding plugs and breaking tile pipe. Proper pre-cleaning of sealing area inside the tile will aid in proper sealing.**

1. In the 12" tile funnels, install (12) vented expandable plugs at the following exchangers.
    a. MEA contactor "B" residue gas cooler E4309 – (1)
    b. "B" plant 3rd stage gas coolers E9103 – (2)
    c. Low pressure absorber gas upper intercooler E8102 – (1)
    d. Low pressure absorber gas lower intercooler E8101 – (1)
    e. MEA contactor "B" intercooler E4103 – (1)
    f. Reabsorber intercooler E8103 – (1)
    g. Lean oil cooler E8105 – (1)
    h. Hot vent condenser E8106 – (1)
    i. Still final condenser E8109 – (1)
    j. Deethanizer reflux condenser E8112 – (1)
    k. Deethanizer product cooler E8113 – (1)

2. Open valves on all plug vents.

3. Cap sewage effluent line from process area wash room septic tank:
    a. Loosen (2) 4" cast iron mechanical compression sleeves on the spool in 4" sewer drain, located at northwest corner of Gasoline Plant Pump building.
    b. Remove spool from tile drain line.
    c. Install 4" mechanical line cap (blind end mechanical sleeve) on section to be tested with vent outlet on top.
    d. Open valve on tap in line cap F98.
    e. Brace test cap with thrust block to prevent end thrust movement of cap. Care should be taken to avoid unnecessary force on loose end of tile line to septic tank to prevent breakage.

4. Install vented expandable plug in 15" line into gasoline plant drain sump. Plug vent is to be on high side of plug for proper venting and filling.

5. With all plug vents open:
    a. Use tap F99 to fill the line with water until all air/gas is displaced through vent valves
    b. Close and plug vent valves on expandable plugs in exchanger backwash drains, except at exchanger E4309, tap F97.

Line: TDL- 15"- L1 continued

6. Close valve on tap F97 and install properly zeroed #60 recorder and calibrated 0-15 psig pressure gauge on tee manifold on this tap. Stabilize system pressure using fill tap, F99.

7. Raise pressure to 5 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8. **DO NOT EXCEED 5 PSIG PRESSURE ON THIS LINE.**

8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder/gauge manifold.

10. Release test pressure. Remove expandable plug from 15" line at drain sump.

11. Remove test cap from 4" sewage effluent line and replace spool with mechanical compression sleeves.

12. Remove (12) expandable plugs from 12" tile funnels under exchangers as listed in item 1a through k.

13. Return system to services.

Line: TDL- 8"- L2 & L4 – Tile Drain Line from "B" Compressor Plant Septic Tank to 8" Valve in 4' X 8' Deep Valve Box

NOTE: **Extreme care should be exercised when inserting expandable plugs in all tile lines or funnels to avoid over tightening or over expanding plugs and breaking tile pipe. Proper pre-cleaning of sealing area inside the tile will aid in proper sealing.**

1. Install blind plate in 8" ANSI 150 flange union at gasoline plant drain sump. Open valve on tap F90.

2. Loosen (2) 8" iron compression sleeves on spool at outlet of "B" Plant septic tank and remove spool from tile drain line. Install 8" mechanical line cap (blind end mechanical sleeve) on section to be tested with vent outlet on top. Open valve on tap in line cap F91. Brace test cap with thrust block to prevent end thrust movement of cap. Care should be taken to avoid unnecessary force on stub end of tile to septic tank outlet.

3. Close valve at junction of 8" steel inlet line with 8" tile line in 4' X 8" deep valve box. Install 8" pipe nipple in valve on tap F92 (for filling line) and open valve. Open vent of sump pump discharge line.

4. Using tap F92, fill the line with water until all air/gas is displaced through vent valve. Close and plug vent valves on tap F90, and vent of sump pump discharge line.

5. Close valve on tap F91 and install properly zeroed #60 recorder and calibrated 0-15 psig pressure gauge on tee manifold on this tap. Stabilize system pressure using fill tap, F92.

6. Raise pressure to 5 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8. **DO NOT EXCEED 5 PSIG PRESSURE ON THIS LINE.**

7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder/gauge manifold.

9. Release test pressure. Open valve at steel/tile line junction and all vents until line is drained.

Line: TDL- 8"- L2 & L4 continued

10. Remove (3) mechanical line caps from line at:
    a. Skimmer basin in classifier area
    b. "B" compressor plant septic tank (1)

11. Return system to normal operating position valves at side stream filters.

12. Remove blind plate from 8" flange union at gasoline plant drain sump.

13. Close and plug all fill and vent valves.

LINE TEST GUIDELINES FOR

PVC DRAIN LINES
(PVC)

Line: 4"- PVC- L100 – Classifier Pump Discharge Line to Filter at Injection Pump House

1. Close 4" inlet and bypass valves at filter.
2. Close (2) 4" valves on classifier pump discharge lines.
3. Using tap F100, fill the line with water until all air/gas is displaced through vent valve.
4. Close tap F101 and install properly zeroed #60 recorder at this tap. Stabilize the system using fill tap F100.
5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
8. Release test pressure. Open 4" valves. Close and plug all fill and vent valves.

Line: 8" & 4"- PVC - L101 – Drain and Overflow Lines From Surge Tank to Contingency Tank

1. Close 4" valve at filter in injection pump house.
2. Close 4" drain valve on water surge tank.
3. Unbolt 8" 150# flange on overflow line on water surge tank and install blind plate.
4. Install expandable plug with a vent valve (F104) in 8" –PVC-L101. Open vent valve F104. Open vent valve F103 (first test will require installation of vent valve F102 and F103).
5. Using tap F102, fill the lines with water until all air/gas is displaced through the vent valves. Close all vent valves.
6. Install properly zeroed 60# recorder at tap F103. Stabilize the system using fill tap F102.
7. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
8. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
9. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
10. Release test pressure and return all connections to their original position.

Line: 8"- PVC - L102– Classifier Overflow Line to Contingency Tank

1. Install expandable plug with a vent valve (F106) at the contingency tank. Open vent valve.

2. Close 8" valve at classifier. Close 8" bypass valve at classifiers.

3. Using tap F105, fill the line with water until all air/gas is displaced through vent valve. Close the event valve F106.

4. Install properly zeroed #60 recorder at this tap F105. Stabilize the system using fill tap F106.

5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure and return all valves and vents to their original positions.

Line: 8"- PVC - L103, 4"- L104, 4"- L105 - Filter Backwash and Return Line from Truck Loading to Classifier and Contingency Tank

1. Close 4" valve on filter backwash line at injection pump building. Open vent valve F107 (Initial test will require installation of vent valve).

2. Install 4" expandable plugs with vent valves at the contingency tank and the classifier.

3. Install blind flange with vent tap on 4" valve at the truck loading stations. Using tap F110, fill the line with water until all air/gas is displaced through vent valves. Close the vent valves.

4. Install properly zeroed #60 recorder at tap F107. Stabilize the system-using tap F110.

5. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

6. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

7. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

8. Release test pressure and remove all plugs and return all valves and vents to their original positions.

Line: 4"- L106 - Line from Oil Storage Tank at Classifier to Truck Loading Station

1. Install expandable plug in 4" line at oil tank. Open vent valves F112 (initial test will require installation of vent valve).

2. Install blind flange with vent tap on 4" valve at the truck loading station. Using tap fill the lines with water until all air/gas is displaced through vent valves F112. Close the vent valves.

3. Install properly zeroed #60 recorder at tap F111. Stabilize the system using the same tap.

4. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

5. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

6. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

7. Release test pressure and remove all plugs and return all valves and vents to their original positions.

Line: 6"- L107 - Filter Backwash Pump Suction Line

1. Turn off the backwash pump.
2. Close the 6" valve on the suction of the backwash pump.
3. Using water from the surge tank fill the line until all air/gas is displaced through vent valve tap F113.
4. Close the 6" valve at the water surge tank.
5. Install a properly zeroed #60 recorder at tap F113.
6. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
9. Release test pressure and remove all plugs and return all valves and vents to their original positions.

Line: PDL - 3"- L108, 2" DR- 647, 1½" DR- 639, 2" SW- 618 - Drains From Sulfur Plant to Tie Into PDL-4"-L5

1. Install blind plate at 150# flange connection to PDL-4"L5, (103).
2. Close 2" valve at discharge from SRU inlet separator pump, P-S103A/B on 2" SW-618.
3. Close 2-1½" drain valves from the waste heat boiler (E-S102) on 1½" DR-647
4. Close 2" valves on the drain line form the 2nd and 3rd stage condenser (E-S104) on 2" DR-647.
5. Using tap F114, fill the lines with water until all air/gas in displaced the vent valves at taps F115, F116, F117, F118 (first test may require the installation of taps).
6. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.
7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.
8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.
9. Release test pressure, remove the blind plate at 103 and return all valves and vents to their original positions.

Line: 2"- L109 - Drains from Turbine Compressors, C-9105 & C-9106 and Inlet Scrubber to Storage Tank #31

1. Close (4) 2" valves at turbine compressor, gas cooling fin fan and discharge lines.

2. Close (3) 2" valves at inlet scrubber and inlet line.

3. Close 2" valve at storage tank #31.

4. Using tap F119, fill the lines with water until all air/gas is displaced through the vent valves.

5. Install a properly zeroed #60 recorder at tap F120. Stabilize the system-using tap F119.

6. Raise pressure to 10 psig on system, stabilize test pressure then begin static pressure test as specified in General Instructions, Item 8.

7. If test pressure cannot be maintained on isolated system as specified, refer to General Instructions, Item 9.

8. At the end of the testing period, chart shall be removed and retained for permanent record and will be identified as indicated in General Instructions, Item 12. Remove recorder.

9. Release test pressure and remove all connections their original positions.