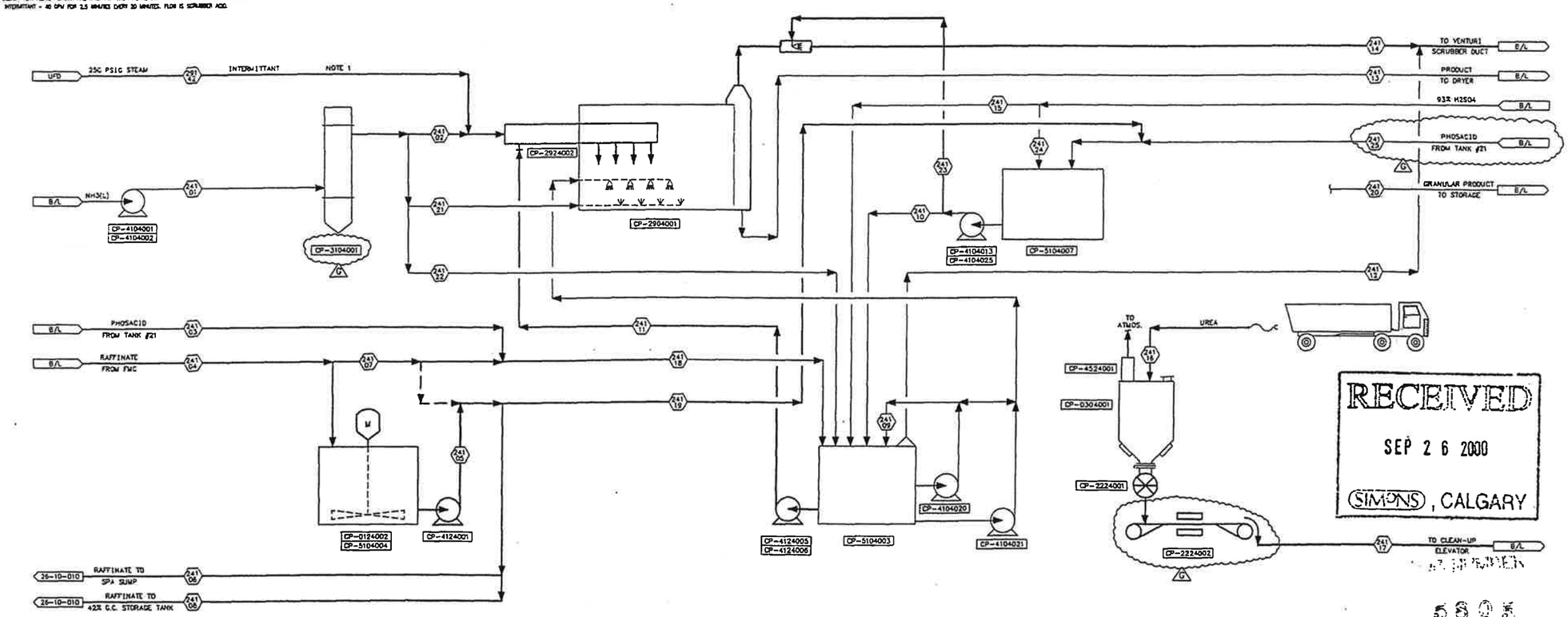
Stream Number	241 01	241 02	241 03	241 03	241 04	241 05	241 06	241 07	241 08	241 09	241 10	241 11	241 12 *	241 13	241 14 *	241 15	241 16	241 17	241 18	241 19	241 20	241 21	241 22	241 23	241 24	241 25	291 42
DESCRIPTION	LIQUID NH3 TO VAPORIZER	VAPOR NH3 TO PIPE REACTOR	ABS. P205 TO PRODUCT TANK	SOL. P205 TO PRODUCT TANK	RAFFINATE FROM PHC	RAFFINATE FROM SPA SUMP	RAFFINATE TO SPA SUMP	RAFFINATE TO PRODUCT TANK	RAFFINATE TO CC STORAGE TANK	SCRUB. ACID TO PRODUCT TANK	SCRUBBED NH3 ACID TO PIPE REACTOR	PRODUCT FLUES TO VENTURI SCRUBBER	PRODUCT TO DRYER	PRODUCT FLUES TO VENTURI SCRUBBER	SCRUB. ACID TO VENTURI SCRUBBER	H2SO4 TO PRODUCT	UREA TO UREA HOPPER	UREA TO CLEAN-UP ELEVATOR	UREA ACID TO PRODUCT TANK	RAFFINATE TO SCRUBBER TANK	SCRUB. PRODUCT TO STORAGE	VAPOR NH3 TO CLEAN-UP	VAPOR NH3 TO PRODUCT TANK	SCRUBBED ACID TO DUCT STACK	SOL. H2SO4 TO SCRUBBER TANK	ABS. P205 TO SCRUBBER TANK	STEAM TO PIPE REACTOR
Average Flow MP205/day							38		28																		
Average Flow L/day							151		114																	212	
Average Flow (NAP)L/hr	11.3	9.2	83.7	~			6.3	~	5	24.5	108.2					~		1.7	83.7	24.5	85	2.3	~			~	
Average Flow (DAP)L/hr	7.7	3.8	~	13.8				~		19.2	35.4					~		~	13.8	~	33	1.6	2.3			19	
Average Flow (APS)L/hr	14.4	6.6	~	~				30.7		29.2	96.1					33.3		~	30.7	29.2	73	2.9	2.9			~	
Design Flow TOTAL L/hr	16.7	10.8	100.7	48.5	75.4	65.2	21.8	67.1	8.4	136.5		136.5		375		41.1	20.0	1.8	97.0	35.0	100.0	3.4	3.6			6.2	24.3
Design Flow EACH L/hr	16.7	10.8	100.7	48.5	75.4	65.2	21.8	67.1	8.4	136.5		136.5		375		41.1	20.0	1.8	97.0	35.0	100.0	3.4	3.6			6.2	24.3
Design Flow TOTAL lb/hr	33,441	21,600	201,445	97,731	150,863	130,433	43,588	134,118	16,765	273,035		273,035	13,620		72,960	82,200	40,000	3,500	193,917	70,080	200,000	6,841	7,200			12,320	48,350	22,200
Design Flow EACH lb/hr	33,441	21,600	201,445	97,731	150,863	130,433	43,588	134,118	16,765	273,035		273,035	13,620		72,960	82,200	40,000	3,500	193,917	70,080	200,000	6,841	7,200			12,320	48,350	22,200
Average Flow (NAP)USGPM	73		208	~				~								~			208	33						~	
Average Flow (DAP)USGPM	45		~	34				~								~			34	~						48	
Average Flow (APS)USGPM	93		~	~				91								76			91	83						~	
Average Flow USGPM							19		14															40			
Design Flow TOTAL USGPM	107		250	121	225	195	65	200	25	352	105	352				91			250	105				40	14	60	
Design Flow EACH USGPM	107		250	121	225	195	65	200	25	352	105	352				91			250	105					14	60	
Average Flow ACFM																											
Design Flow TOTAL ACFM		817											6,000		32,000							256	272				
Design Flow EACH ACFM		817											6,000		32,000							256	272				
Temperature °F	40	82			95	95	95	95	95	167		167	185		185	100			95	95		82	82		100		410
Pressure psig (psia)	125	125											~4in H20		~4in H20							125	125				250
Density lb/ft3	38.0	0.441	100.5	100.8	83.6	83.6	83.6	83.6	83.6	94.7-109.2		94.7-109.2	0.036		0.036	113.0	50.0	50.0	83.6-101	83.6		0.441	0.441		113.0	100.5	0.363
Specific Gravity	0.62		1.61	1.62	1.34	1.34	1.34	1.34	1.34	1.55-1.75		1.55-1.75				1.82	0.80	0.80	1.33-1.62	1.34					1.82	1.61	
Viscosity cP					15	15	15	15	15	350		350				10				15					10		
% P205 (solids free)			46%	52%	25%	25%	25%	25%	25%	42-52%		42-52%								25%						46.00%	
% H20																5.5%									5.5%		
% H2SO4																94.5%									94.5%		
% Solids by Weight			0.43%	1.00%																						0.43%	
% Solids by Volume			0.31%	0.98%																						0.31%	

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

* NOTE: DESIGN NOM FLOWS SHOWN ARE ONLY FOR THE PIPE REACTOR MAP & APS CASES AND ARE SUFFICIENT FOR PIPE REACTOR GUARANTEE RATES ONLY, NOT FOR THE MAXIMUM DESIGN RATES.

* NOTE: INTERMITTANT - 40 GPM FOR 2.5 MINUTES EVERY 30 MINUTES. FLOW IS SCRUBBED ACID.

EQUIP. NO	DESCRIPTION	STATUS
CP-0124001	STATIC MIXER	NEW
CP-0124002	RAFFINATE TANK AGITATOR	NEW
CP-0304001	UREA HOPPER	EXIST
CP-1424001	UREA SCREW CONVEYOR	NEW
CP-2224001	UREA ROTARY VALVE	NEW
CP-2224002	UREA WEIGH BELT	NEW
CP-2904001	GRANULATOR	EXIST
CP-2924002	PIPE REACTOR	NEW
CP-4104001	NH3 FEED PUMP	EXIST
CP-4104002	NH3 FEED PUMP	EXIST
CP-4104013	NORTH REACTOR FEED PUMP	EXIST
CP-4104020	PRENEUTRALIZER PUMP 20	EXIST
CP-4104021	PRENEUTRALIZER PUMP 21	EXIST
CP-4104025	SOUTH REACTOR FEED PUMP	EXIST
CP-4124001	RAFFINATE FEED PUMP	NEW
CP-4124005	PIPE REACTOR FEED PUMP 05	NEW
CP-4124006	PIPE REACTOR FEED PUMP 06	NEW
CP-4504011	AMMONIA VAPORIZER	EXIST
CP-4524001	UREA HOPPER DUST COLLECTOR	NEW
CP-5104003	PRENEUTRALIZER TANK	EXIST
CP-5104004	RAFFINATE DAY TANK	EXIST
CP-5104007	DRYER SCRUBBER PUMP TANK	EXIST



RECEIVED
SEP 2 6 2000
SIMONS, CALGARY

LEGEND:
— NEW
— EXISTING
— ALTERNATE

NOTE:
1. STARTUP & CLEANING FOR 5 MINUTES, ONCE PER HOUR.

5805

REFERENCE DRAWINGS	REV.	REVISION	DATE	BY
	G	REVISED LADDER, LINE, EQUIP. NO	25 AUG 00	NRG
		DELETED LINE, CONVEYOR		
	H	REVISED LADDER	18 SEP 00	NRG

REV.	REVISION	DATE	BY
B	REVISED MATERIAL BALANCE	17 DEC 99	NRG
C	GENERAL REVISION	11 FEB 00	NRG
D	REVISED MATERIAL BALANCE	24 FEB 00	NRG
E	DELETED MIXER, RENAMED EQUIP.	11 MAY 00	SMN
F	REVISED LINES & LADDER	31 JUL 00	NRG

DRAWING HISTORY	DATE	REV.
FOR DETAIL ENGINEERING	24 FEB 00	D
FOR DETAIL ENGINEERING	15 MAY 00	E
FOR DETAIL ENGINEERING	01 AUG 00	F
FOR DETAIL ENGINEERING	25 AUG 00	G
FOR DETAIL ENGINEERING	18 SEP 00	H

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SCALE	NONE	
DESIGN BY	SMN	25 JAN 99
DRAWN BY	JKC	25 JAN 99
CHKD. BY	MDW	24 NOV 99
APPD. BY	NRG	24 NOV 99
CLIENT APPD		

KEMWorks TECHNOLOGY, INC.
8925 IMPERIAL PARKWAY, SUITE 105
MULBERRY, FLORIDA USA
(863) 648-5369 FAX (863) 647-8219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.	DWG. NO.	REV.
NRG	AGRIUM	1334	24-10-001	H

Agrium

AGRIUM U.S., INC.
CPO EXPANSION
DAP PLANT
PIPE REACTION PFD

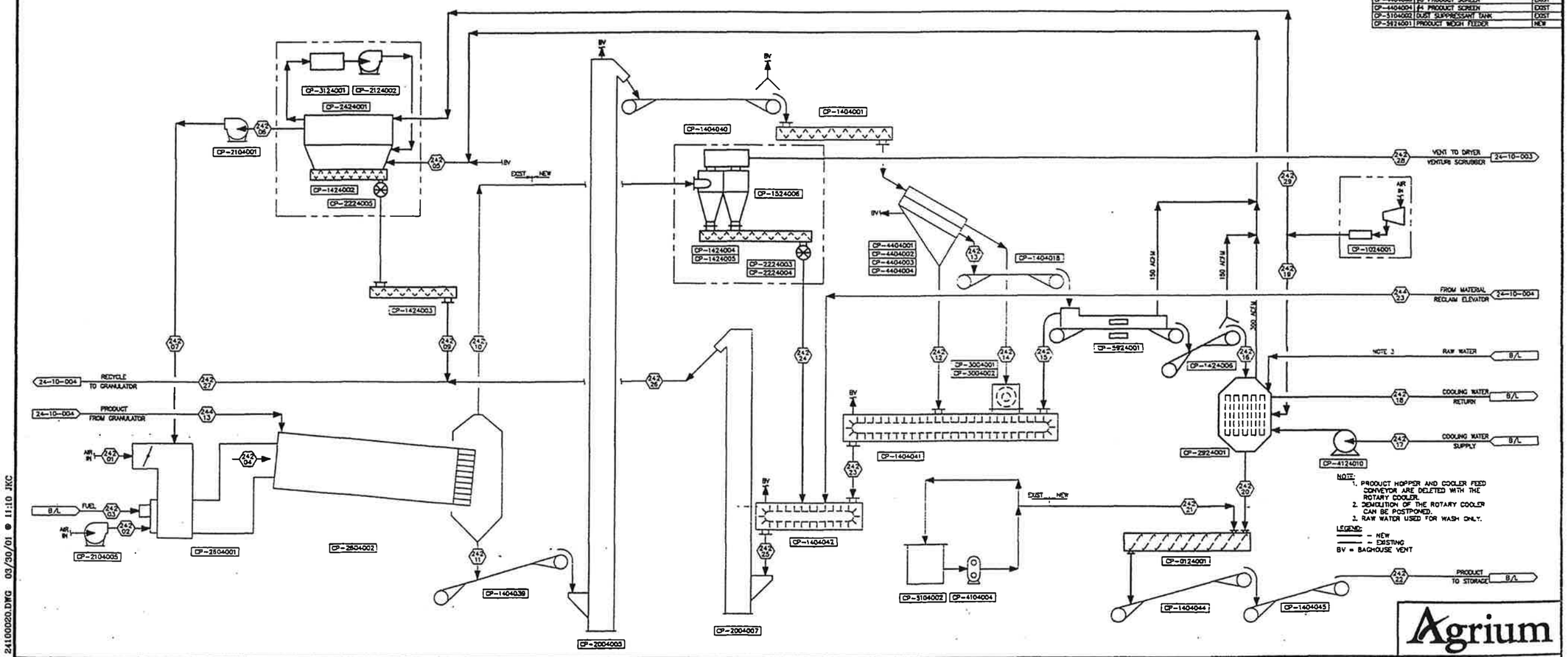
EXHIBIT B

AGR-CBI_003913
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

Stream Number	242 01	242 02	242 03	242 04	242 05	242 06	242 07	242 08	242 10	242 11	242 12	242 13	242 14	242 15	242 16	242 17	242 18	242 19	242 20	242 21	242 22	242 23	242 24	242 25	242 26	242 27	242 28	242 29	244 13	244 23
DESCRIPTION	BLOWER AIR	COMBUSTION AIR	FUEL	HEATED AIR TO DRYER	TOTAL VENTS TO BAGHOUSE	BAGHOUSE AIR TO FAN	BAGHOUSE AIR TO STACK	DUST FROM BAGHOUSE	VENT FROM DRYER TO CYCLONES	PRODUCT FROM SCREEN	FINES FROM SCREENS	PRODUCT FROM SCREENS	OVERSIZE TO MILL	PRODUCT FROM FEEDER	PRODUCT TO COOLER	COOLING WATER TO COOLER	COOLING WATER FROM COOLER	DRY PLANT AIR TO COOLER	PRODUCT FROM COOLER	COOLING OIL TO BLENDER	PRODUCT TO SPONGE	RECYCLE FROM #1 DRAGFLIGHT	DUST FROM DRYER CYCLONES	RECYCLE FROM #2 DRAGFLIGHT	RECYCLE FROM RECYCLE BLENDER	RECYCLE TO GRANULATOR	VENT TO SCRUBBER	DRY PLANT AIR TO BAGHOUSE	SOLIDS FROM GRANULATOR	RECYCLE FROM RECLAIM BLENDER
Design Flow TOTAL L/hr	12.3	18.2	1.0	275.0	51.8	50.3	50.3	1.6	113.3	500	270	150	70	50	125	150.2	150.2	0.6	125	0.3	100	400	7.1	400	400	436	105.8	1.1	500	50
Design Flow EACH L/hr	12.3	18.2	1.0	275.0	51.8	50.3	50.3	1.6	113.3	500	88	38	35	50	125	150.2	150.2	0.6	125	0.3	100	400	3.6	400	400	436	105.8	1.1	500	50
Design Flow TOTAL lb/hr	25,000	36,400	2,000	550,000	103,800	100,600	100,600	3,200	226,400	1,000,000	540,000	300,000	140,000	100,000	250,000	300,300	300,300	1,210	250,000	550.0	200,000	800,000	14,000	800,000	800,000	872,000	212,000	2,120	1,000,000	100,000
Design Flow EACH lb/hr	25,000	36,400	2,000	550,000	103,800	100,600	100,600	3,200	226,400	1,000,000	135,000	75,000	70,000	100,000	250,000	300,300	300,300	1,210	250,000	550.0	200,000	800,000	7,000	800,000	800,000	872,000	212,000	2,120	1,000,000	100,000
Design Flow TOTAL USGPM																600	600			1.25										
Design Flow EACH USGPM																600	600			1.25										
Design Flow TOTAL ACFM	7,000	12,000			36,000	36,000	36,000		93,000									300									89,000	60		
Design Flow EACH ACFM	7,000	12,000			36,000	36,000	36,000		93,000									300									89,000	60		
Temperature °F	95	95	70	400-500	180-215	180-215	180-215	180-215	194-230	185-240	185-240	185-240	185-240	185-240	180-215	70	95	50	125	83	125	180-215	194-230	180-215	180-215	180-215	194-240	50	185	50-215
Pressure psig (psia)	Gm H2O	Gm H2O	60-120	-0.5in H2O	-4in H2O	-12in H2O	5in H2O		-3in H2O									1		30							-10in H2O	100		
Density lb/ft3	0.056	0.057		0.033	0.046	0.044	0.047	58-66	0.041	58-66	58-66	58-66	58-66	58-66	58-66	62.4	62.4	0.067	58-66	53.0	58-66	58-66	58-66	58-66	58-66	58-66	0.040	0.368	58-66	30-46
Specific Gravity								0.93-0.98		0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98	1.00	1.00		0.93-0.98	0.88	0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98	0.93-0.98				0.93-0.98	
Viscosity cP																				30										
% P2O5 (solids free)																														
% H2O								0.5-2%		0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%							0.5-2%				0.5-2%			5.0%	
% H2SO4																														
% Solids by Weight					3.07%	0.032%	0.032%		6.54%																					
% Solids by Volume																														

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

EQUIP. NO.	DESCRIPTION	STATUS
CP-0124001	RIBBON BLENDER	NEW
CP-1024001	DRY PURGE AIR UNIT	NEW
CP-1404001	SEVENTY SCREW	EXIST
CP-1404018	SCREEN PRODUCT BELT #37	EXIST
CP-1404038	DRYER DISCHARGE BELT	EXIST
CP-1404040	TRANSFER CONVEYOR	EXIST
CP-1404041	#1 DRAG FLIGHT	EXIST
CP-1404042	#2 DRAG FLIGHT	EXIST
CP-1404044	COOLER DISCHARGE CONVEYOR	EXIST
CP-1404045	N. PRODUCT STORAGE CONVEYOR	EXIST
CP-1424002	BAGHOUSE SCREW CONVEYOR	NEW
CP-1424003	GRANULATOR FEED SCREW CONVEYOR	NEW
CP-1424004	N. DRYER CYCLONE SCREW CONVEYOR	NEW
CP-1424005	S. DRYER CYCLONE SCREW CONVEYOR	NEW
CP-1424006	COOLER FEED CONVEYOR	NEW
CP-1524006	DRYER CYCLONE	NEW
CP-2004005	PRIMARY ELEVATOR	EXIST
CP-2004007	ELEVATOR TO GRANULATOR	EXIST
CP-2104001	VENT BAGHOUSE FAN	REMARKED
CP-2104005	COMBUSTION AIR FAN	EXIST
CP-2124002	BAGHOUSE HEATER FAN	FUTURE
CP-2224003	N. DRYER DUST ROTARY VALVE	NEW
CP-2224004	S. DRYER DUST ROTARY VALVE	NEW
CP-2224005	BAGHOUSE ROTARY VALVE	NEW
CP-2424001	VENT BAGHOUSE	NEW
CP-2604001	DRYER COMBUSTION CHAMBER	EXIST
CP-2604002	GRANULATOR DRYER	EXIST
CP-2924001	BULK FLOW COOLER	NEW
CP-3004001	#1 OVERSIZE CHODMILL	EXIST
CP-3004002	#2 OVERSIZE CHODMILL	EXIST
CP-3124001	BAGHOUSE HEATER	FUTURE
CP-4104004	DUST SUPPRESSANT TANK PUMP	EXIST
CP-4124010	COOLER WATER BOOSTER PUMP	NEW
CP-4404001	#1 PRODUCT SCREEN	EXIST
CP-4404002	#2 PRODUCT SCREEN	EXIST
CP-4404003	#3 PRODUCT SCREEN	EXIST
CP-4404004	#4 PRODUCT SCREEN	EXIST
CP-5104002	DUST SUPPRESSANT TANK	EXIST
CP-5924001	PRODUCT WEIGH FEEDER	NEW



24100020.DWG 03/30/01 @ 11:10 JKC

REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY	DRAWING HISTORY	DATE	REV.
24-10-005 - MAP PFD LADDERS						FOR CONSTRUCTION	30 MAR 01	0
24-10-006 - 18-20-0 PFD LADDERS								

		DATE
SCALE:	NONE	
DESIGNED BY	JWC	23 AUG 00
DRAWN BY	JKC	23 AUG 00
CHECKED BY	CBS	30 MAR 01
APPROVED BY	NRG	30 MAR 01
CLIENT APPR.		

KEMWorks TECHNOLOGY, INC.
[illegible] MERIDIAN PARKWAY, SUITE 103
MILLSBORO, FLORIDA USA
(863) 648-5369 FAX (863) 647-6219
www.kemworks.com

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
DAP/MAP RECYCLE & PROD. PFD

PROJ. MGR.	CLIENT	PROJ. NO.	DWG. NO.	REV.
NRG	AGRIUM	1313	24-10-002	0

EXHIBIT B

AGR-CBI_003914
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

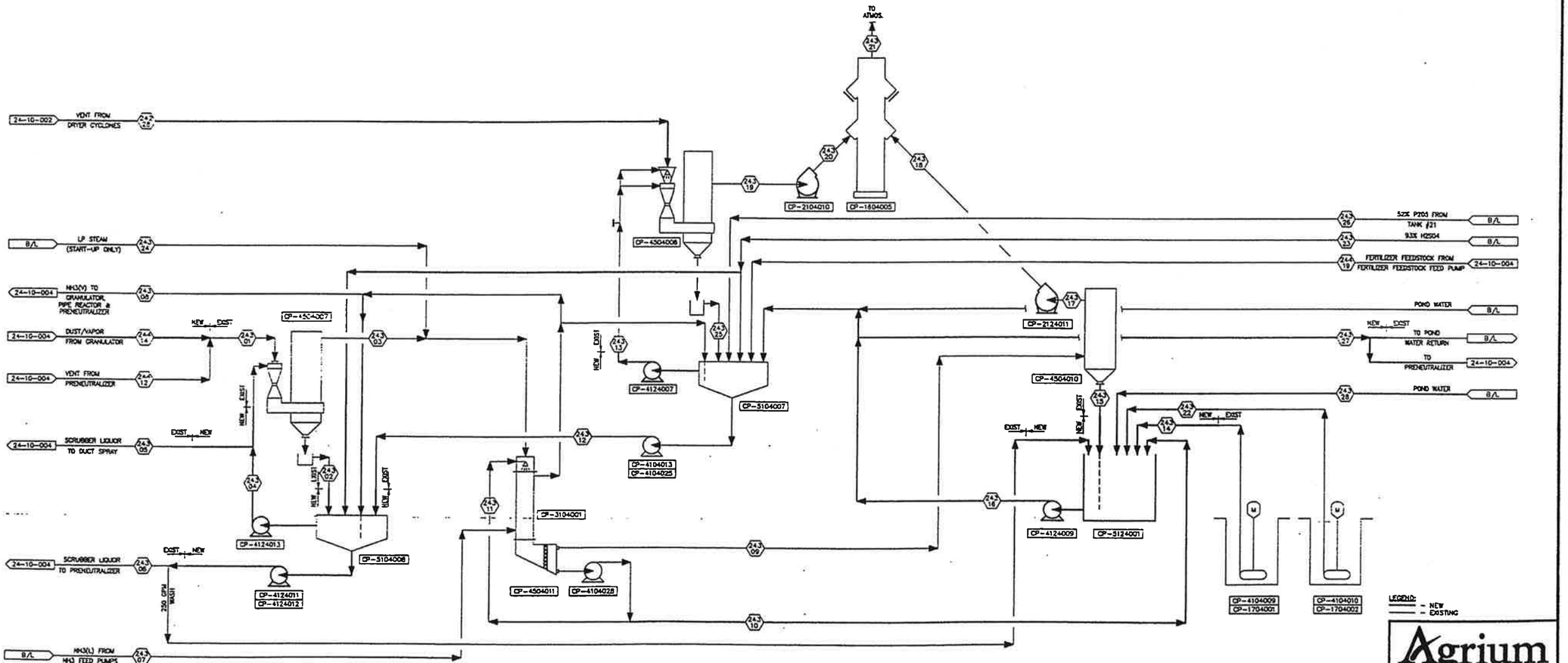
Stream Number	242 26	243 01	243 02	243 03	243 04	243 05 **	243 06	243 07	243 08	243 09	243 10	243 11	243 12	243 13	243 14	243 15	243 16	243 17	243 18	243 19	243 20	243 21	243 22	243 23	243 24 ***	243 25	243 26	243 27	243 28	244 17	244 14	244 18
DESCRIPTION	VENT TO DRYER SCRUBBER	TOTAL VENT TO A/G SCRUBBER	LIQUOR FROM A/G SCRUBBER	VENT FROM A/G SCRUBBER	LIQUOR FROM A/G SCRUBBER PUMP	SCRUBBER ACID TO DUCT SPRAY	SCRUBBER ACID TO PRENEUTR. TANK	LIQUID NH3	VAPOR NH3 FROM VAPORIZER	VENT FROM NH3 VAPORIZER	VAPORIZER CONDENSATE TO WASTE HOT TANK	VAPORIZER CONDENSATE TO VAPORIZER	SPARGE SC LIQUOR TO A/G SCRUBBER	SPARGE SC LIQUOR TO DRYER SCRUBBER	FROM SEP SUMP TO WASTE HOT TANK	SPARGE FROM FLUORINE SCRUBBER	FROM SPARGE WASTE TANK	FLUORINE SCRUBBER VENT TO FAN	FLUORINE SCRUBBER VENT TO STACK	SPARGE SCRUBBER VENT TO FAN	DRYER SCRUBBER VENT TO STACK	SPARGE TO ATMOS	FROM WET SUMP TO WASTE HOT TANK	FROM A/G SPARGE SCRUBBER	LP STEAM TO NH3 VAPORIZER	SCRUBBER LIQUOR FROM SPARGE SCRUBBER	SEP. FROM TO DRYER SCRUBBER	WASTE NEO TO POND	POND NEO TO WASTE TANK	PRODUCT FLASH TO VACUUM SCRUBBER	SPARG FLASH TO VACUUM SCRUBBER	RAFFINATE TO SCRUBBER
Design Flow TOTAL t/hr	105.8	40.1	144.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5	13.7	39.9	35.0
Design Flow EACH t/hr	105.8	40.1	144.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5	13.7	39.9	35.0
Design Flow TOTAL lb/hr	212,000	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	488,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	248,000	50,100	12,300	1,500	453,600	40,500	125,000	125,000	27,400	79,800	70,080
Design Flow EACH lb/hr	212,000	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	488,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	248,000	50,100	12,300	1,500	453,600	40,500	125,000	125,000	27,400	79,800	70,080
Design Flow TOTAL USGPM			510		440	40	105	107			40	400	155	630	100	40	250							100	14		700	50	250	250			105
Design Flow EACH USGPM			510		440	40	105	107			40	400	155	630	100	40	250							100	14		700	50	250	250			105
Design Flow TOTAL ACFM	89,000	36,000		37,000					1,000	37,000								40,000	34,000	65,000	56,000	83,000								12,000	35,000	
Design Flow EACH ACFM	89,000	36,000		37,000					1,000	37,000								40,000	34,000	65,000	56,000	83,000								12,000	35,000	
Temperature °F	194-240	165	170-180	170	170-180	150-180	150-180	40	170	170	170	170	139	140-150	95	142	95	180	180	142	142	154	95	100	280	180 .		95	92	185	185	95
Pressure psig (psia)	~10in. H2O	~3in H2O		~18.5in H2O				125	125	~24.5in H2O								~33.5in H2O	0.5in H2O	~32in H2O	1in H2O	0in H2O			50					~1in H2O	~1in H2O	
Density lb/ft3	0.040	0.037	81.1	0.036	81.1	81.1	81.1	38.0	0.441	0.036	63.0	63.0	82.5	81.1	62.4	62.4	62.4	0.034	0.040	0.044	0.048	0.045	62.4	113.0	0.087	81.1	101.1	62.4	62.4	0.038	0.038	83.6
Specific Gravity			1.30		1.30	1.30	1.30	0.63			1.01	1.01	1.32	1.30	1.00	1.00	1.00					.	1.00	1.82		1.30	1.62	1.00	1.00			1.34
Viscosity cP			3		3	3	3							15	1	1	1						1	10				1	1			15
% P2O5 (solids free)																											52%					25%
% H2O																								5.5%								
% H2SO4																								94.5%								
% Solids by Weight																																
% Solids by Volume																																

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

** NOTE: INTERMITTENT - 40 GPM FOR 2.5 MINUTES EVERY 20 MINUTES. FLOW IS SCRUBBER ACID.

*** NOTE: FOR START-UP ONLY

BCMP NO.	DESCRIPTION	STATUS
CP-1804005	DRYER SCRUBBER STACK	MOD
CP-1704001	GRAN BUILDING FLOOR SUMP	EXIST
CP-1704002	GRAN BUILD FLOOR SUMP #2	EXIST
CP-2104010	DRYER SCRUBBER FAN	MOD
CP-2124011	GRANULATOR AMMONIA SCRUBBER FAN	NEW
CP-3104001	AMMONIA VAPORIZER	EXIST
CP-4104006	GRAN BUILDING FLOOR SUMP PUMP	EXIST
CP-4104010	GRAN BUILD FLOOR SUMP PUMP #2	EXIST
CP-4104013	DRYER SCRUBBER TRANSFER PUMP	RENAMED
CP-4104025	DRYER SCRUBBER TRANSFER PUMP	RENAMED
CP-4104028	VAPORIZER RECIRCULATION PUMP	EXIST
CP-4124007	DRYER SCRUBBER PUMP	NEW
CP-4124008	WASTE WATER PUMP	NEW
CP-4124011	PRENEUTRALIZER TRANSFER PUMP	NEW
CP-4124012	PRENEUTRALIZER TRANSFER PUMP	NEW
CP-4124013	GRAN/AMMONIA SCRUBBER PUMP	NEW
CP-4504006	DRYER SCRUBBER	EXIST
CP-4504007	GRANULATOR AMMONIA SCRUBBER	EXIST
CP-4504010	GRANULATOR FLUORINE SCRUBBER	EXIST
CP-4504011	VAPORIZER SEPARATOR	EXIST
CP-5104007	DRYER SCRUBBER PUMP TANK	RENAMED
CP-5104008	GRAN/AMMONIA SCRUBBER FEED TANK	RENAMED
CP-5124001	WASTE WATER TANK	NEW



REFERENCE DRAWINGS
24-10-005 - MAP PFD LADDERS
24-10-006 - 16-20-0 PFD LADDERS

REFERENCE DRAWINGS	REV.	REVISION	DATE	BY

DRAWING HISTORY	DATE	REV.
FOR CONSTRUCTION	30 MAR 01	0

		DATE
SCALE	NONE	
DESIGNED BY	JWC	23 APR 00
DRAWN BY	JKC	23 APR 00
CHECK. BY	CBS	30 MAR 00
APPR. BY	NRG	30 MAR 00
CLIENT APPR.		

KEMWorks TECHNOLOGY, INC.
9625 IMPERIAL PARKWAY, SUITE 106
BOULDER, FLORIDA USA
(863) 648-5369 FAX (863) 647-5219
www.kemworks.com

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
GRANULATION SCRUBBING PFD

PROJ. MGR.	CLIENT	PROJ. NO.	DWG. NO.	REV.
NRG	AGRIUM	1313	24-10-003	0

24100030.DWG 03/30/01 @ 11:04 JKC

EXHIBIT B

AGR-CBI_003915
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

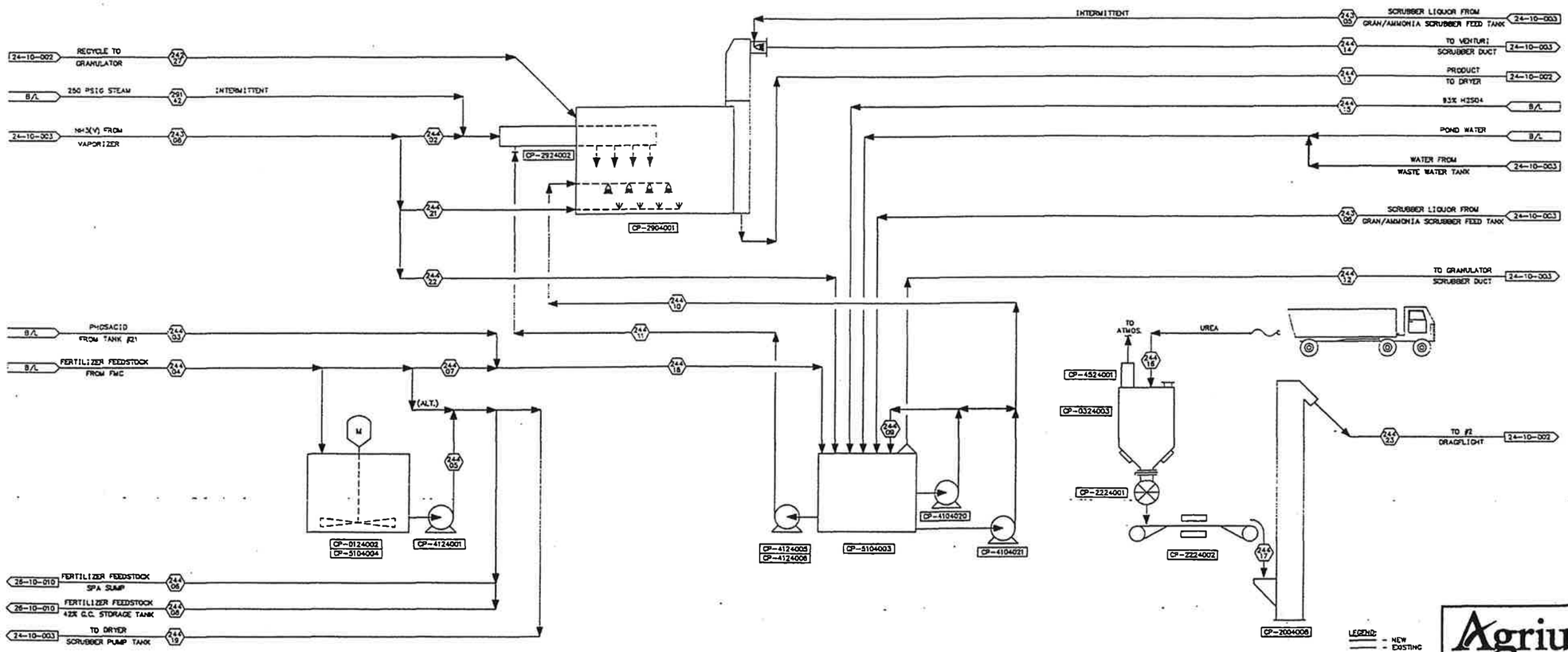
Stream Number	242 27	243 05 **	243 06	243 08	244 02	244 03	244 03	244 04	244 05	244 06	244 07	244 08	244 09	244 10	244 11	244 12	244 13	244 14	244 15	244 16	244 17	244 18	244 19	244 21	244 22	244 23	291 42 ***
DESCRIPTION	RECYCLE TO GRANULATOR	SCRUBBER SPRAY	SCRUBBER ACID TO PRODUCT TANK	VAPOR FROM VAPORIZER	VAPOR TO PIPE REACTOR	48% P2O5 TO PRODUCT TANK	105 P2O5 TO PRODUCT TANK	PFR FROM PAC	PFR FROM DRY TANK	PFR TO SPA SUMP	PFR TO PRODUCT TANK	PFR TO CC STORAGE TANK	PFR TO PRODUCT TANK	ACID TO GRANULATOR	ACID TO PIPE REACTOR	PRODUCT FEED TO VENTURI SCRUBBER	PRODUCT DIRECT	PRODUCT FEED TO VENTURI SCRUBBER	FROM PRODUCT	TO MAIN HOPPER	TO MAIN RECLAIM ELEVATOR	TOTAL ACID TO PRODUCT TANK	PFR TO OTHER SCRUBBER TANK	VAPOR TO GRANULATOR	VAPOR TO PRODUCT TANK	RECLAIM ELEVATOR TO GRANULATOR	50 PSIG STEAM TO PIPE REACTOR
Design Flow TOTAL L/hr	4.36	13.0	34.0	16.7	10.8	100.7	46.9	75.3	85.3	21.8	67.1	8.4	136.5	136.5	136.5	13.7	500	38.9	41.1	20.0	1.8	87.0	35.1	5.1	7.1	50.0	
Design Flow EACH L/hr	4.36	13.0	34.0	16.7	10.8	100.7	46.9	75.3	85.3	21.8	67.1	8.4	136.5	136.5	136.5	13.7	500	38.9	41.1	20.0	1.8	87.0	35.1	5.1	7.1	50.0	
Design Flow TOTAL lb/hr	872,000	24,000	68,000	33,400	21,800	201,400	97,800	150,800	170,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	78,800	82,200	40,000	3,500	183,900	70,100	10,200	14,200	100,000	22,200
Design Flow EACH lb/hr	872,000	24,000	68,000	33,400	21,800	201,400	97,800	150,800	170,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	78,800	82,200	40,000	3,500	183,900	70,100	10,200	14,200	100,000	22,200
Design Flow TOTAL USGPM		40	105			250	121	225	185	65	200	25	352	352	352				81			250	105				
Design Flow EACH USGPM		40	105			250	121	225	185	65	200	25	352	352	352				81			250	105				
Design Flow TOTAL ACFM				1,300	800											12,000		35,000						400	500		
Design Flow EACH ACFM				1,300	800											12,000		35,000						400	500		
Temperature °F	180-215	150-180	150-180	170	170	95	95	95	95	95	95	95	167	167	167	185	185	185	100			95	95	170	170	50-215	410
Pressure psig (psia)				125.0	125.0											~1in H2O		~1in H2O						125.0	125.0		250
Density lb/ft3	58-66	81.1	81.1	0.441	0.441	100.3	101.1	83.8	83.8	83.8	83.8	83.8	94.7-108.2	94.7-108.2	94.7-108.2	0.038	58-66	0.038	113.0	50.0	50.0	83.8-101	83.8	0.441	0.441	50-66	0.583
Specific Gravity		1.30	1.30			1.61	1.62	1.34	1.34	1.34	1.34	1.34	1.55-1.75	1.55-1.75	1.55-1.75		0.93-0.96		1.82	0.80	0.80	1.33-1.62	1.34				
Viscosity cP		3	3			13	20	15	15	15	15	15	350	350	350				10				15				
% P2O5 (solids free)						46%	52%	25%	25%	25%	25%	25%	42-52%	42-52%	42-52%								25%				
% H2O	0.5%																5.00%		3.5%								
% H2SO4																			94.5%								
% Solids by Weight																											
% Solids by Volume																											

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

** NOTE: INTERMITTANT - 40 GPM FOR 2.5 MINUTES EVERY 30 MINUTES. FLOW IS SCRUBBER ACID.

*** NOTE: INTERMITTANT - STARTUP FOR 10 MINUTES FOR 2-5 MINUTES WHEN BACKPRESSURE REDUCES BY PSIG.

EQUIP. NO.	DESCRIPTION	STATUS
CP-0114002	FERTILIZER FEEDSTOCK TANK AGITATOR	EXIST
CP-0334003	UREA HOPPER	EXIST
CP-3004008	MATERIAL RECLAIM ELEVATOR	EXIST
CP-2224001	UREA ROTARY VALVE	EXIST
CP-2224002	UREA WEIGH BELT	EXIST
CP-2004007	GRANULATOR	EXIST
CP-2974002	PIPE REACTOR	EXIST
CP-4104020	NORTH SLURRY PUMP	EXIST
CP-4104021	SOUTH SLURRY TO GRANULATOR PUMP	EXIST
CP-4114001	FERTILIZER FEEDSTOCK FEED PUMP	EXIST
CP-4124005	PIPE REACTOR FEED PUMP 05	EXIST
CP-4124006	PIPE REACTOR FEED PUMP 06	EXIST
CP-4324001	UREA HOPPER DUST COLLECTOR	EXIST
CP-5104003	PRODUCT/FERTILIZER TANK	EXIST
CP-5104004	FERTILIZER FEEDSTOCK DAY TANK	EXIST



REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY	DRAWING HISTORY	DATE	REV.
24-10-005 - MAP PFD LADDERS						FOR CONSTRUCTION	30 MAR 01	0
24-10-006 - 16-20-0 PFD LADDERS								

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		DATE
SIZE	NONE	
DESIGN BY	NRG	25 AUG 00
DRAFT BY	JKC	24 AUG 00
CHKD. BY	CBS	30 MAR 01
APPR. BY	NRG	30 MAR 01
CLIENT APPR.		

KEMWorks TECHNOLOGY, INC.
8625 IMPERIAL PARKWAY, SUITE 100
BOLSBERRY, FLORIDA USA
(863) 648-6369 FAX (863) 647-5219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.
NRG	AGRIUM	1313

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
GRANULATION REACTION PFD

DWG. NO. 24-10-004 REV. 0

84100040.DWG 03/30/01 @ 11:08 JKC

EXHIBIT B

AGR-CBI_003916
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

Stream Number	242 01	242 02	242 03	242 04	242 05	242 06	242 07	242 09	242 10	242 11	242 12	242 13	242 14	242 15	242 16	242 17	242 18	242 19	242 20	242 21	242 22	242 23	242 24	242 25	242 26	242 27	242 28	242 29
DESCRIPTION PRODUCT - MAP	DILUTION AIR	COMBUSTION AIR	FUEL	HEATED AIR TO DRYER	TOTAL VENTS TO BAGHOUSE	BAGHOUSE AIR TO FAN	BAGHOUSE AIR TO DRYER	DUST FROM BAGHOUSE	VENT FROM DRYER TO CYCLONES	PRODUCT FROM DRYER	FINES FROM SCREENS	PRODUCT FROM SCREENS	OVERSIZE TO MILLS	PRODUCT [illegible]	PRODUCT TO COOLER	COOLING WATER TO COOLER	COOLING WATER FROM COOLER	DRY PLANT AIR TO COOLER	PRODUCT FROM COOLER	COATING OIL TO BLENDER	PRODUCT TO STORAGE	RECYCLE FROM #1 DRAGFLIGHT	DUST FROM DRYER CYCLONES	RECYCLE FROM #2 DRAGFLIGHT	RECYCLE FROM RECYCLE [illegible]	RECYCLE TO GRANULATOR	VENT TO DRYER SCRUBBER	DRY PLANT AIR TO BAGHOUSE
Average Flow tP2O5/day								20		5,251	2,306	1,563	791	509	1,076				1,076		1,000	4,204	77	4,283	4,283	4,283		
Average Flow t/day	240	372	9	1,833	1,246	1,207	1,207	38	2,207	10,361	5,534	3,019	1,507	965	2,050	2,283	2,285	14	2,050	5.6	2,060	8,010	146	8,160	8,160	8,154	2,064	
Average Flow t/hr	10	16	0.4	76	52	50	50	1.6	92	416	231	126	63	40	85	95.2	95.2	0.6	85	0.2	86	334	6.1	340	340	340	86	
Design Flow TOTAL t/hr	12.5	18.2	1.0	275	51.9	50.3	50.3	1.6	113.2	500	270	150	70	50	125	150.2	150.2	0.6	125	0.3	100	400	7.1	400	400	436	105.8	1.1
Design Flow EACH t/hr	12.5	18.2	1.0	275	51.9	50.3	50.3	1.4	113.2	500	88	38	35	50	125	150.2	150.2	0.6	125	0.3	100	400	3.6	400	400	436	105.8	1.1
Design Flow TOTAL lb/hr	25,000	36,400	2,000	550,000	103,800	100,800	100,800	3,200	226,400	1,000,000	540,000	300,000	140,000	100,000	250,000	300,300	300,300	1,210	250,000	550	200,000	800,000	14,000	800,000	800,000	872,000	212,000	2,120
Design Flow EACH lb/hr	25,000	36,400	2,000	550,000	103,800	100,800	100,800	3,200	224,400	1,000,000	135,000	75,000	70,000	100,000	250,000	300,300	300,300	1,210	250,000	550	200,000	800,000	7,000	800,000	800,000	872,000	212,000	2,120
Average Flow USGPM (ACFM)	(3,500)	(9,100)		(77,000)	(36,000)	(38,000)	(34,000)		(75,000)							380	380	(300)		1.1							(72,000)	
Design Flow TOTAL USGPM																600	600			1.25								
Design Flow EACH USGPM																600	600			1.25								
Design Flow TOTAL ACFM	7,000	12,000		278,000	38,000	38,000	36,000		93,000									300									88,000	60
Design Flow EACH ACFM	7,000	12,000		278,000	36,000	38,000	36,000		93,000									300									88,000	60
Temperature °F	85	85	70	500	215	215	215	215	228	221	215	215	215	215	215	70	95	50	125	85	124	215	228	215	215	209	228	50
Pressure psig (psia)	0in H2O	5in H2O	60-120	-0.5in H2O	-4in H2O	-12in H2O	5in H2O		-3in H2O									1		30							-10in H2O	100
Density lb/ft3	0.056	0.057		0.033	0.046	0.044	0.047	61.0	0.041	61.0	61.0	61.0	61.0	61.0	61.0	62.4	62.4	0.087	61.0	55.0	61.0	61.0	61.0	61.0	61.0	61.0	0.040	0.586
Specific Gravity								0.98		0.98	0.98	0.98	0.98	0.98	0.98	1.00	1.00		0.98	0.88	0.98	0.98	0.98	0.98	0.98	0.98		
Viscosity cP																				30								
% P2O5 (solids free)								52.5%		52.5%	52.5%	52.5%	52.5%	52.5%	52.5%				52.5%		52.5%	52.5%	52.5%	52.5%	52.5%	52.5%		
% H2O								2.5-2%		2.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%				0.5-2%		0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%		
% H2SO4																												
% Solids by Weight					3.07%	0.032%	0.032%		5.54%																			
% Solids by Volume																												

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

Stream Number	243 01	243 02	243 03	243 04	243 05 **	243 06	243 07	243 08	243 09	243 10	243 11	243 12	243 13	243 14	243 15	243 16	243 17	243 18	243 19	243 20	243 21	243 22	243 23	243 24 ***	243 25	243 26	243 27	243 28
DESCRIPTION PRODUCT - MAP	TOTAL VENT TO R/G SCRUBBER	SCRUBBER LIQUOR FROM R/G SCRUBBER	VENT FROM R/G SCRUBBER	LIQUOR FROM R/G SCRUBBER PUMP	SCRUBBER ACID TO DUCT SPRAY	SCRUBBER ACID TO PRENEUT TANK	LIQUID NH3	VAPOR NH3 FROM VAPORIZER	VENT FROM NH3 VAPORIZER	VAPORIZER CONDENSATE TO WASTE H2O TANK	VAPORIZER CONDENSATE TO VAPORIZER	DRYER SC LIQUOR TO R/G SCRUBBER	DRYER SC LIQUOR TO DRYER SCRUBBER	FROM DIRT SUMP TO WASTE H2O TANK	BLEED FROM FLUORINE SCRUBBER	FROM WASTE WATER TANK	FLUORINE SCRUBBER VENT TO FAN	FLUORINE SCRUBBER VENT TO STACK	DRYER SCRUBBER VENT TO FAN	DRYER SCRUBBER VENT TO STACK	STACK TO ATMOS	FROM WET SUMP TO WASTE H2O TANK	H2SO4 TO DRYER SCRUBBER	LP STEAM TO NH3 VAPORIZER [illegible]	SCRUBBER LIQUOR FROM DRYER SCRUBBER	[illegible] TO DRYER SCRUBBER	WASTE [illegible] TO POND RETURN	POND WATER TO WASTE WATER TANK
Average Flow tP2O5/day																												
Average Flow t/day	968	2,817	967	2,817		546	281	281	1,390	-427	1,992	157	5,331	0	370	-398	1,012	1,012	2,047	2,047	3,057	0	0		5,339	0	0	0
Average Flow t/hr	40	117	40	117		24	12	12	58	-17.8	83	5	222	0	15	-16.6	42.1	42.1	85	85	127	0	0.0		222	0	0	0
Design Flow TOTAL t/hr	40.1	168.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5
Design Flow EACH t/hr	40.1	168.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5
Design Flow TOTAL lb/hr	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	486,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	249,000	50,100	12,300	1,500	432,800	40,500	125,000	125,000
Design Flow EACH lb/hr	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	486,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	249,000	50,100	12,300	1,500	432,800	40,500	125,000	125,000
Average Flow USGPM (ACFM)	(42,000)	420	(43,000)	370		74	75	(890)	(82,000)	-89	330	30	700		59	-46	(43,000)	(41,000)	(63,000)	(58,000)	(104,000)				680			
Design Flow TOTAL USGPM		510		440	40	105	107			40	400	155	750	100	40	250						100	14		700	50	250	250
Design Flow EACH USGPM		510		440	40	105	107			40	400	155	750	100	40	250						100	14		700	50	250	250
Design Flow TOTAL ACFM	36,000		37,000					1,300	37,000								40,000	34,000	85,000	58,000	83,000							
Design Flow EACH ACFM	36,000		37,000					1,300	37,000								40,000	34,000	85,000	58,000	83,000							
Temperature °F	180	180	170	180	180	180	40	170	170	170	170	125	125	95	156	95	165	163	134	134	170	95	100	299	134	95	95	82
Pressure psig (psia)	-3in H2O		-18.5in H2O				125	125	-24.5in H2O								-33.5in H2O	0.5in H2O	-32in H2O	1in H2O	0in H2O			30				
Density lb/ft3	0.032	81.1	0.031	81.1	81.1	81.1	38.0	0.441	0.031	63.0	63.0	81.1	81.1	62.4	62.4	62.4	0.031	0.034	0.045	0.048	0.041	62.4	113.0	0.097	81.1	101.1	62.4	62.4
Specific Gravity		1.30		1.30	1.30	1.30	0.63			1.01	1.01	1.30	1.30	1.00	1.00	1.00						1.00	1.82		1.30	1.82	1.00	1.00
Viscosity cP		3		3	3	3	0.1					15	3	1	1	1						1	10		3	20	1	1
% P2O5 (solids free)																										52%		
% H2O																							5.5%					
% H2SO4																							94.5%					
% Solids by Weight																												
% Solids by Volume																												

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

** NOTE: INTERMITTENT - 40 GPM FOR 2.5 MINUTES EVERY 30 MINUTES. FLOW IS SCRUBBER ACID.

*** NOTE: FOR START-UP ONLY

Stream Number	244 02	244 03	244 04 **	244 05	244 06	244 07	244 08	244 09	244 10	244 11	244 12	244 13	244 14	244 15	244 16	244 17	244 18	244 19	244 21	244 22	244 23	231 42 ***
DESCRIPTION PRODUCT - MAP	VAPOR NH3 TO PPC REACTOR	68% P2O5 TO PRENEUT TANK	PFS FROM PMC	PFS FROM DIR TANK	PFS TO SPA SUMP	PFS TO PRENEUT TANK	PFS TO 42% GC STORAGE TANK	RECIRC TO PRENEUT TANK	MIXED ACID TO GRANULATOR	MIXED ACID TO PPC REACTOR	PRENEUT FUMES TO VENTURI SCRUBBER	PRODUCT TO DRYER	GRAN FUMES TO VENTURI SCRUBBER	H2SO4 TO PRENEUT	UREA TO UREA HOPPER	UREA TO WGT. RECLAIM ELEVATOR	TOTAL ACID TO PRENEUT TANK	PFS TO DRYER SCRUBBER TANK	VAPOR NH3 TO GRANULATOR	VAPOR NH3 TO PRENEUT TANK	RECLAIM ELEVATOR TO #2 DRAGFLIGHT	HP STEAM TO PPC REACTOR
Average Flow tP2O5/day				187	38	75	28					5,370						121				
Average Flow t/day	209	1,823		750	151	302	113	3,273	0	2,778	35	10,440	968	0	0	0	2,225	486	72	0	0	
Average Flow t/hr	8.7	80		31	6.2	13	4.7	136	0	116	1.5	435	40	0	0	0.0	93	20	3.0	0	0.0	
Design Flow TOTAL t/hr	10.8	100.7	75.5	83.3	21.8	87.1	8.4	136.5	136.5	136.5	13.7	500	39.9	41.1	20.0	1.8	97.0	35.1	5.1	7.1	50.0	
Design Flow EACH t/hr	10.8	100.7	75.5	83.3	21.8	67.1	8.4	136.5	136.5	136.5	13.7	500	39.9	41.1	20.0	1.8	97.0	35.1	5.1	7.1	50.0	
Design Flow TOTAL lb/hr	21,800	201,400	150,900	130,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	79,800	82,200	40,000	3,500	193,900	70,100	10,200	14,200	100,000	22,200
Design Flow EACH lb/hr	21,800	201,400	150,900	130,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	79,800	82,200	40,000	3,500	193,900	70,100	10,200	14,200	100,000	22,200
Average Flow USGPM (ACFM)	(680)	200			19	37	14	352		294	(7,200)		(41,000)	0.0			236	80	(335)	(0)		
Design Flow TOTAL USGPM		250	225	195	65	200	25	352	352	352				91			250	105				
Design Flow EACH USGPM		250	225	195	65	200	25	352	352	352				91			250	105				
Design Flow TOTAL ACFM	800										12,300		35,000						400	500		
Design Flow EACH ACFM	800										12,300		35,300						400	500		
Temperature °F	150	95	95	95	95	95	95				185	185	167	100			95	95	150	150	50	410
Pressure psig (psia)	125										-1in H2O		-1in H2O						125	125		250
Density lb/ft3	0.426	100.5	83.6	83.6	83.6	83.6	83.6	98.0	98.0	98.0	2.348	61.0	2.033	113.0	50.0	50.0	83.6-101	83.6	0.426	0.426	50-66	0.563
Specific Gravity		1.81	1.34	1.34	1.34	1.34	1.34	1.57	1.57	1.57				1.82	0.80	0.80	1.33-1.82	1.34				
Viscosity cP		12	15	15	15	15	15							10				15				
% P2O5 (solids free)		44%	25%	25%	25%	25%	25%	38%	38%	38%		51.4%						25%				
% H2O												2.5%		5.5%								
% H2SO4														94.5%								
% Solids by Weight																						
% Solids by Volume																						

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

** NOTE: SEE PMC FLOWSHEET FOR AVERAGE RATE.

*** NOTE: INTERMITTENT - STARTUP FOR 10 MINUTES, FOR 2-5 MINUTES WHEN BACKPRESSURE REACHES 85 PSIG.

24100050.DWG 03/30/01 @ 11:06 JKC

REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY	DRAWING HISTORY	DATE	REV.
24-10-002 - DAP/MAP RECYCLE & PROD. PFD						FOR CONSTRUCTION	30 MAR 01	0
24-10-003 - GRANULATION SCRUBBING PFD								
24-10-004 - GRANULATION REACTION PFD								

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SCALE	NONE	DATE
DESIGN BY	SMN	30 MAR 01
DRAWN BY	JKC	30 MAR 01
CHKD. BY	CBS	30 MAR 01
APPD. BY	NRG	30 MAR 01
CLIENT APPD.		

KEMWorks TECHNOLOGY, INC.
5925 IMPERIAL PARKWAY, SUITE 100
MULBERRY, FLORIDA USA
(863) 646-6366 FAX (863) 647-5219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.
NRG	AGRIUM	1313

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
MAP PFD LADDERS

DWG. NO.	REV.
24-10-005	0

EXHIBIT B

AGR-CBI_003917

SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

Stream Number	242-01	242-02	242-03	242-04	242-05	242-06	242-07	242-08	242-10	242-11	242-12	242-13	242-14	242-15	242-16	242-17	242-18	242-19	242-20	242-21	242-22	242-23	242-24	242-25	242-26	242-27	242-28	242-29
DESCRIPTION PRODUCT - APS	DILUTION AIR	COMBUSTION AIR	FUEL	HEATED AIR TO DRYER	TOTAL VENTS TO BAGHOUSE	BAGHOUSE AIR TO FAN	BAGHOUSE AIR TO DRYER	DUST FROM BAGHOUSE	VENT FROM DRYER TO CYCLONES	PRODUCT FROM DRYER	FINES FROM SCREENS	PRODUCT FROM SCREENS	OVERSIZE TO MILLS	PRODUCT WEIGH FEEDER OVERFLOW	PRODUCT TO COOLER	COOLING WATER TO COOLER	COOLING WATER FROM COOLER	DRY PLANT AIR TO COOLER	PRODUCT FROM COOLER	COATING OIL TO BLENDER	PRODUCT TO STORAGE	RECYCLE FROM #1 DRAGFLIGHT	DUST FROM DRYER CYCLONES	RECYCLE FROM #2 DRAGFLIGHT	RECYCLE FROM RECYCLE ELEVATOR	RECYCLE TO GRANULATOR	VENT TO DRYER SCRUBBER	DRY PLANT AIR TO BAGHOUSE
Average Flow tP2O5/day								8.0		1,770	873	531	264	170	361				361		362	1,408	28	1,434	1,434	1,436		
Average Flow t/day	284	377	10	1,878	1,246	1,207	1,207	38	2,190	8,633	4,747	2,590	1,294	830	1,760	1,961	1,961	14	1,760	3.8	1,760	6,870	125	7,000	7,000	7,005	2,064	
Average Flow t/hr	12	16	0.4	78	52	50	50	1.6	91	360	198	108	54	35	73	81.7	81.7	0.6	73	0.2	74	286	5.2	292	292	292	86	
Design Flow TOTAL t/hr	12.5	18.2	1.0	275	51.9	50.3	50.3	1.6	113.2	500	270	130	70	50	125	150.2	150.2	0.6	125	0.3	100	400	7.1	400	400	436	105.8	1.1
Design Flow EACH t/hr	12.5	18.2	1.0	275	51.9	50.3	50.3	1.6	113.2	500	68	38	35	50	125	150.2	150.2	0.6	125	0.3	100	400	3.6	400	400	436	105.8	1.1
Design Flow TOTAL lb/hr	25,000	36,400	2,000	550,000	103,800	100,600	100,600	3,200	226,400	1,000,000	540,000	300,000	140,000	100,000	250,000	300,300	300,300	1,210	250,000	550	200,000	800,000	14,000	800,000	800,000	872,000	212,000	2,120
Design Flow EACH lb/hr	25,000	36,400	2,000	550,000	103,800	100,600	100,600	3,200	226,400	1,000,000	135,000	75,000	70,000	100,000	250,000	300,300	300,300	1,210	250,000	500	200,000	800,000	7,000	800,000	800,000	872,000	212,000	2,120
Average Flow USGPM (ACFM)	(7,100)	(8,200)		(79,000)	(38,000)	(36,000)	(36,000)		(74,000)							326	326	(300)		0.7							(72,000)	
Design Flow TOTAL USGPM																800	800			1.25								
Design Flow EACH USGPM																800	800			1.25								
Design Flow TOTAL ACFM	7,000	12,000		278,000	36,000	38,000	36,000		93,000									300									89,000	80
Design Flow EACH ACFM	7,000	12,000		278,000	36,000	38,000	36,000		93,000									300									89,000	80
Temperature °F	95	95	70	500	215	215	215	215	228	221	215	215	215	215	215	70	95	50	125	85	124	215	228	215	215	208	228	50
Pressure psig (psia)	3in H2O	5in H2O	50-120	-0.5in H2O	-4in H2O	+12in H2O	5in H2O		-3in H2O									1		30							-10in H2O	100
Density lb/ft3	0.056	0.057		0.033	0.046	0.044	0.047	81.0	0.041	81.0	81.0	81.0	81.0	81.0	81.0	62.4	62.4	0.087	81.0	55.0	81.0	81.0	81.0	81.0	81.0	81.0	0.040	0.568
Specific Gravity								0.98		0.98	0.98	0.98	0.98	0.98	0.98	1.00	1.00		0.98	0.88	0.98	0.98	0.98	0.98	0.98	0.98		
Viscosity cP																				30								
% P2O5 (solids free)								20.5%		20.5%	20.5%	20.5%	20.5%	20.5%	20.5%				20.5%		20.5%	20.5%	20.5%	20.5%	20.5%	20.5%		
% H2O								0.5-2%		0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%				0.5-2%		0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%	0.5-2%		
% H2SO4																												
% Solids by Weight					3.07%	0.032%	0.032%		8.54%																			
% Solids by Volume																												

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.

Stream Number	243-01	243-02	243-03	243-04	243-05 **	243-06	243-07	243-08	243-09	243-10	243-11	243-12	243-13	243-14	243-15	243-16	243-17	243-18	243-19	243-20	243-21	243-22	243-23	243-24 ***	243-25	243-26	243-27	243-28
DESCRIPTION PRODUCT - APS	TOTAL VENT TO R/C SCRUBBER	SCRUBBER LIQUOR FROM R/C SCRUBBER	VENT FROM R/C SCRUBBER	LIQUOR FROM R/C SCRUBBER PUMP	SCRUBBER ACID TO DUCT SPRAY	SCRUBBER ACID TO PREHEAT TANK	LIQUID NH3	VAPOR NH3 FROM VAPORIZER	VENT FROM NH3 VAPORIZER	VAPORIZER CONDENSATE TO WASTE H2O TANK	VAPORIZER CONDENSATE TO VAPORIZER	DRYER SC LIQUOR TO R/C SCRUBBER	DRYER SC LIQUOR TO DRYER SCRUBBER	FROM SEC SUMP TO WASTE H2O TANK	WATER FROM FLUORINE SCRUBBER	FROM WASTE WATER TANK	FLUORINE SCRUBBER VENT TO FAN	FLUORINE SCRUBBER VENT TO STACK	DRYER SCRUBBER VENT TO FAN	DRYER SCRUBBER VENT TO STACK	STACK TO ATMOS	FROM WET SUMP TO WASTE H2O TANK	H2SO4 TO DRYER SCRUBBER	LP STEAM TO NH3 VAPORIZER DUCT	SCRUBBER LIQUOR FROM DRYER SCRUBBER	SCR FEED TO DRYER SCRUBBER	WATER FEED TO POND RETURN	POND H2O TO WASTE WATER TANK
Average Flow tP2O5/day																												
Average Flow t/day	938	2,965	1,012	2,965		274	348	348	986	28	1,992	486	5,331	3	0	28	979	979	2,034	2,036	3,013	0	0		5,359	0	0	0
Average Flow t/hr	39	124	42	124		11	15	15	41	1.2	83	20	222	0	0	1.2	41	41	85	85	126	0	0		223	0	0	0
Design Flow TOTAL t/hr	40.1	166.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5
Design Flow EACH t/hr	40.1	166.0	40.1	143.0	13.0	34.0	16.7	16.7	39.8	10.0	101.1	50.6	244	25.1	10.0	62.5	39.8	39.8	84.8	84.8	124.6	25.1	6.2		226.3	20.3	62.5	62.5
Design Flow TOTAL lb/hr	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	488,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	248,000	50,100	12,300	1,500	452,600	40,500	125,000	125,000
Design Flow EACH lb/hr	80,300	332,000	80,300	286,000	26,000	68,000	33,400	33,400	79,600	20,000	202,200	101,200	488,000	50,100	20,000	125,000	79,600	79,600	170,000	170,000	248,000	50,100	12,300	1,500	452,600	40,500	125,000	125,000
Average Flow USGPM (ACFM)	(39,000)	430	(43,000)	380		46	93	(1,100)	(43,000)	5	330	80	650		0	5	(42,000)	(39,000)	(43,000)	(57,000)	(101,000)				890			
Design Flow TOTAL USGPM		510		440	40	105	107			40	400	155	750	900	40	250						100	14		700	50	250	250
Design Flow EACH USGPM		510		440	40	105	107			40	400	155	750	900	40	250						100	14		700	50	250	250
Design Flow TOTAL ACFM	38,000		37,000					1,300	37,000								40,000	34,000	85,000	56,000	83,000							
Design Flow EACH ACFM	36,000		37,000					1,300	37,000								40,000	34,000	85,000	58,000	83,000							
Temperature °F	180	176	178	176	180	180	40	170	178	176	176	136	136	95	156	95	165	165	143	143	178	95	100	298	142	95	95	92
Pressure psig (psia)	-3in H2O		-18.5in H2O				125	125	-24.5in H2O								-33.5in H2O	0.5in H2O	-32in H2O	1in H2O	0in H2O			30				
Density lb/ft3	0.033	81.1	0.033	81.1	81.1	81.1	39.0	0.441	0.032	63.0	63.0	81.1	81.1	62.4	62.4	62.4	0.032	0.035	0.045	0.048	0.042	62.4	113.0	0.087	81.1	101.1	62.4	62.4
Specific Gravity		1.30		1.30	1.30	1.30	0.63			1.01	1.01	1.30	1.30	1.00	1.00	1.00						1.00	1.82		1.30	1.62	1.00	1.00
Viscosity cP		3		3	3	3	0.1					15	3	1	1	1						1	10		3	20	1	1
% P2O5 (solids free)																										32%		
% H2O																							5.5%					
% H2SO4																							94.5%					
% Solids by Weight																												
% Solids by Volume																												

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.
** NOTE: INTERMITTANT - 40 GPM FOR 2.5 MINUTES EVERY 20 MINUTES. FLOW IS SCRUBBER ACID.
*** NOTE: FOR START-UP ONLY

Stream Number	244-02	244-03	244-04 **	244-05	244-06	244-07	244-08	244-09	244-10	244-11	244-12	244-13	244-14	244-15	244-16	244-17	244-18	244-19	244-21	244-22	244-23	291-42 ***
DESCRIPTION PRODUCT - APS	VAPOR NH3 TO PPC REACTOR	40% P2O5 TO PREMIX TANK	PPS FROM PMC	PPS FROM DAT TANK	PPS TO SPA SUMP	PPS TO PREMIX TANK	PPS TO 42% OC STORAGE TANK	RECYC TO PREMIX TANK	MIXED ACID TO GRANULATOR	MIXED ACID TO PPC REACTOR	PREHEAT FUMES TO VENTURI SCRUBBER	PRODUCT TO DRYER	GRAN FUMES TO VENTURI SCRUBBER	H2SO4 TO PREMIX	UREA TO UREA HOPPER	UREA TO RECLAIM ELEVATOR	TOTAL ACID TO PREHEAT TANK	PPS TO SCRUBBER TANK	VAPOR NH3 TO GRANULATOR	VAPOR NH3 TO PREHEAT TANK	RECLAIM ELEVATOR TO #1 DRAGFLIGHT	HP STEAM TO PPC REACTOR
Average Flow tP2O5/day				174	38	256	28					1,800						108				
Average Flow t/day	206	0		696	151	1,018	113	3,275	0	2,315	212	8,952	728	871	0	0	1,018	432	72	70	0	
Average Flow t/hr	8.8	0		29	6.3	42	4.7	136	0	96	8.8	373	30	36	0	0.0	42	18	3.0	2.9	0.0	
Design Flow TOTAL t/hr	10.8	100.7	75.5	65.3	21.8	67.1	8.4	136.5	136.5	136.5	13.7	500	39.9	41.1	20.0	1.8	97.0	35.1	5.1	7.1	50.0	
Design Flow EACH t/hr	10.8	100.7	75.5	65.3	21.8	67.1	8.4	136.5	136.5	136.5	13.7	500	39.9	41.1	20.0	1.8	97.0	35.1	5.1	7.1	50.0	
Design Flow TOTAL lb/hr	21,800	201,400	150,900	130,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	79,800	82,200	40,000	3,500	193,900	70,100	10,200	14,200	100,000	22,200
Design Flow EACH lb/hr	21,600	201,400	150,900	130,500	43,600	134,200	16,800	273,000	273,000	273,000	27,400	1,000,000	79,800	82,200	40,000	3,500	193,900	70,100	10,200	14,200	100,000	22,200
Average Flow USGPM (ACFM)	(670)	0			18	126	14	352		288	(6,100)		(28,000)	80.0			126	54	(235)	(228)		
Design Flow TOTAL USGPM	- - -	250	225	185	65	200	25	352	352	352				91			250	105				
Design Flow EACH USGPM		250	225	185	65	200	25	352	352	352				91			250	105				
Design Flow TOTAL ACFM	800										12,000		35,000						400	500		
Design Flow EACH ACFM	800										12,000		35,000						400	500		
Temperature °F	150	95	95	95	95	95	95	167	167	167	185	185	187	100			95	95	150	150	50	410
Pressure psig (psia)	125										-1in H2O		-1in H2O						125	125		250
Density lb/ft3	0.426	100.5	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	0.048	61.0	0.039	113.0	50.0	50.0	83.6-101	83.6	0.429	0.428	50-66	0.563
Specific Gravity		1.61	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34				1.82	0.80	0.80	1.33-1.82	1.34				
Viscosity cP		12	15	15	15	15	15							10				15				
% P2O5 (solids free)		46%	25%	25%	25%	25%	25%	16%	16%	16%		20.1%						25%				
% H2O												2.5%		5.5%								
% H2SO4														94.5%								
% Solids by Weight																						
% Solids by Volume																						

NOTE: FLOWS ON THE PROCESS FLOW DIAGRAMS ARE FOR DESIGN PURPOSES ONLY - THEY ARE NOT MEANT TO BE A RIGOROUS PLANTWIDE COMPONENT BALANCE, AND MAY VARY FROM DRAWING TO DRAWING.
** NOTE: SEE PMC FLOWSHEET FOR AVERAGE RATE.
*** NOTE: INTERMITTANT - STARTUP FOR 10 MINUTES, FOR 2-3 MINUTES WHEN BACKPRESSURE REACHES 95 PSIG.

84100080.DWG 03/30/01 @ 11:08 JKC

REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV	REVISION	DATE	BY	DRAWING HISTORY	DATE	REV.
24-10-002 - DAP/MAP RECYCLE & PROD. PFD						FOR CONSTRUCTION	30 MAR 01	0
24-10-003 - GRANULATION SCRUBBING PFD								
24-10-004 - GRANULATION REACTION PFD								

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SCALE	NONE	DATE
DESIGN BY	SMN	30 MAR 01
DRAWN BY	JKC	30 MAR 01
CHKD. BY	CBS	30 MAR 01
APPD. BY	NRG	30 MAR 01
CLIENT APPD.		

KEMWorks TECHNOLOGY, INC.
[illegible] IMPERIAL PARKWAY, SUITE 100 MULBERRY, FLORIDA USA
(863) 648-5368 FAX (863) 647-8219
www.kemworks.com

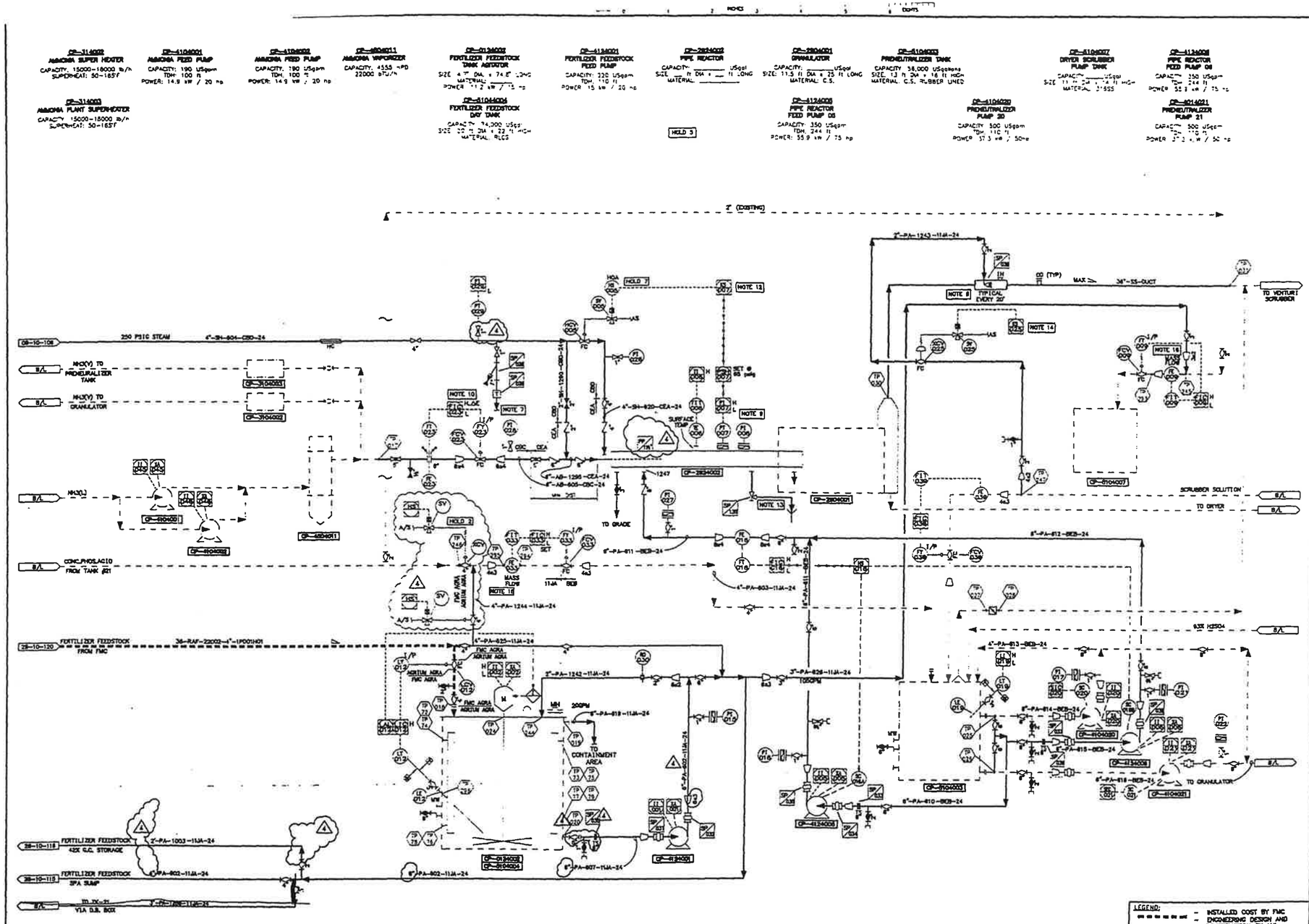
Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
18-20-0 PFD LADDERS

PROJ. MGR.	CLIENT	PROJ. NO.	DWG. NO.	REV.
NRG	AGRIUM	1313	24-10-006	0

EXHIBIT B

AGR-CBI_003918
SUBJECT TO ALL APPLICABLE CONFIDENTIAL
BUSINESS INFORMATION PRIVILEGES



REV.	REVISION DESCRIPTION	DATE	DRAWN BY	DESIGNED BY	DWG. CHECK	DESIGN CHECK	LEAD DISC./DOPE MGR.	P. DIC./PROJ. MGR.
4	REVISED AS NOTED	01/05/'01	TSV	RAJM	SSK	SSK		
3	REVISED AS NOTED - FOR GRADE CONTROL MODIFICATIONS	01/04/'01	TL	RAJM	SSK	RR	RR	JAF
2	REVISED BY KEMWORKS AS NOTED RE-ISSUED FOR CONSTRUCTION	00/11/22	JMC	RAJM	SSK	RR	RR	JAF
1	IFC - UPDATED TO REFLECT KEMWORKS/CLIENT REQUESTED CHANGES	00/08/21	AB	RAJM	SSK	RR	RR	JAF
0	ISSUED FOR CONSTRUCTION	00/07/26	AB	RAJM	SSK	RR	RR	JAF
F	ISSUED FOR CLIENT APPROVAL	00/05/24	AB	RAJM	SSK	RR		
E	UPDATED FOR HAZOP	00/04/20	AB	RAJM	SSK	RR		
D	ISSUED FOR TIE-IN REVIEW	00/03/28	AB	RAJM	RR			

NO.	DWG. NO.	REFERENCE DRAWINGS
*	25-10-098/099	FMC PIPING AND ASTM SYMBOLS AND NOMENCLATURE P&IDs
4	26-10-122	ASRM W. FMC TIE-IN POINTS
3	26-10-114	ACID SPACE CONTROL STORAGE TANK
*	26-10-113	PHOS ACID SPACE CONTROL
2	29-10-106	PREHEATER
2	29-10-106	STEAM AND CONDENSATE
1	29-10-100	STANDARD P&ID SYMBOLS

ENGINEERING REVIEW

P. DIC./PROJ. MGR.	JAF	00/07/06
LEAD DISC./DOPE MGR.	RR	00/07/06
DESIGN CHECK	KEMWORKS	00/02/17
DWG. CHECK	MRG	00/01/10
DESIGNED BY	MDW	00/01/03
DRAWN BY	JCK	00/01/04

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LEGEND:
- - - - - - INSTALLED COST BY FMC
- - - - - - ENGINEERING DESIGN AND CONSTRUCTION BY AMI

KEMWORKS TECHNOLOGY, INC.
4080 ROSEWALL PARKWAY, SUITE 100
WALL BOROUGH, N.J. 08831
(908) 946-6300 FAX (908) 947-8818
www.kemworks.com

CLIENT APPROVAL BY CRH DATE 00/06/01

AGRA MONENCO DWG. NO. Y600D-500-6-101
PROJECT NO. Y600D
SCALE NONE
DRAWING NO. 24-10-101
REV 4

NU-WEST INDUSTRIES INC.
3015 CONDA ROAD SODA SPRINGS, ID 83276

AGRA Monenco
ENGINEERING GLOBAL SOLUTIONS

CPO EXPANSION PROJECT
DAP PLANT
PIPE REACTOR P&ID

GENERAL NOTES

1. ALL AMMONIA RELIEF, VENTS AND DRAINS TO BE PIPED TO DISCHARGE AT A SAFE LOCATION.
2. DELETED
3. DELETED
4. SEAL WATER REQUIREMENT TO BE DETERMINED IN DETAIL ENGINEERING.
5. SAFETY SHOWERS AND EYE WASH STATIONS TO BE DETERMINED DURING DETAIL ENGINEERING.
6. KEMWORKS ISSUED REV. C WITH P.E. STAMP, EFFECTIVE MARCH 24th, 2000. THIS DRAWING IS BEING MAINTAINED BY AMI. REVISED P&ID RECEIVED FROM KEMWORKS 18 OCT, 2000 (Log No. 5868)
7. DISCHARGE TRAP TO FLUORINE SCRUBBER TANK.
8. SPRAY NOZZLES TO BE BETE WT RIGHT ANGLE HOLLOW CONE 3/4" WT 2000 90° TEFLON.
9. PT-007 AND PI-008 FLUSH MOUNTED WITH WALL OF PIPE REACTOR.
10. PROVIDE HIGH FLOW AND FLOW DEVIATION ALARM FOR EACH PRODUCT THAT IS TO BE PRODUCED.
11. FOR FMC GENERAL NOTES AND SYMBOLS REFER TO DRAWINGS # 35-10-098 AND # 35-10-099.
12. OPEN STEAM VALVE FOR 2-5 MINUTES WHEN THE PRESSURE REACHES 65 psig. VALVE THEN CLOSES.
13. SAMPLE VALVE TO BE ¼" MANUALLY OPERATED STRAHMAN VALVE.
14. 40 USgpm FOR 2½ MINUTES EVERY 20 MINUTES.
15. DELETED
16. EXISTING MAGMETERS TO BE REPLACED WITH MASS FLOW METERS.
17. EXTEND 3" ALL THE WAY TO FLOWMETER

HOLDS

2. VALVES TO BE ACTUATED PENDING APPROVAL OF TREND (SSK/CRH/FRB).
3. ALL VENDOR INFORMATION (SMC).

EQUIPMENT ON THIS DRAWING

EQUIP. NO.	DESCRIPTION	STATUS
CP-0124002	FERTILIZER FEEDSTOCK TANK AGITATOR	NEW
CP-2904001	GRANULATOR	EXIST
CP-2924002	PIPE REACTOR	NEW
CP-4104001	AMMONIA FEED PUMP	EXIST
CP-4104002	AMMONIA FEED PUMP	EXIST
~~CP-4104003~~	~~NORM-REACTOR FEED PUMP~~ DELETED	EXIST
CP-4104020	PREMEUTRALIZER PUMP 20	EXIST
CP-4104021	PREMEUTRALIZER PUMP 21	EXIST
~~CP-4104006~~	~~SOURH-REACTOR FEED PUMP~~ DELETED	EXIST
CP-4124001	FERTILIZER FEEDSTOCK FEED PUMP	NEW
CP-4124005	PIPE REACTOR FEED PUMP 05	NEW
CP-4124006	PIPE REACTOR FEED PUMP 06	NEW
CP-4504011	AMMONIA VAPORIZER	EXIST
CP-5104003	PREMEUTRALIZER TANK	EXIST
CP-5104004	FERTILIZER FEEDSTOCK DAY TANK	EXIST
CP-5104007	DRYER SCRUBBER PUMP TANK	EXIST
CP-X004300X	SUPERHEATER	EXIST

ISSUED FOR CONSTRUCTION

DESTROY PREVIOUS PRINTS

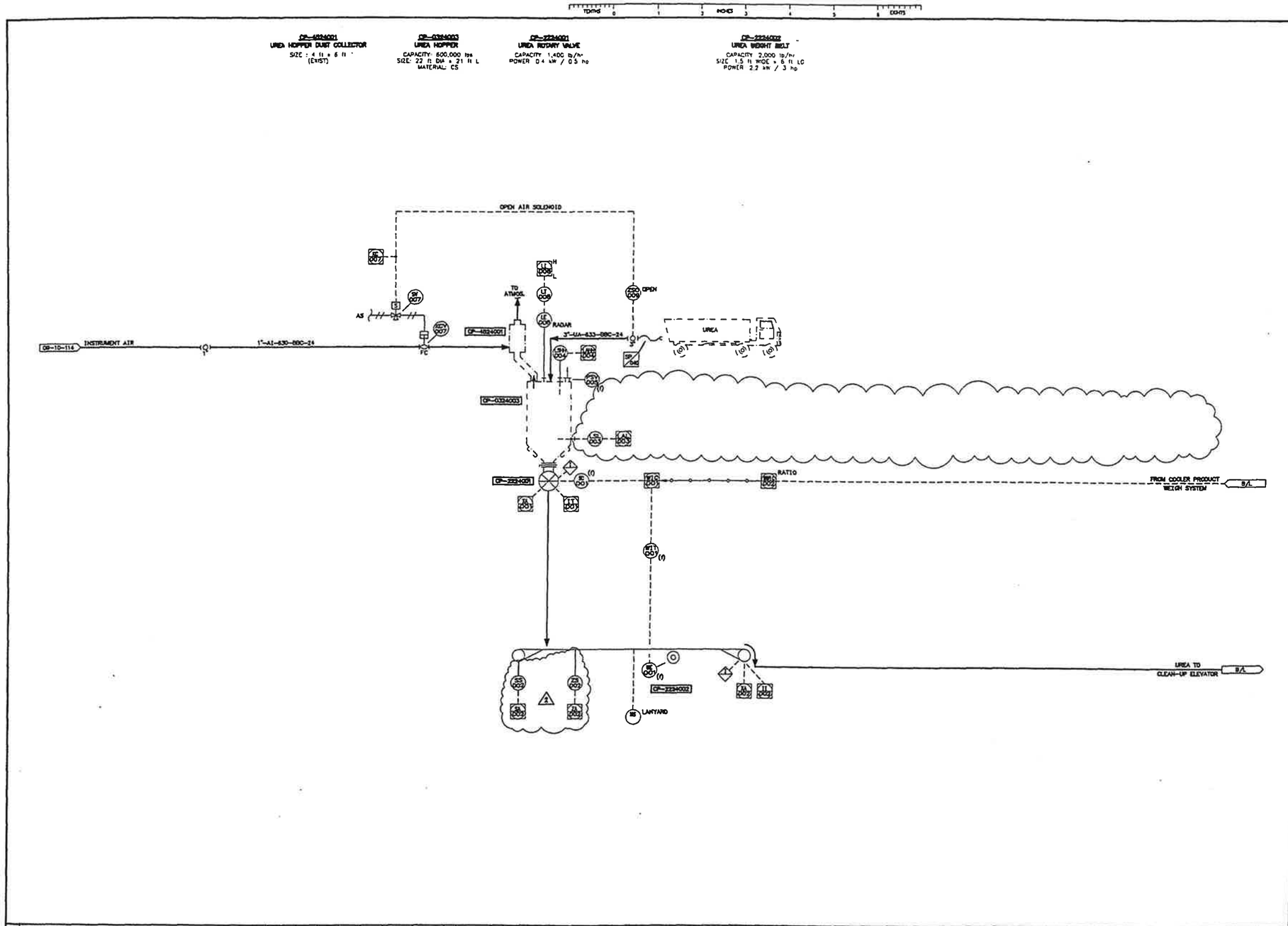
AGRA Monenco
CALGARY
ISSUE
MAY 14 2001

CAD FILE NAME: G:\Y6000\CAD\PIP\PHOS\AGRAP&ID\5006101.dwg

LAST UPDATE 01/05/18 9:07am

EXHIBIT B

AGR-CBI_003919
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES



GENERAL NOTES

1. KEMWORKS ISSUED REV. 8 WITH P.E. STAMP. EFFECTIVE MARCH 24th, 2000, THIS DRAWING IS BEING MAINTAINED BY AML.

EQUIPMENT ON THIS DRAWING

EQUIP. NO.	DESCRIPTION	STATUS
CP-0324003	UREA HOPPER	EXIST
CP-2224001	UREA ROTARY VALVE	NEW
CP-2224002	UREA WEIGH BELT	NEW
CP-4524001	UREA HOPPER DUST COLLECTOR	EXIST

ISSUED FOR CONSTRUCTION

DESTROY PREVIOUS PRINTS

AGRA Monenco CALGARY ISSUE MAY 14 2001

NU-WEST INDUSTRIES INC.
3010 CONDA ROAD SODA SPRINGS, ID 83276

AGRA Monenco
ENGINEERING GLOBAL SOLUTIONS

CPO EXPANSION PROJECT
DAP PLANT
UREA HOPPER P&ID

REV.	REVISION DESCRIPTION	DATE	DRAWN BY	DESIGNED BY	DWG. CHECK	DESIGN CHECK	LEAD ENG./DEPT. MGR.	P. ENG./PROJ. MGR.	NO.	DWG. NO.	REFERENCE DRAWINGS
2	REVISED AS NOTED	01/05/14	LH	RAJM	SSK	RR			8		
1	REVISED AS NOTED	00/12/08	PRC	RAJM	SSK	RR			7		
0	ISSUED FOR CONSTRUCTION	00/07/21	AB	RAJM	SSK	RR	RR	LAF	6		
E	GENERAL REVISIONS	00/07/06	AB	RAJM	SSK	RR			5		
D	GENERAL REVISIONS	00/05/24	AB	RAJM	SSK	RR			4		
C	ISSUED FOR TIE-IN REVIEW	00/03/28	AB	RAJM	RR				3		
B	CHANGE DRYER FOR COOLER / ISSUED FOR DESIGN	00/02/17	RPL						2	09-10-114	INSTRUMENT AIR AND PLANT AIR P&ID
A	FOR APPROVAL	00/01/10							1	09-10-100	STANDARD P&ID SYMBOLS

ENGINEERING REVIEW

P. ENG./PROJ. MGR.	LAF	00/07/24
LEAD ENG./DEPT. MGR.	RR	00/07/21
DESIGN CHECK	KEMWORKS	00/02/17
DWG. CHECK	NRG	00/01/10
DESIGNED BY	SMH	00/01/03
DRAWN BY	JKC	00/01/04

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KEMWORKS TECHNOLOGY, INC.
[illegible] IMPERIAL PARKWAY, SUITE 1[illegible]
MULBERRY, FLORIDA USA
[illegible] FAX [illegible]
www.kemworks.com

CLIENT APPROVAL BY	DATE	AGRA MONENCO DWG. NO.	
CRH	00/06/01	Y600D-500-6-102	
		PROJECT NO. Y600D	SCALE NONE

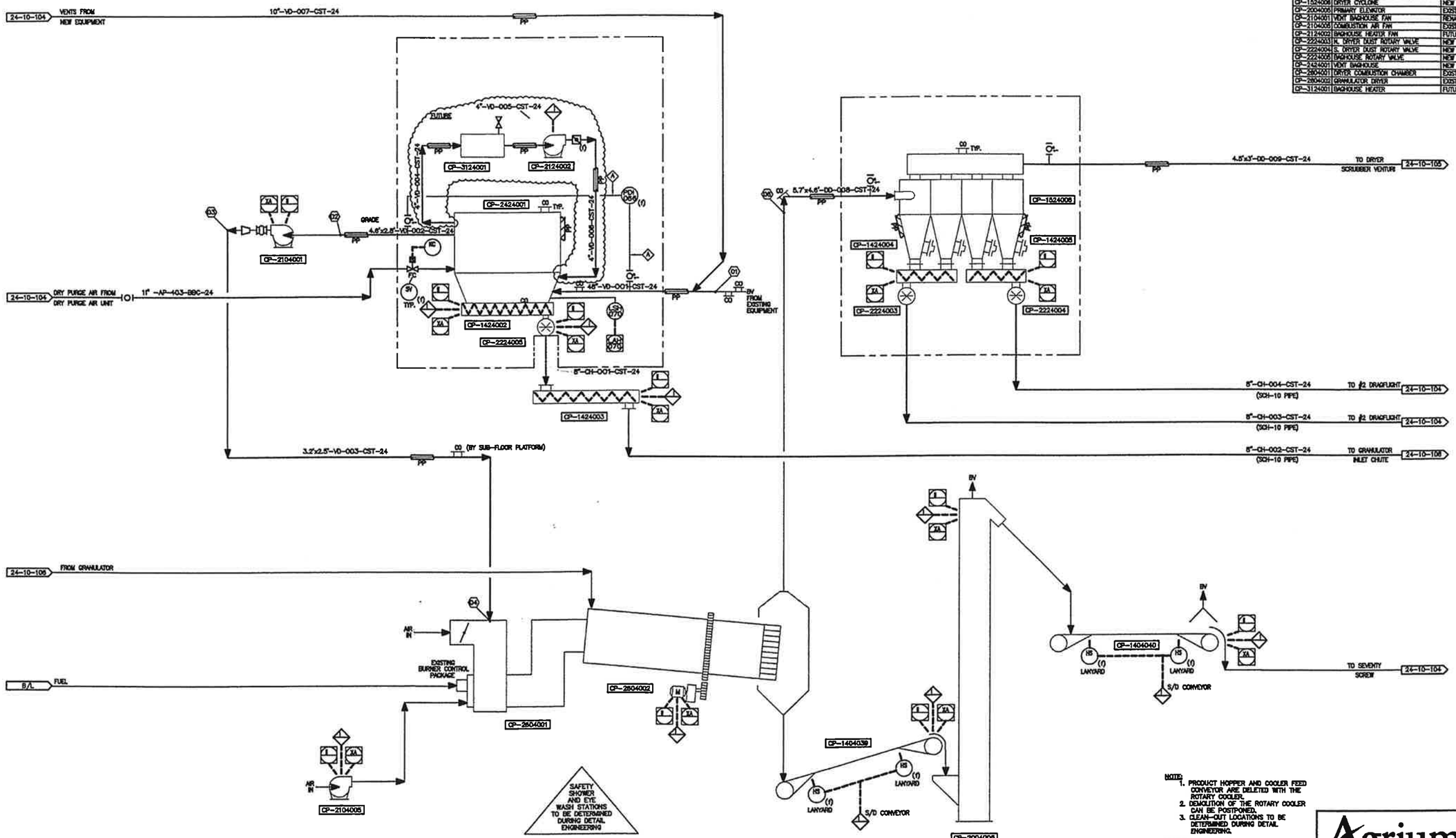
DRAWING NO. 24-10-102 REV. 2

LAST UPDATE: 01/05/18 11:05am CAD FILE NAME: G:\Y600D\CAD\PIP\PRC\AGRAP&ID\5006102.dwg

AGR-CBI_003920
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

EXHIBIT B

EQUIP. NO.	DESCRIPTION	STATUS
CP-1404038	DRYER DISCHARGE BELT	EXIST
CP-1404040	TRANSFER CONVEYOR	EXIST
CP-1424002	BAGHOUSE SCREW CONVEYOR	NEW
CP-1424003	GRANULATOR FEED SCREW CONVEYOR	NEW
CP-1424004	N. DRYER CYCLONE SCREW CONVEYOR	NEW
CP-1424005	S. DRYER CYCLONE SCREW CONVEYOR	NEW
CP-1524008	DRYER CYCLONE	NEW
CP-2004005	PRIMARY ELEVATOR	EXIST
CP-2104001	VENT BAGHOUSE FAN	REMARKED
CP-2104005	COMBUSTION AIR FAN	EXIST
CP-2124002	BAGHOUSE HEATER FAN	FUTURE
CP-2224003	N. DRYER DUST ROTARY VALVE	NEW
CP-2224004	S. DRYER DUST ROTARY VALVE	NEW
CP-2224005	BAGHOUSE ROTARY VALVE	NEW
CP-2424001	VENT BAGHOUSE	NEW
CP-2804001	DRYER COMBUSTION CHAMBER	EXIST
CP-2804002	GRANULATOR DRYER	EXIST
CP-3124001	BAGHOUSE HEATER	FUTURE



NOTE:
1. PRODUCT HOPPER AND COOLER FEED CONVEYOR ARE DELETED WITH THE ROTARY COOLER.
2. DEMOLITION OF THE ROTARY COOLER CAN BE POSTPONED.
3. CLEAN-OUT LOCATIONS TO BE DETERMINED DURING DETAIL ENGINEERING.

LEGEND:
= NEW
= EXISTING
BV = BAGHOUSE VENT

REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY

DRAWING HISTORY	DATE	REV.
FOR DETAIL ENGINEERING	13 FEB 01	0
UPDATE PER DETAIL ENG.	27 MAR 01	1

SCALE: NONE	DATE
DESIGN BY JWC	24 AUG 00
DRAWN BY JKC	28 AUG 00
CHKD. BY NRG	30 SEP 00
APVD. BY MDW	20 SEP 00
CLIENT APVD.	

KEMWORKS TECHNOLOGY, INC.
5925 IMPERIAL PARKWAY, SUITE 103
MULBERRY, FLORIDA USA
(863) 646-5369 FAX (863) 647-5219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.
NRG	AGRIUM	1313

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
DUST COLLECTION P&ID

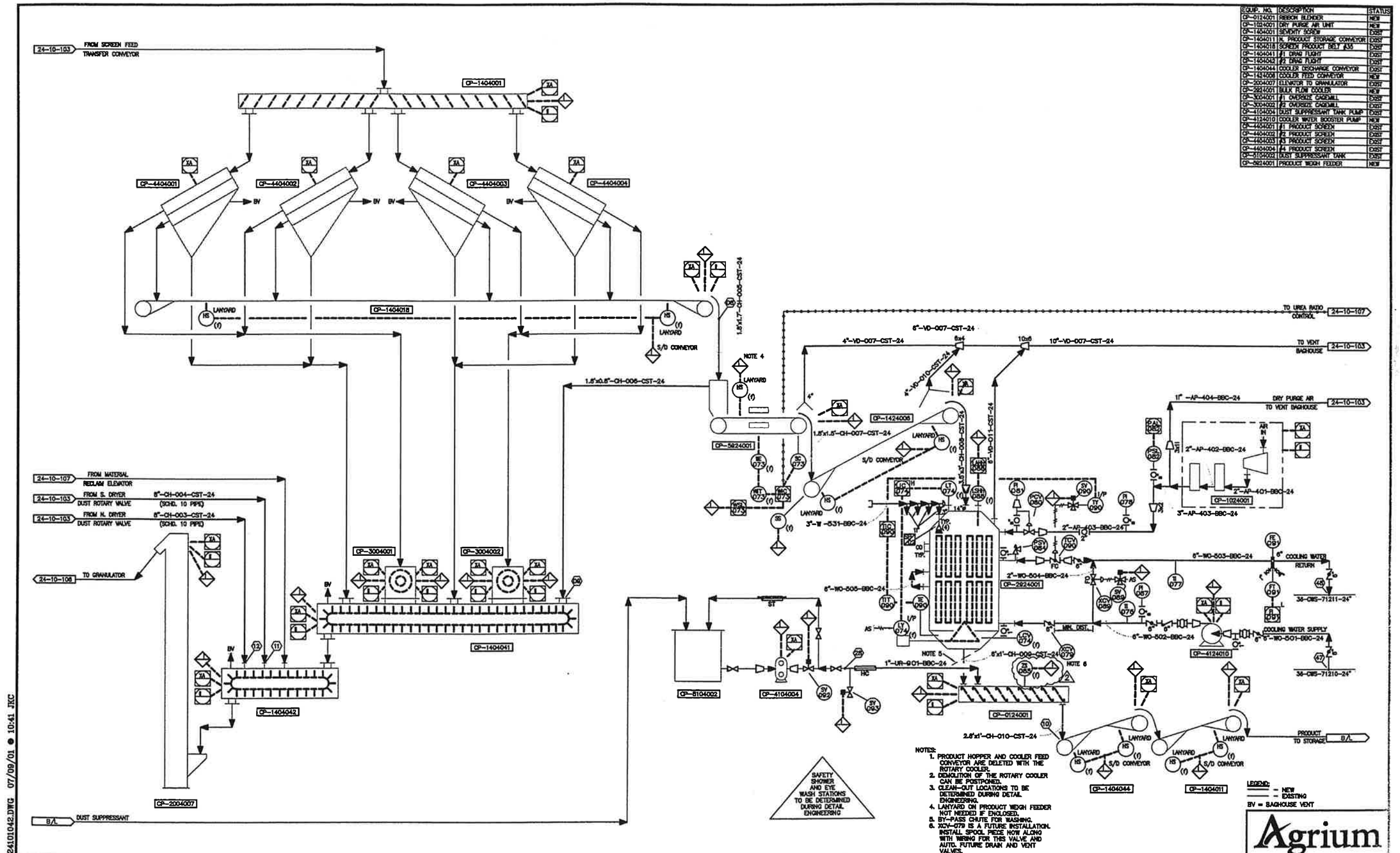
DWG. NO. 24-10-103 REV. 1

24101031.DWG 03/27/01 ● 09:49 JKC

EXHIBIT B

AGR-CBI_003921
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

EQUIP. NO.	DESCRIPTION	STATUS
CP-0124001	RIBBON BLENDER	NEW
CP-1024001	DRY PURGE AIR UNIT	NEW
CP-1404001	SEVERITY SCREW	EXIST
CP-1404011	M. PRODUCT STORAGE CONVEYOR	EXIST
CP-1404018	SCREEN PRODUCT BELT #35	EXIST
CP-1404041	#1 DRAG FLIGHT	EXIST
CP-1404042	#2 DRAG FLIGHT	EXIST
CP-1404044	COOLER DISCHARGE CONVEYOR	EXIST
CP-1424008	COOLER FEED CONVEYOR	NEW
CP-2004007	ELEVATOR TO GRANULATOR	EXIST
CP-2924001	BULK FLOW COOLER	NEW
CP-3004001	#1 OVERSIZE CASCADE	EXIST
CP-3004002	#2 OVERSIZE CASCADE	EXIST
CP-4104004	DUST SUPPRESSANT TANK PUMP	EXIST
CP-4124010	COOLER WATER BOOSTER PUMP	NEW
CP-4404001	#1 PRODUCT SCREEN	EXIST
CP-4404002	#2 PRODUCT SCREEN	EXIST
CP-4404003	#3 PRODUCT SCREEN	EXIST
CP-4404004	#4 PRODUCT SCREEN	EXIST
CP-8104002	DUST SUPPRESSANT TANK	EXIST
CP-5824001	PRODUCT WEIGH FEEDER	NEW



REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY

DRAWING HISTORY	DATE	REV.
FOR DETAIL ENGINEERING	02 JAN 01	0
UPDATE PER DETAIL ENG.	27 MAR 01	1
UPDATED INSTRUMENTATION	09 JUL 01	2

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	NONE	DATE
DESIGN BY	JWC	24 AUG 00
DRAWN BY	JKC	28 AUG 00
CHECK. BY	JWC	02 JAN 01
APPR. BY	NRG	02 JAN 01
CLIENT APPR.		

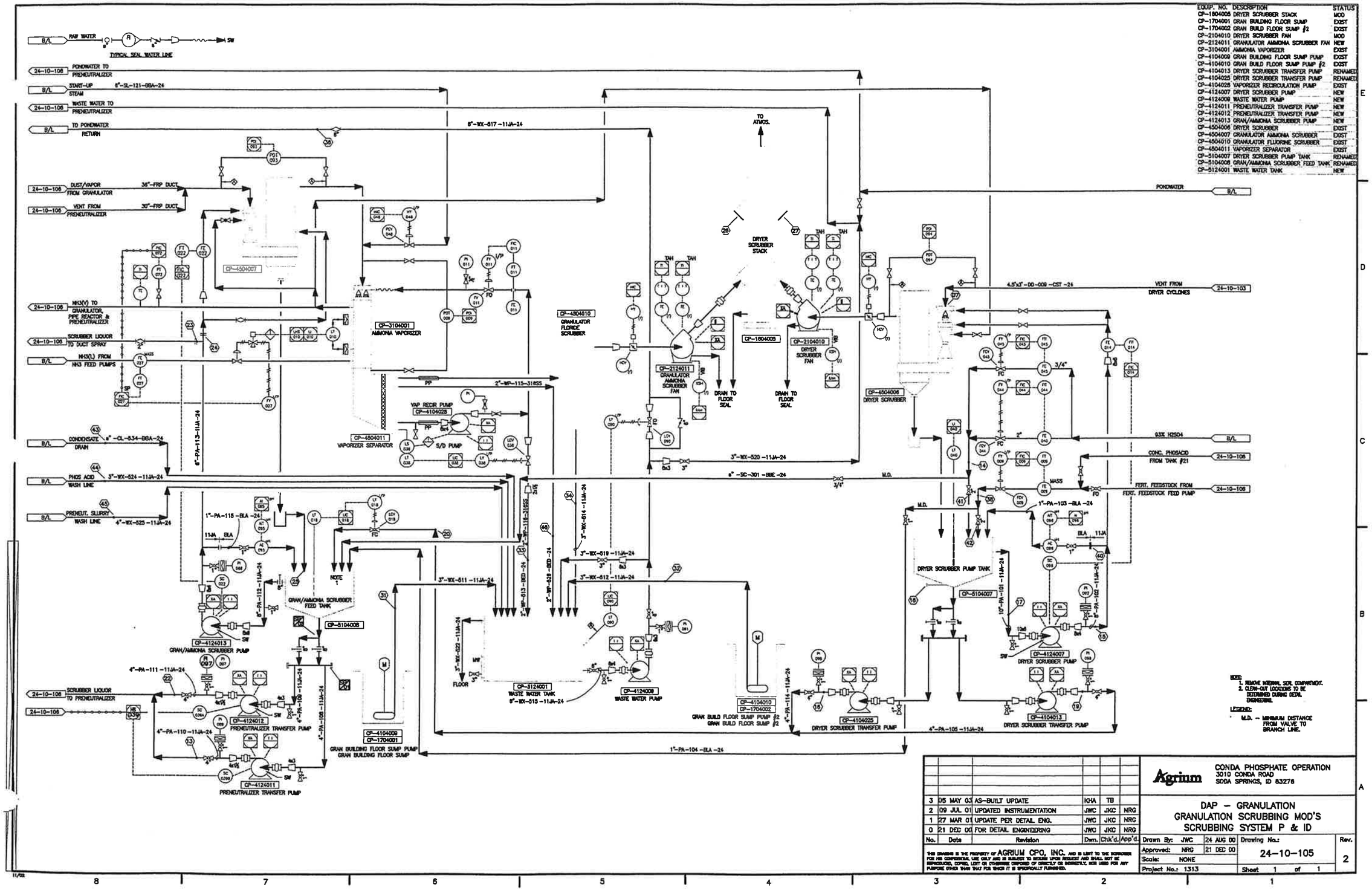
KEMWorks TECHNOLOGY, INC.
5925 IMPERIAL PARKWAY, SUITE 105
MULBERRY, FLORIDA USA
(863) 648-5369 FAX (863) 647-5219
www.kemworks.com

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
SCREENS & COOLER P&ID

PROJ. MGR.	CLIENT	PROJ. NO.	DWG. NO.	REV.
NRG	AGRIUM	1313	24-10-104	2

EXHIBIT B

AGR-CBI_003922
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES



EQUIP. NO.	DESCRIPTION	STATUS
CP-1804005	DRYER SCRUBBER STACK	MOD
CP-1704001	GRAN BUILDING FLOOR SUMP	EXIST
CP-1704022	GRAN BUILD FLOOR SUMP #2	EXIST
CP-2104010	DRYER SCRUBBER FAN	MOD
CP-2124011	GRANULATOR AMMONIA SCRUBBER FAN	NEW
CP-3104001	AMMONIA VAPORIZER	EXIST
CP-4104009	GRAN BUILDING FLOOR SUMP PUMP	EXIST
CP-4104010	GRAN BUILD FLOOR SUMP PUMP #2	EXIST
CP-4104013	DRYER SCRUBBER TRANSFER PUMP	RENAMED
CP-4104025	DRYER SCRUBBER TRANSFER PUMP	RENAMED
CP-4104028	VAPORIZER RECIRCULATION PUMP	EXIST
CP-4124007	DRYER SCRUBBER PUMP	NEW
CP-4124009	WASTE WATER PUMP	NEW
CP-4124011	PRENEUTRALIZER TRANSFER PUMP	NEW
CP-4124012	PRENEUTRALIZER TRANSFER PUMP	NEW
CP-4124013	GRAN/AMMONIA SCRUBBER PUMP	NEW
CP-4504006	DRYER SCRUBBER	EXIST
CP-4504007	GRANULATOR AMMONIA SCRUBBER	EXIST
CP-4504010	GRANULATOR FLUORINE SCRUBBER	EXIST
CP-4504011	VAPORIZER SEPARATOR	EXIST
CP-5104007	DRYER SCRUBBER PUMP TANK	RENAMED
CP-5104008	GRAN/AMMONIA SCRUBBER FEED TANK	RENAMED
CP-5124001	WASTE WATER TANK	NEW

No.	Date	Revision	Dwn.	Chk'd.	App'd.
3	05 MAY 03	AS-BUILT UPDATE	KHA	TB	
2	09 JUL 01	UPDATED INSTRUMENTATION	JWC	JKC	NRG
1	27 MAR 01	UPDATE PER DETAIL ENG.	JWC	JKC	NRG
0	21 DEC 00	FOR DETAIL ENGINEERING	JWC	JKC	NRG

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Agrium

CONDA PHOSPHATE OPERATION
3010 CONDA ROAD
SODA SPRINGS, ID 83276

DAP – GRANULATION
GRANULATION SCRUBBING MOD'S
SCRUBBING SYSTEM P & ID

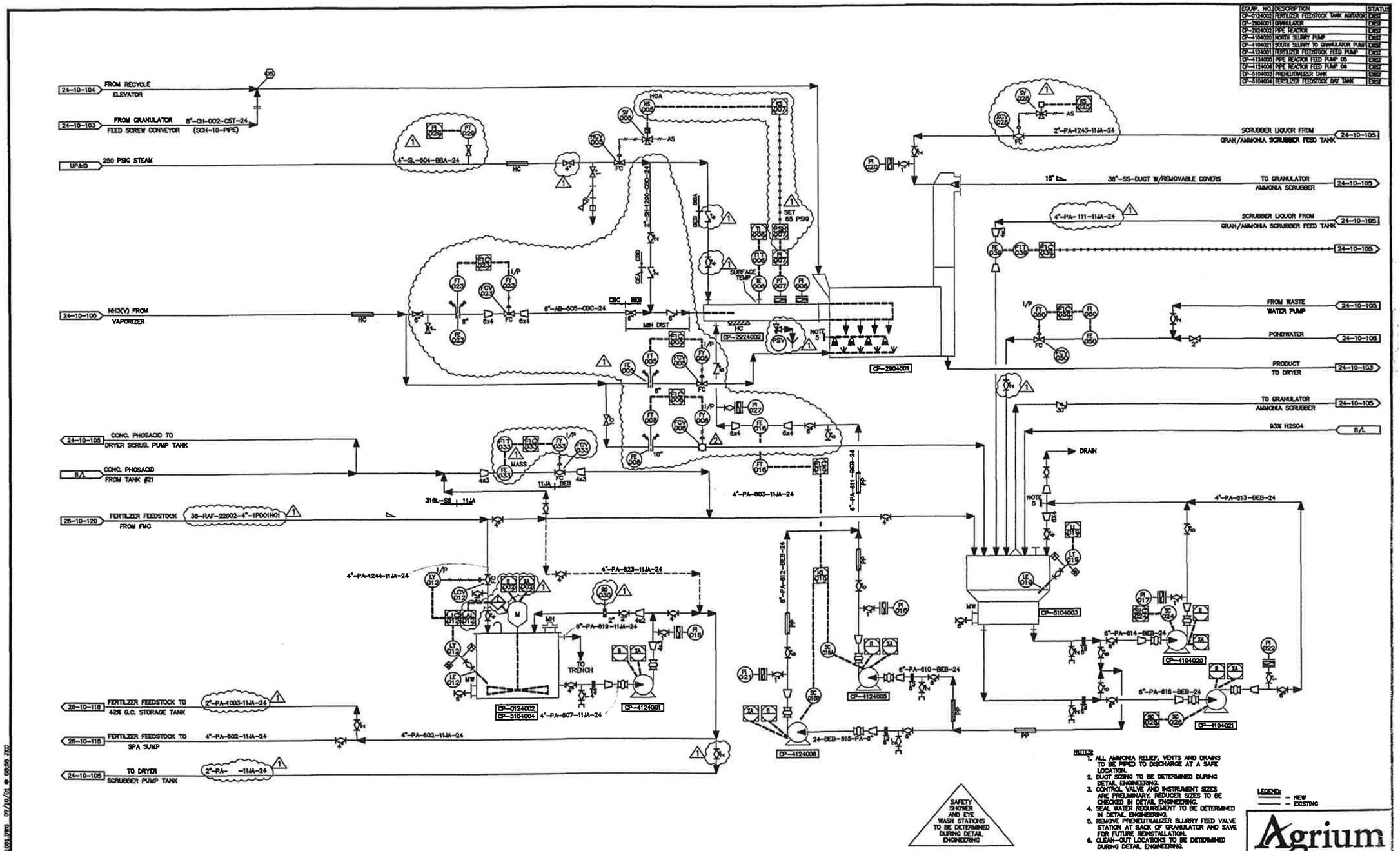
Drawn By: JWC	24 AUG 00	Drawing No.: 24-10-105	Rev. 2
Approved: NRG	21 DEC 00		
Scale: NONE			
Project No.: 1313		Sheet 1 of 1	

11/02

EXHIBIT B

AGR-CBI_003923
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

EQUIP. NO.	DESCRIPTION	STATUS
CP-0124002	FERTILIZER FEEDSTOCK TANK AGITATOR	EXIST
CP-2904001	GRANULATOR	EXIST
CP-2924002	PIPE REACTOR	EXIST
CP-1104020	NORTH SLURRY PUMP	EXIST
CP-1104021	SOUTH SLURRY TO GRANULATOR PUMP	EXIST
CP-1124001	FERTILIZER FEEDSTOCK FEED PUMP	EXIST
CP-1134005	PIPE REACTOR FEED PUMP 05	EXIST
CP-1134006	PIPE REACTOR FEED PUMP 06	EXIST
CP-4104003	PRENEUTRALIZER TANK	EXIST
CP-4104004	FERTILIZER FEEDSTOCK DAY TANK	EXIST



REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY

DRAWING HISTORY	DATE	REV.
FOR DETAIL ENGINEERING	03 JAN 01	0
UPDATED INSTRUMENTATION	10 JUL 01	1
CHANGED VALVE	1/30/03	2

SCALE: NONE		DATE
DESIGN BY	JWC	30 AUG 00
DRAWN BY	JKC	30 AUG 00
CHECK BY	JWC	03 JAN 01
APPR. BY	NBG	03 JAN 01
CLIENT APPR.		

KEMWorks TECHNOLOGY, INC.
5925 IMPERIAL PARKWAY, SUITE 105
MULBERRY, FLORIDA USA
(863) 648-5369 FAX (863) 647-5219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.
NRG	AGRIUM	1313

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
GRANULATION P&ID

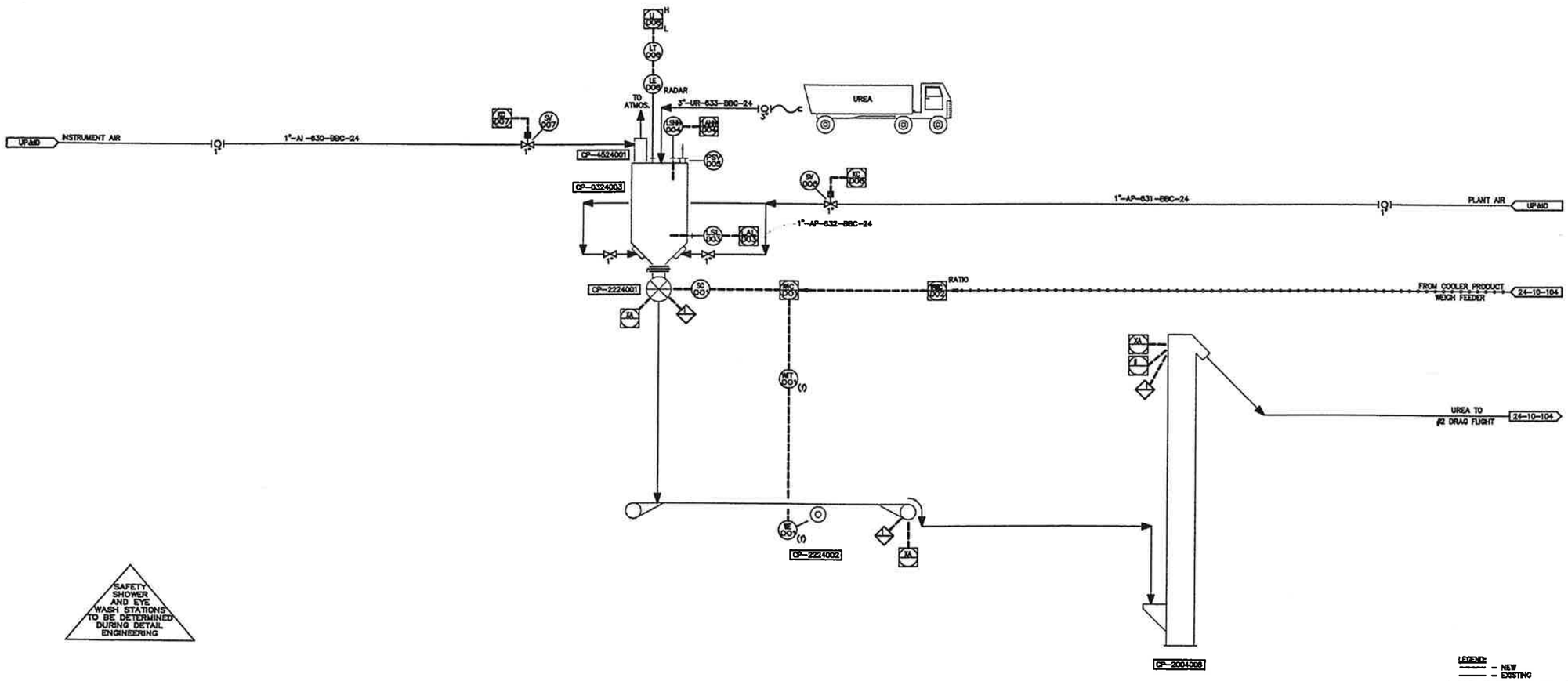
DWG. NO. 24-10-106 REV. 2

24101001.DWG 07/10/01 @ 0855 JKC

EXHIBIT B

AGR-CBI_003924
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES

EQUIP. NO.	DESCRIPTION	STATUS
CP-0324003	UREA HOPPER	EXIST
CP-3324004	MATERIAL RECLAIM ELEVATOR	EXIST
CP-2224001	UREA ROTARY VALVE	EXIST
CP-2224002	UREA WEIGH BELT	EXIST
CP-0324001	UREA HOPPER DUST COLLECTOR	EXIST



REFERENCE DRAWINGS	REFERENCE DRAWINGS	REV.	REVISION	DATE	BY	DRAWING HISTORY	DATE	REV.
		B	GENERAL REVISION PER CLIENT REVIEW	03 NOV 00	NRG	FOR APPROVAL	20 SEP 00	A
						FOR BASIC ENGINEERING PKG.	03 NOV 00	B

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SCALE	NONE	DATE
DESIGN BY	SMN	06 SEP 00
DRAWN BY	JKC	07 SEP 00
CHECK. BY	NRG	20 SEP 00
APPR. BY	MDW	20 SEP 00
CLIENT APPR.		

KEMWorks TECHNOLOGY, INC.
5925 IMPERIAL PARKWAY, SUITE 105
MULBERRY, FLORIDA USA
(863) 648-5369 FAX (863) 647-5219
www.kemworks.com

PROJ. MGR.	CLIENT	PROJ. NO.
NRG	AGRIUM	1313

Agrium

AGRIUM U.S., INC.
SODA SPRINGS, IDAHO
GRANULATION SCRUBBING MOD'S
UREA HOPPER P&ID

DWG. NO. 24-10-107 REV. B

24101077D.DWG 11/05/00 @ 09:57 JKC

EXHIBIT B

AGR-CBI_003925
SUBJECT TO ALL APPLICABLE CONFIDENTIAL BUSINESS INFORMATION PRIVILEGES