PROCESS SURVEY - ENVIRONMENTAL IMPACT ANALYSIS

PROCESS/FACILITY Asbestos PLANT King City

COMPLETED BY R. O. Marsten DATE 2/73

III-A - INPUT

Raw Mat'l, Utility, etc.	Units	Amount	Function	Remarks
Water, Boiler Feed	GPM	28		While Operating 20% T.
Cooling	"	42		
Cycle Makeup				
Process	GPM	460		Recycle
Steam				
Utilities, Other-Nat Gas	SCFM/HR	22,000	Standard Drier	
Nat Gas	" "	3240	RG244 Drier	
Materials, Raw				
TiO_2 (Rutile or Anatase)	Tons/day	35		Used Special Run Appro 5 Days Per Year
Glacial Acetic Acid	lbs/day	2100	RG 244	
Type N Silicate	lbs/day	2100	RG 244	
Materials, Auxiliary				
Rock Salt	lbs/Mo	200	Boiler Water Treatment	
Filter Cloths	Pcs/Mo	200		Standard Grade
" "	" "	17		RG 244

III-B - USEFUL PRODUCTS

Stream	Component	Wt%	~~Lbs~~ Tons/day	How Shipped
	Standard Grades		100	Bags
	RG-244		3	Bags

A 16507

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ENVIRONMENTAL PROTECTION FACILITIES - ENVIRONMENTAL IMPACT ANALYSIS

PLANT KING CITY COMPLETED BY R.O. MARSTEN DATE 2/73

X. - METEOROLOGICAL INFORMATION

A. Wind: Average Velocity APRIL TO SEPT 20 (mph) Direction FROM NORTH (attach wind rose if available)

B. Temperature (°F): Low +17°F High 105°F Yearly Avg. — January Range 17-60 July Range 40-105

C. Atmospheric Stability: Stable, Moderately Stable, Unstable — Inversion Frequency — (days/year)

D. Rainfall: Annual 9" AT PLANT 18" AT MINE (Inches) Seasonal YES When OCT TO MAY

XI. - WATER INFORMATION

A10508

A. Water Required

Usage	Flow GPD Avg.	Flow GPD Max.
Process	674,750	
Cooling	60,050	
Cycle Makeup		
Boiler Feed	39,880	20% TIME
Sanitary	1800	
Other		
Total	776,480	

Intake

No.	Source	Flow GPD Low	Flow GPD Avg.
	RECYCLE		662,400
	WELL		101,730
	IN ORE		12,350
			776,480

Storm Water

Discharge

No.	Point	Flow Low	Flow Avg.
	BOILER BLOW DOWN		3,625
	RG 244 FILTRATE		720
	SANITARY		1800
	OVERFLOW TO POND		64611
	WITH TAILS TO PILE		16466
	TO AIR		26858
			114,080

Examples * Intake - Municipal, Private, River, Lake, Well / Discharge - Waste Treatment (Plant, Other) River, Evaporation & PERCOLATION

B. Distance of Plant Intake from Nearby Upstream Plants

Plant	—			
Miles				

C. Distance of Plant Discharge Points to Nearby Water Users — miles

D. Distance of Plant Discharge to Closest Downstream Public Water Intake — miles

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PROCESS SURVEY - ENVIRONMENTAL IMPACT ANALYSIS Date 2-73

~~Process~~ Facility Plant Name KING CITY Completed by R.O. MARSTEN

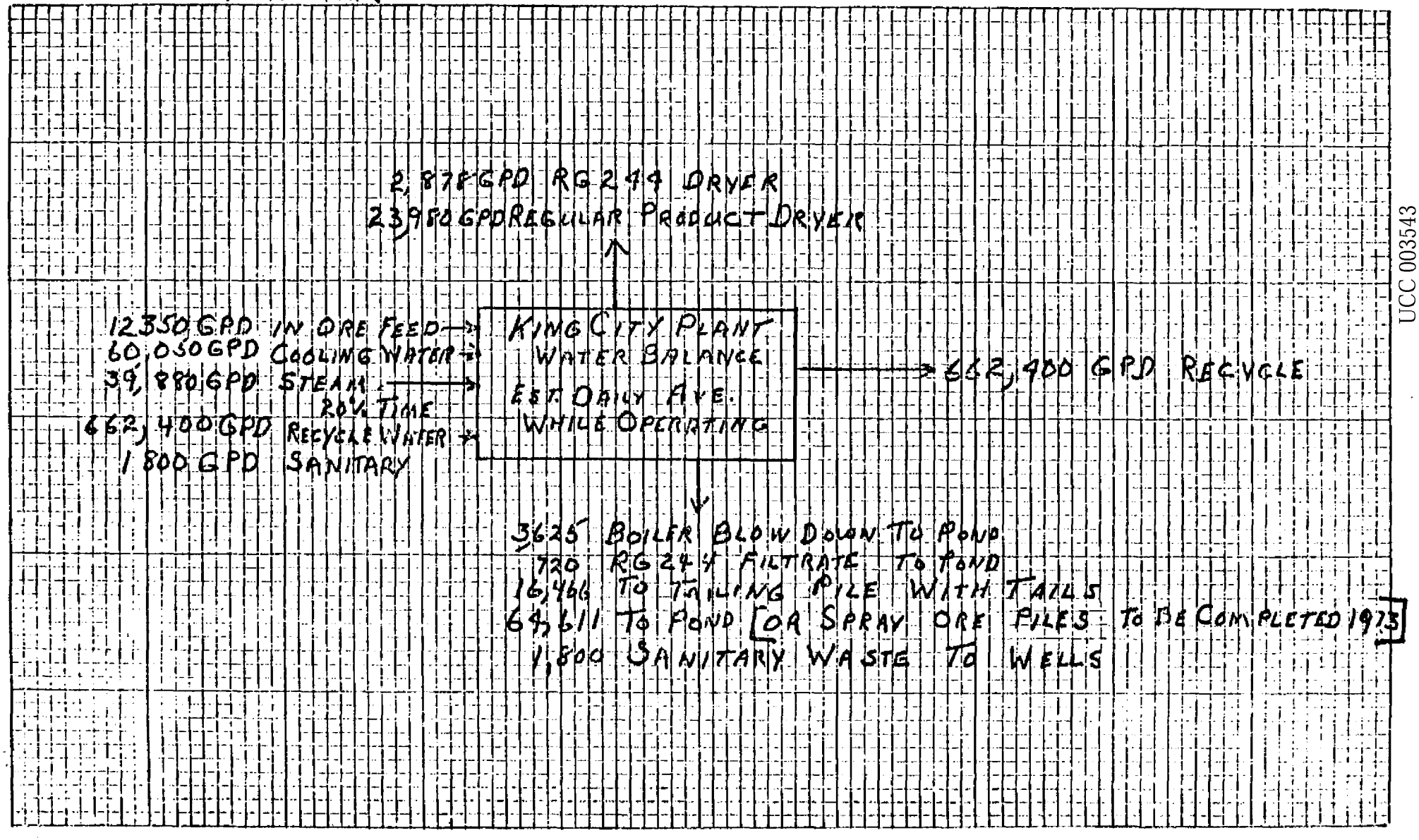
~~Mine~~ KING CITY

Production Rate 3 RG 244 46 HI PURITY at Capacity ___ (lbs/hr or tons/day) 54 REGULAR

Production Time 24 Hr/D 5 D/WK (hrs/day or days/year) Batch Rate ___ (batches/yr)

A 10503

X 1. SIMPLIFIED BLOCK DIAGRAM WATER BALANCE



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ENVIRONMENTAL PROTECTION/PROCESS SURVEY-ENVIRONMENTAL IMPACT ANALYSIS

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OCESS/~~FACILITY~~ ASBESTOS PLANT KING CITY COMPLETED BY R.O. MARSTEN DATE 2-1-73
RG 244

VI. RESIDUES/MISCELLANEOUS EMISSIONS

A1057C

(1) Stream No. R- 9

(2) Component	Wt%	(3) Usual Lb/Day	(4) Abnormal Lb/hour
ASBESTOS			
ROCK			
WATER			
Total			

(5) Abnormal Production: Frequency ____
Duration ____

(6) Name CYCLONE REJECT AND PRODUCT SPILLS

(7) Disposal Means-Incinerator, Boiler, Landfill, Underground, Sale, Contract, Tailing Ponds RECYCLE

(8) Frequency-Continuous 24 [Hr/D] D/Wk Wk/Mo Mo/Yr ____

(9) Physical Form-Viscous, Liquid, Oil, Chunks, [Slurry] Semi, Solids

(10) Problems in Disposal (Note Disposal Location) [None] Odor, Toxic, Radiation, Dusting, Others (Describe) ____

(11) Notes ____

(1) Stream No. R- 10

(2) Component	Wt%	(3) Usual Lb/Day	(4) Abnormal Lb/hour
Total			

(5) Abnormal Production: Frequency ____
Duration ____

(6) Name PRODUCT SPILLS

(7) Disposal Means-Incinerator, Boiler, [Landfill] Underground, Sale, Contract, Tailing Ponds ____

(8) Frequency-[Continuous] 24 Hr/D D/Wk Wk/Mo Mo/Yr 50/WK

(9) Physical Form-Viscous, Liquid, Oil, Chunks, Slurry, Semi, [Solids]

(10) Problems in Disposal (Note Disposal Location) None, Odor, [Toxic] Radiation, Dusting, Others (Describe) ____

(11) Notes MOST PRODUCT HANDLING EQUIPT AFTER DRYER WELL VENTILATED AND HOODED EXCEPT BAGGER. MATERIAL VACUUMED UP AND DISPOSED IN LANDFILL

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ENVIRONMENTAL PROTECTION/PROCESS SURVEY - ENVIRONMENTAL IMPACT ANALYSIS Page ____ of ____

PROCESS/~~FACILITY~~ ASBESTOS PLANT KING CITY COMPLETED BY R.D. MARSTEN DATE 2/73

A10571

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V. WATER DISCHARGES

(1) Stream No. W- 1		(3) Usual	(4) Abnormal
(2) Component	Wt%	Lb/Day	Lb/Hour
Total			

(5) Abnormal Discharge: Frequency ____
Duration ____

(6) Name SPILLS 6A GPM ____
(7) Discharged to - Sewer, stream, drainage ditch, pond TRENCH
(8) Frequency-Continuous 24 Hr/D D/Wk Wk/Mo Mo/Yr 50/W
(9) Temperature AMBIENT °F (10) Problems: In Treating or From Dire
Discharge-None, Odor, Visibility, Toxicity, Metals, Non-Degradea
Oxygen Demand, Inorganics ____
(11) Waste Reduction Equipment WATER RECYCLED
(12) Reduces What? —
(13) Efficiency or Amount Recovered —
(14) How Abnormal Discharge Detected and Corrected —
(15) Range of flow of receiving stream CFS —
(16) Notes WATER AND PRODUCT SPILLS AT VARIOUS LOCATIONS COLLECTED IN SUMP AND PUMPED TO 24 FT. THICKENER FOR RECYCLE

(1) Stream No. W- 2		(3) Usual	(4) Abnormal
(2) Component	Wt%	Lb/Day	Lb/Hour
Total			

(5) Abnormal Discharge: Frequency ____
Duration ____

(6) Name FILTRATE 6A GPM 475
(7) Discharged to- Sewer, stream, drainage ditch, pond RECYCLE
(8) Frequency - Continuous 24 Hr/D D/Wk Wk/Mo Mo/Yr 50/W
(9) Temperature ____ °F (10) Problems: In Treating or From Direct
Discharge-None, Odor, Visibility, Toxicity, Metals, Non-Degradeable
Oxygen Demand, Inorganics ____
(11) Waste Reduction Equipment RECYCLE
(12) Reduces What? ____
(13) Efficiency or Amount Recovered ____
(14) How Abnormal Discharge Detected and Corrected ____
(15) Range of flow of receiving stream CFS ____
(16) Notes ____

ENVIRONMENTAL PROTECTION/PROCESS SURVEY - ENVIRONMENTAL IMPACT ANALYSIS

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PROCESS/~~FACILITY~~ ASBESTOS PLANT KING CITY COMPLETED BY R.O. MARSTEN DATE 2/73

RG-244

V. WATER DISCHARGES

A 10572

(1) Stream No. W- 3		(3) Usual	(4) Abnormal
(2) Component	Wt%	Lb/Day	Lb/Hour
Total			

(5) Abnormal Discharge: Frequency ____
Duration ____

(6) Name RG-244 FILTRATE 6A GPM 0.5

(7) Discharged to - Sewer, stream, drainage ditch, pond

(8) Frequency-Continuous 24 Hr/D D/Wk Wk/Mo Mo/Yr ____

(9) Temperature 70 °F (10) Problems: In Treating or From Direct Discharge-None Odor, Visibility, Toxicity, Metals, Non-Degradeab

Oxygen Demand, Inorganics ____

(11) Waste Reduction Equipment POND

(12) Reduces What? ____

(13) Efficiency or Amount Recovered ____

(14) How Abnormal Discharge Detected and Corrected ____

(15) Range of flow of receiving stream CFS ____

(16) Notes FILTRATE DISCHARGED TO POND EVAPORATES AND PERCOLATES. NO DISCHARGE FROM POND

(1) Stream No. W-		(3) Usual	(4) Abnormal
(2) Component	Wt%	Lb/Day	Lb/Hour
Total			

(5) Abnormal Discharge: Frequency ____
Duration ____

(6) Name ____ 6A GPM ____

(7) Discharged to- Sewer, stream, drainage ditch, pond ____

(8) Frequency - Continuous ____ Hr/D D/Wk Wk/Mo Mo/Yr ____

(9) Temperature ____ °F (10) Problems: In Treating or From Direct Discharge-None, Odor, Visibility, Toxicity, Metals, Non-Degradeable

Oxygen Demand, Inorganics ____

(11) Waste Reduction Equipment ____

(12) Reduces What? ____

(13) Efficiency or Amount Recovered ____

(14) How Abnormal Discharge Detected and Corrected ____

(15) Range of flow of receiving stream CFS ____

(16) Notes ____

ENVIRONMENTAL PROTECTION/PROCESS SURVEY-ENVIRONMENTAL IMPACT ANALYSIS

PROCESS/FACILITY RG 244 ASBESTOS PLANT KING CITY COMPLETED BY R.O. MARSTEN DATE 2/73

A-0573

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IV. AIR EMISSIONS

(1) Stream No. A- 15		(3) Usual Lb/Day	(4) Abnormal Lb/Hour
(2) Component	Wt %		
ASBESTOS			
Total			

(5) Abnormal Emissions: Frequency ____

Duration ____

(6) Name BAGGER 6A SCFM

(7) Discharge To- [Air] Flare Incinerator AND VENT PIPE

(8) Frequency- [Continuous] 24 Hr/D D/Wk Wk/Mo Mo/Yr ____

(9) Outlet: Dimension ____ in. Pipe, Duct, Stack; Height ____

(10) Temperature AMBIENT °F (11) Visibility-None, Mist, Solids, Steam, Color SLIGHT

(12) Odor - [None] Slight, Moderate, Strong; Quality ____

(13) Emission Reduction Device SMALL VENT Installed ____

(14) Reduces What? ____ (15) Efficiency Poo

(16) How Abnormal Emissions Detected and Corrected ____

(17) Notes BAGGER NOT ENCLOSED AND CAUSES CONSIDERABLE DUST

(1) Stream No. A-		(3) Usual Lb/Day	(4) Abnormal Lb/Hour
(2) Component	Wt %		
Total			

(5) Abnormal Emissions: Frequency ____

Duration ____

(6) Name ____ 6A SCFM

(7) Discharge To- Air Flare Incinerator ____

(8) Frequency-Continuous ____ Hr/D D/Wk Wk/Mo Mo/Yr ____

(9) Outlet: Dimension ____ in. Pipe, Duct, Stack; Height ____

(10) Temperature ____ °F (11) Visibility-None, Mist, Solids, Steam, Color ____

(12) Odor-None, Slight, Moderate, Strong; Quality ____

(13) Emission Reduction Device ____ Installed ____

(14) Reduces What? ____ (15) Efficiency ____

(16) How Abnormal Emissions Detected and Corrected ____

(17) Notes ____