

Activity ID	Activity Description	Orig Dur	Rem Dur	% Comp	Early Start	Early Finish	Total Float	RESP	Budgeted Cost	Cost to Date	2007												2008																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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CLASS "A" BATCH PROCESS EXPANSION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

Outstanding RFI's delayed submittal
RFI's 13, 28, 29

Attachment 18.1-4
Page 1 of 5

Start Date22FEB07
Finish Date05MAR08
Data Date30NOV07
Run Date20DEC07 08:19

Early Bar

Progress Bar

Critical Activity

3711

MURRAY COMPANY

CLASS "A" BATCH PROCESS EXPANSION

Nov07 Update

DETAILED SCHEDULE (BY AREA)

Sheet 1 of 5

S.L. Boschen - Scheduler

Date	Revision	Checked	Approved

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Activity ID	Activity Description	Orig Dur	Rem Dur	% Comp	Early Start	Early Finish	Total Float	RESP	Budgeted Cost	Cost to Date	2007												2008					
											F	M	A	M	J	J	A	S	O	N	D	D	J	F	M	A	M	
S2050	R&A - Ductile Iron Pipe	30	0	100	15MAR07A	27MAR07A		OWNR	0.00	0.00																		
S2180	R&A-Welding Procedure	30	0	100	15MAR07A	27MAR07A		OWNR	0.00	0.00																		
S2190	R&A-Welder Certifications	30	0	100	15MAR07A	27MAR07A		MC	0.00	0.00																		
S2020	R&A - Baseline Schedule	30	0	100	20MAR07A	27MAR07A		OWNR	0.00	0.00																		
S2100	R&A - Instrumentation Hdwr Subm	30	0	100	29MAR07A	26APR07A		OWNR	0.00	0.00																		
S2010	R&A - Hidrostal Pumps	30	0	100	11APR07A	16MAY07A		OWNR	0.00	0.00																		
S2070	R&A - Electrical Conduit	30	0	100	12APR07A	24APR07A		OWNR	0.00	0.00																		
S2080	R&A - Electrical Wiring	30	0	100	12APR07A	24APR07A		OWNR	0.00	0.00																		
S2090	R&A - Electrical Heat Tracing	30	0	100	12APR07A	24APR07A		OWNR	0.00	0.00																		
S2000	R&A - Pipe Supports	30	0	100	19APR07A	26APR07A		OWNR	0.00	0.00																		
S2130	R&A - Steam & Plant Air Pipe	30	0	100	23APR07A	25APR07A		OWNR	0.00	0.00																		
S2140	R&A - Valves	30	0	100	24APR07A	25APR07A		OWNR	0.00	0.00																		
S2005	R&A - Pipe Supports - Rev 1	23	0	100	21MAY07A	12JUL07A		OWNR	0.00	0.00																		
S2105	R&A - Control Panel Mod Subm	30	0	100	23MAY07A	19JUL07A		OWNR	0.00	0.00																		
S2110	R&A - Loop Dwgs	30	0	100	23MAY07A	19JUL07A		OWNR	0.00	0.00																		
S2040	R&A - Steam Injectors	30	0	100	26JUL07A	26JUL07A		OWNR	0.00	0.00																		
S2060	R&A - Rebar	30	0	100	26JUL07A	26JUL07A		OWNR	0.00	0.00																		
S2160	R&A - Pipe Insulation	30	30	0	05DEC07	03JAN08	5	OWNR	0.00	0.00																		
S2115	R&A - Instr. Training Subm	30	30	0	20DEC07	01FEB08	18	OWNR	0.00	0.00																		
S2120	R&A - Coating	30	30	0	20DEC07	18JAN08	38	OWNR	0.00	0.00																		
Subtotal		340	59	86	27FEB07A	01FEB08	26		0.00	0.00																		
PROCUREMENT/FABRICATION																												
S3075	Fab/Del - Steam & Plant Air Pipe	20	0	100	14MAR07A	03JUL07A		MC	75,000.00	75,000.00																		
S3210	Fab/Del - Pipe & Fittings	39	0	100	03APR07A	03JUL07A		MC	22,000.00	22,000.00																		
S3070	Fab/Del - Ductile Iron Pipe (4-6 Weeks)	42	0	100	12APR07A	29MAY07A		MC	400,000.00	400,000.00																		
S3120	Fab/Del - Instrumentation (10 Weeks)	70	0	100	27APR07A	03SEP07A		INST	190,000.00	190,000.00																		
S3110	Fab/Del - Electrical Heat Tracing (6 Weeks)	42	0	100	07MAY07A	31OCT07A		ELEC	75,000.00	75,000.00																		
S3220	Fab/Del - Valves (12 Weeks)	84	0	100	07MAY07A	07JUL07A		MC	24,000.00	24,000.00																		
S3010	Fab/Del - Hidrostal Pumps (26 Weeks)	164	0	100	16MAY07A	26OCT07A		MC	577,000.00	571,230.00																		
S3000	Fab/Del - Pipe Supports	45	0	100	11JUN07A	23AUG07A		SS	22,500.00	22,500.00																		
S3060	Fab/Del - Expansion Joints (8 Weeks)	56	0	100	16JUN07A	02SEP07A		MC	22,000.00	22,000.00																		
S3125	Fab/Del - Control Panel Mods (2 Weeks)	14	0	100	09JUL07A	11SEP07A		INST	75,000.00	75,000.00																		
S3040	Fab/Del - Steam Injectors (8 Weeks)	56	0	100	27JUL07A	01AUG07A		MC	93,000.00	93,000.00																		
S3090	Fab/Del - Rebar	14	0	100	31OCT07A	13NOV07A		CONC	8,000.00	8,000.00																		
S3230	Fab/Del - HVAC	5	5	0	08DEC07	12DEC07	54	HVAC	3,400.00	0.00																		
Subtotal		274	5	99	14MAR07A	12DEC07	54		1,586,900.00	1,577,730.00																		
PRECON/MOBILIZATION / ALLOWANCES																												
MOB1000	Mobilization	15	0	100	22FEB07A	02MAR07A		MC	125,000.00	43,750.00																		
Start Date		22FEB07	Early Bar		711							***S.L. Boschen - Scheduler***																
Finish Date		05MAR08	Progress Bar									Date		Revision										Checked		Approved		
Data Date		30NOV07	Critical Activity																									
Run Date		20DEC07 08:19																										
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Activity ID	Activity Description	Orig Dur	Rem Dur	% Comp	Early Start	Early Finish	Total Float	RESP	Budgeted Cost	Cost to Date	2007												2008					
											F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		
MOB1040	BONDS & PERMITS (Electrical & Bldg)	10	0	100	22FEB07A	01NOV07A		OWNR	30,000.00	30,000.00																		
MOB1050	ALLOWANCE - Permits	1	1	0	30NOV07	30NOV07	66	OWNR	25,000.00	0.00																		
MOB1060	ALLOWANCE - Spare Parts	1	1	0	30NOV07	30NOV07	66	OWNR	25,000.00	0.00																		
MOB1070	ALLOWANCE - City Inspection	1	1	0	30NOV07	30NOV07	66	OWNR	25,000.00	0.00																		
MOB1080	ALLOWANCE - Site Conditions	1	1	0	30NOV07	30NOV07	66	OWNR	100,000.00	0.00																		
Subtotal		200	1	86	22FEB07A	30NOV07	66		330,000.00	73,750.00																		
DEMOLITION																												
DEMO1050	Coordination/Layout	10	0	100	15MAR07A	25APR07A		MC	10,000.00	10,000.00																		
DEMO1000	Demo - Piping & Supports - Level B2	20	0	100	14MAY07A	31MAY07A		MC	25,000.00	25,000.00																		
DEMO1020	Demo - Piping & Supports - Level Above Ground	10	0	100	22MAY07A	20JUN07A		MC	2,500.00	2,500.00																		
DEMO1010	Demo - Piping & Supports - Level B1	5	0	100	29MAY07A	29MAY07A		MC	5,492.00	5,492.00																		
Subtotal		70	0	100	15MAR07A	20JUN07A		MC	42,992.00	42,992.00																		
EQUIPMENT PADS & CMU																												
CONC1030	Demo - Concrete Pads & Pedestals - Level B2	5	0	100	22MAY07A	24MAY07A		CONC	1,200.00	1,200.00																		
CONC1050	Install Pump Pads	10	0	100	29OCT07A	30OCT07A		CONC	2,900.00	2,900.00																		
CONC1070	Install Elec Equipment Pads @ Level B1	5	0	100	23NOV07A	23NOV07A		CONC	2,900.00	2,900.00																		
CONC1060	CMU Wall @ Level B1	9	5	44	27NOV07A	07DEC07	13	CONC	18,458.00	0.00																		
CONC1040	Demo - CMU - Level B1/Cut Hole in Wall	1	1	0	30NOV07	30NOV07	13	CONC	3,500.00	0.00																		
Subtotal		142	6	80	22MAY07A	07DEC07	13	CONC	28,958.00	7,000.00																		
2E DIGESTER																												
2E-0920	Install Piping & Fittings	5	1	90	18JUN07A	30NOV07	17	MC	140,000.00	126,000.00																		
2E-0915	Install Pipe Supports	10	0	100	29JUN07A	26OCT07A		MC	41,500.00	41,500.00																		
2E-0925	Install Steam & Plant Air Pipe & Fittings	10	1	95	02JUL07A	30NOV07	17	MC	40,000.00	38,000.00																		
2E-0930	Install Pipe Valves	5	0	100	09JUL07A	10OCT07A		MC	98,000.00	98,000.00																		
2E-0900	Install Pumps	5	0	100	01NOV07A	07NOV07A		MC	36,500.00	36,500.00																		
2E-0940	Pressure Test	1	1	0	05DEC07	05DEC07	17	MC	5,000.00	0.00																		
ELEC1100	Heat Trace - 2E Digester	4	4	0	02JAN08	07JAN08	0	ELEC	4,665.00	0.00																		
ELEC1105	Test Heat Trace - 2E Digester	1	1	0	08JAN08	08JAN08	0	ELEC	1,000.00	0.00																		
INSU1000	Insulate - 2E Digester	3	3	0	09JAN08	11JAN08	0	INSU	31,150.00	0.00																		
2E-0970	Pipe ID & Tag	2	2	0	14JAN08	15JAN08	19	MC	2,451.00	0.00																		
Subtotal		148	31	72	18JUN07A	15JAN08	19		400,266.00	340,000.00																		
3E DIGESTER																												
3E-1000	Install Piping & Fittings	5	1	90	18JUN07A	04DEC07	17	MC	140,000.00	126,000.00																		
3E-0990	Install Pipe Supports	10	1	95	29JUN07A	03DEC07	17	MC	41,500.00	39,425.00																		
3E-1005	Install Steam & Plant Air Pipe & Fittings	10	1	95	02JUL07A	04DEC07	17	MC	40,000.00	38,000.00																		
3E-1010	Install Pipe Valves	5	0	100	09JUL07A	02OCT07A		MC	98,000.00	98,000.00																		
3E-0980	Install Pumps	5	0	100	01NOV07A	07NOV07A		MC	36,500.00	36,500.00																		

Attachment 18.1-1
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Start Date22FEB07

Finish Date05MAR08

Data Date30NOV07

Run Date20DEC07 08:19

Early Bar

Progress Bar

Critical Activity

711

MURRAY COMPANY

CLASS "A" BATCH PROCESS EXPANSION

Nov07 Update

DETAILED SCHEDULE (BY AREA)

Sheet 3 of 5

Date

Revision

Checked

Approved

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Attachment 18.1-4

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