

PD-AAR-848

len: 41481

YEARLY PROGRESS REPORT

1980

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Volume 1

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1.0 SUMMARY

1.1 Project Milestones

	<u>Scheduled Date</u>	<u>Actual Date</u>
Contract Signing	5 Nov 77	5 Nov 77
Review of Feasibility Report	26 Jan 78	26 Jan 78
Advertise for Refinery Equipment	15 Feb 78	1 Feb 78
Presentation to Lenders - Amman	11 Apr 78	11 Apr 78
Town Site Contract Award	1 May 78	4 May 78
Approval of Solar Pan Construction Tender Documents	-	2 June 78
Townsite Contractor starts Mobilizing	-	7 June 78
Solar Pan Construction Tender Inquiry Issued	1 Aug 78	28 June 78
Solar Pan Contract Bids due	4 Oct 78	4 Oct 78
Advertise Power Plant Contract	14 Oct 78	16 Oct 78
Definitive Estimate Due	31 Dec 78	1 May 79
Solar Pan Contract Award	1 Jan 79	13 Jan 79
Solar Pan Contractor starts mobilizing	1 Feb 79	15 Jan 79
Approval of Refinery Mechanical Construction Tenders (Pre-Qualification)	1 Mar 79	12 Apr 79
Approval of Power Plant Construction Tenders (Pre-Qualification)	23 Feb 79	20 Mar 79
Refinery Mechanical Tender Inquiry Issued	5 Apr 79	10 May 79
Power Plant Contract Bids Due	7 July 79	7 July 79
Refinery Contract Bids Due	15 Aug 79	1 Oct 79
Refinery Contract Award	15 Dec 79	17 Jan 80
Power Plant Contract Award	15 Dec 79	11 Jan 80

1.0 SUMMARY - continued

1.1 Project Milestones - Continued

	<u>Original Scheduled Date</u>	<u>Current Forecast Date</u>	<u>Actual Date</u>
Refinery Contractor Letter of Intent	15 Dec. 79		17 Jan 80
Refinery Contractor Starts Construction	1 Apr. 80		15 May 80
Power Plant Contractor Starts Construction	1 May 80		1 Oct 80
Screening & Compaction Erection Contract Award	30 Oct. 80	17 Jan 81	
Power Plant Mechanically Complete	1 Dec. 81	17 Jan 82	
Refinery Contractor Mechanically Complete	1 Dec. 81	17 Jan 82	
Screening & Compaction Erection Mechanically Complete	1 Dec. 81	17 Jan 82	
<u>Township</u>			
Housing - Lot 1	1 Feb 79		15 July 79
Housing - Lot 2	1 July 79		15 Feb 80
Housing - Lot 3	1 Feb 80	1 Nov 80	
Housing - Lot 4	1 June 80	1981	
<u>Solar Pans (Partial completion for pan filling)</u>			
Salt Pan	1 Feb 81	1 Feb 81	
PC-1	1 Mar 81	1 Mar 81	
PC-2	1 Apr 81	1 Apr 81	
C-1	1 May 80		8 Apr 80
C-2	1 Apr 81	1 Apr 81	
C-3	1 Apr 82	1 Apr 82	
<u>Start-up Schedule</u>			
<u>Start Carnallite Deposition</u>			
C-1	1 Aug 81	1 Aug 81	
C-2	1 Aug 82	1 Aug 82	
C-3	1 Aug 83	1 Aug 83	
<u>Product Test Runs*</u>			
75% Test Run	1 Feb 83	1 Feb 83	
100% Test Run	1 Nov 83	1 Nov 83	

*These dates based on assuming start of carnallite precipitation
1 August, 1981.

1.3 Status of Project

JIL

At the beginning of the year the Steam and Power Plant Contract (08-1875-11) and the Screening and Compaction Purchase Order (08-1875-29-2) were signed. Soon after these major items were agreed, a letter of intent was issued to Voest Alpine for the Mechanical Works Contract (08-1875-10).

The Hot Leach System was altered to a two-stage system and accordingly a detailed redesign was carried out. All the additional equipment was placed on order.

Work continued on reviewing and approving drawings for the permanent township and the solar evaporation system. Meetings with all contractors to review progress of drawings and equipment procurement were held from time to time.

By mid year a total of 774 drawings were issued for construction and an additional 15 drawings were awaiting information from vendors and could not be completed.

By mid year also, concern was being expressed over the ability of the carnallite pan salt bottoms to support the carnallite harvester which was being estimated to weigh a total of 250 tonnes approx. Alternative harvested designs and methods of increasing the salt bottom thickness were investigated.

The bid package for the erection of the screening and compaction plant was issued in mid September.

Considerable damage of equipment and materials was experienced at Aqaba. Port congestion continued to be a problem for the unloading of ships. By year end most of the major critical items had arrived on site. Rahco prototype carnallite harvester was factory tested, then disassembled and shipped to Aqaba. It is proposed to reassemble the harvester at Lisan and carry out tests at the test pan site early in 1981.

Salt bottom tests were carried out by the Institute of Industrial Research and Standards (IIRS) on carnallite pan C-1 and these indicated that additional salt would have to be deposited before any bottom-operated harvester could function safely. JIL proposed an independent floating harvester and presented it to all parties involved. In conjunction with this proposal it was decided to increase the salt laying in the carnallite pans by the addition of a second pipeline.

At year end Management, Cost Control and Scheduling continued to monitor and supervise overall progress. Home Office continued to review contractor and vendor drawings, design liaison with site and update drawings as necessary. Expediting equipment continued to be an important function in progressing equipment deliveries to site.

1.3 Status of Project - Continued

Progress continued to be made in the conversion of unit rate work to lump sum for mechanical Contract 08-1875-10.

All major purchase orders were issued with the exception of the product haulage trucks.

AGP

Contract No. 2

The Contractor (Shin Seung) had cash flow problems which persisted throughout the year. These problems were responsible for difficulties with materials supplied and labour morale which in turn resulted in variable performance on progress of the Works. In the light of this the Employer decided not to extend the Contract to include the construction of additional buildings, Hospital and Mosque in the Township. The Contractor made a determined and moderately successful effort towards the end of the year to accelerate completion of the Works still remaining to be done. At the end of the year Contract No. 2 was 93% complete. It is now anticipated that substantial completion of all the Works comprising this Contract will be achieved during the first quarter of 1981, some 10 months after the contractual date for completion.

Contract No. 3

The Contractor (Wimpey) has maintained consistent output throughout 1980 substantially at programmed rates which aimed at achieving completion by bonus dates.

Phase 1 completion was achieved on 8th April 1980 and operation of the Temporary Brine Supply system commenced. This operation continued successfully with only minor interruptions.

At the end of the year Contract No. 3 was 75% complete.

Current indications are that Phases 2 and 3 completion will be achieved on schedule.

Consultant's Staff

Progress of work by Sir Alexander Gibb & Partners in terms of man months expenditure during the year rose from 53% in January to 74% in December.

Project Expenditure

Approximate expenditure on services included in the Sir Alexander Gibb & Partners Sub-Contract Consultancy Agreement was US\$5,443,135.

1.3 Status of Project - Continued

Equipment: Design and procurement of electrical/mechanical equipment and inspections at manufacturers works continued during the year. At year end the delivery of items was substantially complete.

2.0 Engineering and Design

2.1 JII - Pasadena:

Process flow calculations, material balance and process flow diagrams were completed for the counter-current hot leach system.

Some work was carried out in coordination of brine samples with Weck Laboratories for analysis. In addition attention was also given to an examination of the pan operations under the schedule conditions being proposed at year end.

2.2 JIL - (Dublin)

The Letter of Intent was issued to Voest Alpine for the Mechanical Contract (08-1875-10) on 17th January, 1980. Also in the same month the Steam and Power Plant Contract (08-1875-11) was signed off. The Screening and Compaction System (08-1875-29-2) was also finalised.

Early in the year telemetering was receiving attention and purchase order was eventually placed with Telectron.

During the year the following departments were engaged to varying degrees in the reviewing of drawings and specifications, meeting with contractors, vendors and subcontractors.

Project Engineering	Architectural Design
Piping and Mechanical Design	Building Services
Civil and Structural Design	Contracts Dept.
Electrical Design	

They were also engaged in carrying out inspection and expediting visits to equipment suppliers. Technical support was also provided to our field staff both through communication with site and site visits.

Due to the process changes in the Hot Leach Area equipment layout was revised and the necessary modifications were carried out by all disciplines. The Administration Building was finalised.

The Potash Refinery model was shipped to site October 1980. Great use had been made of the model in achieving considerable cost savings - in the Crystallizer Area in particular.

Due to the carnallite pan salt test results obtained by the IIRS it was decided that harvester and pan modifications would be necessary to guarantee operating performance. Accordingly, it was agreed to by all parties that an additional brine supply line would be installed in order to

2.0 Engineering and Design - Continued

2.2 JIL - (Dublin) - Continued

to increase the salt layer thickness in the carnallite pans. Alternative harvesting methods were also reviewed and Rahco began work on a new independent floating harvester based on modifying barges. At year end it was tentatively agreed pending final approval by the financiers in a meeting scheduled for Amman on 12th January 1981 that:-

- Rahco to supply second prototype harvester (JIL independent floating design) using existing barge from Ireland and parts from 1st prototype.
- Rahco to provide proposal for test and study of other possible alternative harvester concepts.
- Proceed with Lisan pan test of 1st prototype to obtain possible data for design of future harvester.
- Above harvester design to operate on 40 cm of carnallite pan salt bottom as recommended by IIRS

At year end preparation of specifications for work boats and anchors for use in the carnallite pan was under way. All specifications for owner-supplied equipment had been completed and issued for purchase except product haulage trucks - these will be issued in the first quarter of 1981.

AGP - Reading

Contract No. 2 - Permanent Township

Work on checking, commenting on and approving Contractor's architectural and structural drawings continued throughout the year.

Contract No. 3 - Solar Evaporation System

Preparation and issue of working drawings continued during the year, though the bulk of the drawings was completed in the first half.

Study of, commenting upon and approval of Contractor's designs for the mechanical and electrical equipment continued.

Contract No. 6 - Additional Buildings

Preparation of designs, drawings and tender documents was undertaken for hospital, mosque, guest house and additional houses. Tenders were invited in October and returned in mid-December. Clarification of tenders and preparation of a Report on Tenders was in progress at year's end.

2.0 Engineering and Design - Continued

2.2 JIL - (Dublin) - Continued

Contract No. 7 - Hospital Equipment

Designs were prepared and specialist advice received for the equipment for the hospital.

3.0 Construction

The following is a detailed report outlining activities during the year 1980 and also highlighting the present state of construction on site.

Contract No. 10 - Refinery Mechanical Works

Contractor Voest Alpine AG
Sub-contractors Balfour Beatty (Civil)
 Balfour Kilpatrick (Gulf) (Elect./Instr.)

Refinery Works Progress

The following is the state of the Work at the end of December, 1980.

Area 01 - Crystalliser Area

- Concrete to grade slabs	35%
- Erection of structural steel	85%
- Work to tank foundations	
Mother Liquor Tank 13-09-410	75%
Crystalliser Dump Tank 13-09-360	95%
Crystalliser Wash Tank 13-09-370	15%
- Prefabrication of c.s. pipework for mother liquor and wash tanks	40%

Area 02 - Drying/Dewatering/Process Control

- Set rotary dryer and ancillary equipment	27%
- Carry out remedial work to h/d bolts on stack base	100%
- Set first section of stack	100%
- Work continued to process control substructure	60%
- Blockwork commenced to process control building	10%
- Trenches for acid leach field excavated	100%
- Commence erection of tails repulp tank	24%

Area 03 - Sylvinite Structure and Hot Leach Tanks

- Complete outstanding works to hot leach tank bases	100%
- Erect tank Nos. 13-09-080 and 13-09-090	95%
- Commence erection of structural steel to Sylvinite structure	65%

3.0 Construction - Continued

Area 04 - Carnallite Structure

- Commenced laying out structural steel prior to erection 5%

Area 05 - Hot Thickener and Decomposition Tanks

- Concrete to access tunnel completed 100%
- Work commenced to ring beam walls
- Five of six decomposition tank bases completed
soffit still outstanding on final base 13-09-130 85%
- Work to erection of tank 13-09-110 commenced 22%

Area 06 - Sylvinite Thickener/Durge Tank/Switchroom No.2

- Work to thickener foundation completed 100%
- Erection of surge tank continues 90%
- Blockwork continues to switchroom No. 2 95%
- Prefabrication of c.s. pipework continues 30%

Area 07 - Carnallite Surge Tanks/Cooling Tower

- Work commenced on erection of all three tanks 13%
- Prefabrication of c.s. pipework continued to
carnallite surge tanks 40%
- Prefabrication of c.s. pipework continued to
cooling tower 25%

Area 08 - Carnallite Thickener

- Concrete work continued to base 90%

Area 09 - Fuel and Diesel Oil Storage

- Erection of fuel oil tanks continued 62%
- Continued prefabrication of pipework 45%

Area 10 - 33kV Switchroom

- Continued work to floor slabs 75%
- Continued blockwork 60%

Area 11 - Administration Building

- Completing outstanding concrete work to basement and
substructure 99%
- Continued concrete work to superstructure 15%

3.0 Construction - Continued

Area 12 - Maintenance Building

- Continued concrete work to depressed truck dock area	95%
- Blockwork continued to central office block	55%
- Concreting to suspended slabs of central office block	25%
-- Floor slabs complete	100%
- Blockwork continued in facilities annex	40%
- Blockwork completed to Maintenance area office	100%
- Commenced work to misc. equipment bases	60%
- Commenced concreting floor slabs	15%
- Installed tie-rod	100%

Area 12A - Truck Weigh Scales

- Continued concrete work to both scales	75%
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Area 13 - Piperacks

- Continued concreting bases	75%
- Continued precasting sleepers for solar pans area	

Area 14 - Underground Piping

- Continued laying sewage collection piping	75%
- Commenced laying sewage disposal piping	70%

Area 16 - Reservoir

- Completed preparatory work prior to basin lining	100%
- Completing influent line	90%
- Completed piping prefabrication	100%

Area 17 - Sewage Lagoons

- Prepared ground to receive basin lining	95%
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Lisan Test Pans

- Completed mechanical assembly of prototype harvester (yet to be commissioned).	100%
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Progress Against Master Schedule

All reports submitted to date have been against Voest Alpine Master Schedule Revision, 4, dated 30th August. The Contractor has since submitted Master Schedule Revision, 5 dated 1st December, 1980. This report is based on Revision 4, dated 31st December, 1980.

3.0 Construction - Continued

Area 01 - Crystallisers

- Grade slab started at area of vessels 1, 2 and 3 - two sections surface finish condemned.
- Erection of Crystalliser steelwork - in progress and access for Whiting Vermont remedial works prepared.
- Civil works, Crystalliser Dump and Mother Liquer Tanks - 4 weeks behind programme, becoming critical.
- Painting steel structure - not started, not critical.
- Electrical installation, no access - not started, 3 weeks behind programme, not critical.
- Erection of crystalliser vessels 4 and 5 - not started, rescheduled due to late delivery of vessels (ETA Aqaba 11 Jan 1981) - critical.
- Erection, rest of equipment - Cocconi tanks placed at level 32,400, crystalliser structure - no further progress - 3 weeks behind programme.
- Prefabrication C-steel pipes - in progress for Dump, Wash and Mother Liquer tanks area and crystalliser structure area - 6 weeks behind programme - critical. (Work item 13 - 40% complete).
- Erection of C-steel piping - not started - 1 week behind programme - critical.

Area 02 - Drying/Dewatering/Process Control

- Civil works, Process Control Building - in progress - 1 week ahead of programme - not critical.
- Civil works, Dryer equipment - in progress for fan base - 2 weeks behind - not critical.
- Erection of external equipment - (Cyclones, Precipitators, Dryer) in progress and awaiting final alignment by A.C. Supervisor.
- Erection of Dewatering structure steelwork - not started - 8 weeks behind programme - critical (Note: BB advise that expected start date is 02 February 1981 - 14 weeks later than this programme).
- Civil works, 1st floor, dewatering structure - not started - 5 weeks behind programme - follows steel erection - critical.
- Piping prefabrication - commenced, 8 weeks behind programme - not critical.

Area 03 - Sylvinitic Structure/Hot Leach Tanks

- Erection structural steel - in progress - 10 weeks behind programme - critical.
- Civil works, 1st floor, sylvinitic structure - not started - 8 weeks behind programme - critical.
- Erection equipment, 1st floor - not started - 3 weeks behind programme - dependant on erection of steel and suspended slab.
- Civil works, Hot Leach tanks - in progress - 2 weeks behind programme - not critical.
- Piping prefabrication commenced - 8 weeks behind programme - not critical.

3.0 Construction - Continued

Area 04 - Carnallite Structure

- .. Erection of structural steelwork commenced - 9 weeks behind programme - critical.
- Civil works, 1st floor - 4 weeks behind - follows steel erection - critical.
- Piping prefabrication, C-steel - in progress - behind programme - not critical.

Area 05 - Decomposition Tanks/Hot Thickener

- Civil works, Decomposition tanks - in progress, 2 weeks behind programme - not critical.
- Civil works, Hot Thickener - running 7 weeks behind programme - started late due to design charges.
- Piping prefabrication, C-steel - in progress - behind programme but not critical.

Area 06 - Sylvinite Thickener/Surge Tank/Switchroom No. 2

- Erection of Sylvinite Surge tank - in progress and on programme.
- Civil works, Thickener foundations - in progress-asphalting in hand - 10 weeks behind programme - becoming critical.
- Erection of Thickener tank - further progress - awaiting asphaltting - 6 weeks behind programme - becoming critical.
- Piping prefabrication - in progress - behind programme - 30% complete (Work Item 7).
- Electrical installation - not started - 4 weeks behind programme - not critical.
- Civil works, Switchroom No. 2 - in progress - 3 weeks behind programme - not critical.

Area 07 - Carnallite Surge Tanks/Cooling Tower

- Civil works, Surge tanks - equipment and distributor box structure foundations outstanding - ahead of programme.
- Tank erection - in progress 14 weeks ahead of programme.
- Piping prefabrication commenced - 8 weeks behind programme - not critical - 40% completed (Work Item 7).
- Civil works, Cooling Tower - completed, 3 weeks ahead of programme - piping fabrication 25% completed (Work Item 6).

Area 08 - Carnallite Thickener

- Civil works - in progress - 6 weeks ahead of programme.
- Piping prefabrication - commenced 8 weeks behind programme - not critical.

Yearly Progress Report
Arab Potash Project
December, 1980.

3.0 Construction - Continued

Area 09 - Fuel and Diesel Oil Storage

- Civil works - sump and pump foundations in progress - 11 weeks behind programme - becoming critical.
- Tank erection - in progress - 4 weeks behind programme - becoming critical.
- Piping prefabrication - in progress - 5 weeks behind - 45% complete (Work Item 4).
- Civil works, bund wall - no further progress - ahead of programme.
- Painting - not started - 5 weeks behind - not critical.

Area 10 - 33kV Switchroom

- Civil works, - in progress - 4 weeks behind programme - critical.

Area 11 - Administration Building

- Civil works, basement and 1st floor - in progress and on programme.

Area 12A - Maintenance Building

- Civil works - in progress - Central Office Block - 5 weeks behind programme - remedial works in progress to Facilities Annex.
- Steel erection - roofing commenced - 9 weeks ahead of programme. (Note suspended pending outcome of discussions with Wards).
- Electrical installation commenced.

Area 12E - Truck Weight Scales

- Civil works - in progress for Weigh Scales only - 4 weeks ahead of programme.

Area 13 - Piperacks

- Erection of steelwork, phase I - not started - 7 weeks behind programme - no steel on site - critical. (Steel being delivered January 1981)
- Civil works, phase II - in progress and on programme.
- Piping prefabrication - in progress - 3 weeks behind programme - 52% completed (Work Item 2).
- Painting - not started - 4 weeks behind programme - not critical.

Area 14 - Undergrounds

- Underground piping - sanitary sewers in progress - running 5 weeks behind programme.
- Earthing - not started - 20 weeks behind programme - not critical.

3.0 Construction - Continued

Area 15 - Fencing/Streets/Lighting

- Fencing - some bases pre-cast - 17 weeks behind programme 1 not critical.
- Site security lighting - not started - 12 weeks behind programme.

Area 16 - Process Water Pond

- Reservoir civil works - preparation for lining in progress - will be complete before installation of lining.
- Reservoir influent line - in progress and ready for testing - 8 weeks behind programme.
- Pump outfall structure - tank and pump foundations outstanding - 8 weeks behind programme - not critical.
- Erection of pumps - commenced, 7 weeks behind programme - not critical (Note: 2 No. Process Water Pumps not at site - P.O. 08-1875-01-1).
- Installation of lining - material on site-specialists due in early January.
- Piping prefabrication - in progress and on programme - 60% complete (Work Item 5).
- Erection of piping, electrics - not started is not critical.

Area 17 Sewage Lagoons

- Civil works - continuing on preparation for lining - 3 weeks behind programme - not critical.
- Installation of lining - 6 weeks behind programme - material on site, installation after reservoir.

Area 18 - Solar Pans

- Sleeper prefabrication - in progress and on programme.
- Pipe fabrication - welding of flanges commenced - 15% complete (Work Item 1).

Overall

The overall assessment of current situation of completion is:-

Site improvement	17%
Concrete	63%
Structural steel	15%
Buildings	18%
Equipment	17%
Piping	2%
Painting	5%
Overall	14%

3.0 Construction - Continued

General Remarks

The slippage against schedule in the critical areas of Sylvinite, Carnalite and Dewatering Structures has continued during the month. Deliveries of steelwork from the fabrication yard in Turkey did improve due to the intervention of Mr. A Khasawneh and the Turkish Ambassador, enabling a quicker clearance through the Customs to be made.

At the end of the month a total of 305 tons of fabricated steel had been received on site. Erection of the Sylvinite Structure, 1st stage, commenced on 8th December, 1980 and by the end of the month approximately 65% had been positioned. Unfortunately, design and fabrication errors in the connections were found which further delayed progress. The Contractor brought their Senior Designer to site and immediate design changes and approval made to keep these delays to a minimum with the remedial measures being conducted on site.

Erection of steelwork to the Carnallite Structure commenced at the end of December 1980, but no advance on commencement of Dewatering Structure date of 2nd February 1981 was possible.

Pipe Fabrication, which was the other main source of delay - due to fittings being held at Aqaba port - has made better progress during December and, a total of approximately 7410 metres was fabricated. All shipped materials were cleared from the Aqaba docks.

A major re-appraisal of the programme to completion will be necessary by the Contractor to detail manner in which agreed completion dates will be met.

Civil Works

During December the Contractor poured 854m³ of concrete to the permanent works as follows:

<u>Area</u>	<u>M³</u>	<u>Total to 31 Dec. 1980</u>
01	86	1302
02	27	380
03	14	373
04	--	249
05	95	379
06	78	206
07	--	77
08	51	170
09	3	173
10	(Contract 11)	70
11	170	807
12	315	896
13	16	101
16	--	103
Total	<u>854m³</u>	<u>5286m³</u>

3.0 Construction - Continued

The Civil Contractor also supplied a total of 230m³ of concrete to Contract No. 11.

Mechanical Works

The mechanical works are continuing to progress well, especially in respect to tank erection and with receipt of specials to pipe fabrication.

The erection works to the Rotary Dryer under supervision of Allis Chalmers has made good progress, after an initial delay in location of anchor bolts.

The Prototype Harvester was completed except for final electrical and instrumental data with Rahco personnel assisted by Voest Alpine labour and equipment.

Site Mobilization

The Contractors' staff and labour on site at the end of December 1980 was:

Voest Alpine	Staff	13
	Labour	175
	Domestic	3
Balfour Beatty	Staff	51
	Labour	264
	Domestic	40
Balfour Kilpatrick	Staff	3
	Labour	4
Total		<u>553</u>

The attached manpower histogram compares actual manpower with that planned by Voest Alpine on the Manpower Requirements 5861/21101/1018 Rev 4 dated 30th June 1980. The two figures - planned and estimated are coming closer, reflecting the increase in mechanical works activity.

The Civil Contractor's labour force continued to alter with the increase in specialised personnel - steel erectors and building tradesmen, at the expense of unskilled labour required for the ground works.

Site Facilities

The Refinery Offices remained handicapped by a lack of external telephone system. The situation was aggravated further during December when the inclement weather caused the ground line connection to Numeira exchange to be out of action. Only telephone outlet was from Township RE office. After a long absence the Jordan Telephone Company returned on 28th December, 1980 to complete the 20 pair cable installation to Numeira exchange. Work had not commenced on the temporary 2-pair cable extension from Numeira to Refinery.

3.0 Construction - Continued

Programming and Scheduling

Regular meetings were held until the JILI Planning Engineer departed for leave prior to Christmas. The problem of delays caused by the delivery, and later the design/fabrication error, of the structural steelwork was the major concern. All parties - VA, BB, Cimtas, APC, Telstar and JILI Consultants, devoted much time to solving the delivery problem successfully and later initiated remedial measures.

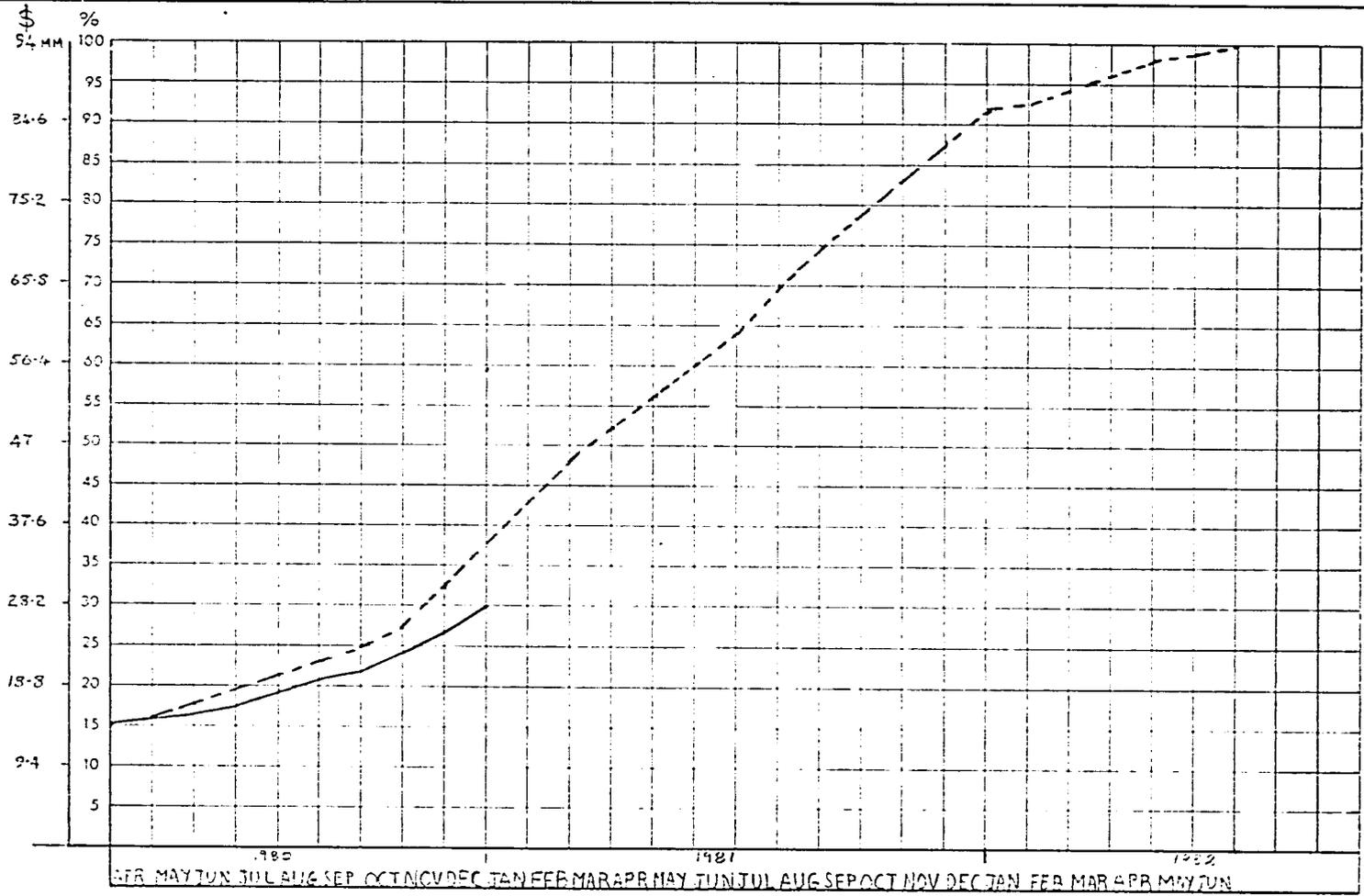
All the materials and equipment in Aqaba docks was cleared by the personal effort of Mr. Khasawneh who visited there on 23rd December 1980.

Further reported delays on delivery of Crystalliser Units 4 and 5 could also influence on the programme.

Against Master Schedule Rev 4, it is calculated that in certain areas the Contractor is running 8 weeks behind schedule. A new schedule will be prepared considering all above factors.

Cost Control

The forecast has been updated as per attached forecast variance register.



LEGEND

PLANNED PROGRESS - - - - -
 ACTUAL PROGRESS - - - - -

JACOBS INTERNATIONAL LTD.

TITLE

- CASH-FLOW GRAPH -

CUSTOMER ARAB POTASH CO. LTD.

TYPE OF UNIT PLANT EXPANSION

PROJECT NUMBER 001 75

ORIGINAL ISSUE DATE

BY

REVISION DATE

NO

BY

PROGRESS REPORT TO 31 DEC 1982

BY 42

3.0 Construction - Continued

Budget Changes from Cost Report No. 3

\$

Preliminaries and General Items

Model Room Generator 75,500
F.C.O. No.1

Forecast Variation Register

Preliminaries and General Items

1. Changes in final negotiations on Contract 10 award.	- 419,000
2. Delete prov. sum for Product Dryer Bld. (Transferred to civil account)	- 500,000
3. Delete prov. sum for Hot Leach (Transferred to civil, mechanical and electrical a/cs)	- 300,000
4. Reduce prov. sum for Addendum 3 changes for wadi piling (transfer to AGP contract)	- 800,000
5. Add painting of Maintenance Building	+ 170,354
6. Delete remainder of prov. sum for Addendum 3 changes	-1,200,000
7. Add for Model Room generator and associated running costs	+ 135,900
	<hr/>
	- 2,912,746

Civil, Building etc.

1. Changes in final negotiations on Contract 10 award.	+ 148,000
2. Changes agreed to date for Addendum No. 3	+1,957,939
	<hr/>
	2,105,939

Electrical

1. Changes in final negotiations on Contract 10 award.	- 52,000
2. Addendum 3 changes (Estimate)	150,000
	<hr/>
	98,000

Piping and Insulation

1. Changes in final negotiations on Contract 10 award.	+ 1,000
2. Reduction in quantities on Addendum 3 (Estimate).	-1,000,000
	<hr/>
	999,000

3.0 Construction - Continued

<u>Mechanical and Equipment Setting</u>	\$
1. Changes in final negotiations on Contract 10 award.	- 117,000
2. Increased weight of crystalliser package (est)	+ 300,000
3. Transport of cradles.	+ 150,000
4. Installation and handling of spare pumps	+ 3,500
5. Installation and handling of harvester spare parts	+ 10,000
6. Specification changes to fork lift truck	+ 14,000
7. Fuel Oil heating and pumping sets	+ 11,000
8. Installation of hot leach equipment	+ 20,000
9. Transport to site of Screening & Compaction	+ 370,000
10. Addendum 3 changes (estimate)	+ 300,000
	<hr/> 1,061,500

Instrumentation

No change.

HVAC Plumbing and Fire Protection

Extension of fire ring main. + 50,000

Hot Leach Revision

Spread over various accounts. - 360,000

Dayworks

No change.

Registration of Vehicles

Add for registration of Contractor supplied vehicles + 36,000

Housing Rental

Delete as this is considered as income to Arab Potash Company Ltd., - 100,000

- 1,060,307

Client: Arab Potash Company

Issued Date:
Period Ending 31.12.80

Plant: Arab Potash Project

Project No: 08-1875

JACOBS INTERNATIONAL LTD. INC.

SAFI, JORDAN

Contract No. 10 Mechanical Works
(All figures in '000 's)

Page 23

Description	Current Budget	Last month Estimate	Latest Estimate	Variations	Committed to-date	Value Achieved 31.12.80
	\$'s	\$'s	\$'s	\$'s	\$'s	\$'s
General Items, Preliminaries and Provisional Sums.	21,295	20,326	19,106	- 2,189	21,600	7,822
Civil, Structural and Building Work.	19,288	20,436	21,394	+ 2,106	19,436	4,362
Electrical.	3,561	3,509	3,659	+ 98	3,509	
Piping and Insulation	24,669	23,670	23,670	- 999	24,670	533
Mechanical and Eq. Setting	21,469	22,232	22,531	+ 1,062	21,352	2,558
Instrumentation	206	206	206	-	206	
H.V.A.C. Plumbing and Fire Protection	900	950	950	+ - 50	900	16
Hot Leach Revision	360	-	-	- 360	-	
Dayworks	1,900	1,900	1,900	-	1,900	41
Vehicle Registration	-	-	36	+ 36		
Total U.S. Dollars	93,648	93,229	93,452	- 196	93,573	15,332
Total U.S. Dollars converted to Jordanian Dinars.	26,783	26,663	26,727	- 56	26,762	4,385
1\$ = 286 Fils						
TOTAL: J.D.'s	26,783	26,663	26,727	- 56	26,762	4,385

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3.0 Construction - Continued

Employer Purchased Equipment

During December shipments were received against the following purchase orders:

- 01-5 Slurry Booster Pumps
- 04-1 Thickener Mechanism
- 29-2 Screening & Compaction Plant

JIL are concerned that JIL still have no representative in the port area at Aqaba. Therefore they are unable to establish if damages sustained on the equipment occurred aboard ship or during unloading and handling in the port. JIL are also of the opinion that many parts listed as missing in the Damage Reports are lying unclaimed in the port area. This may cause problems with insurance claims if we cannot show that we have made every effort to recover missing parts.

Prices for damages and missing parts are now coming through from JILI Dublin and appropriate action is being taken to progress insurance claims and reorder as necessary. We will advise APC when we consider it prudent to call on the services of vendor representatives to check equipment, prior to re-ordering damaged parts, in particular where guarantee or warranties could be affected.

Three Rahco personnel were on site during December to supervise the assembly of the prototype harvester which was completed on 13th December, 1980 (purchase order 39-1)

An Allis-Chalmers representative was on site supervising the erection of the equipment of the Rotary Dryer (purchase order 25-1).

Telex discussions have been held with Ward Bros. concerning the cladding/roofing to the Maintenance Building. A final outcome of these discussions is awaited, and in the interim roofing work was suspended by the Contractors.

JILI Site Engineering Office

The Site Engineering Office has continued to function as a viable unit and may queries have been answered for the contractors. Quality of work and materials including X-Ray testing, concrete, aggregate and pipe testing have been monitored and registered.

7 APC engineers have been incorporated into the JILI consultants' Site Staff and are being given the necessary training for their future role in the Project.

3.0 Construction - Continued

Safety

The JILI Site Safety Officer has continued to hold safety meetings and seminars. Daily inspections of site works and practices are made and by constant pressure, improvements are noticeable. A particular improvement in the wearing of safety helmets, eye goggles and hand protection can be recorded. Three accidents requiring hospitalisation of personnel were recorded during the month.

Dead Sea Level

The level recorded on 31st December, 1980 was -400.254.

Specific Gravity - 1.216.

Contract No. 2 - Permanent Township

Consultant: Sir Alexandra Gibb & Partners

Contractor: Shin Seung Corporation

Housing

Only outstanding works remained to be done on Stages 1 and 2 housing during the year but progress was slow. Housing units in Stage 3 were progressively completed and taken over by the C3 Contractor to operate and maintain. This stage was 98% complete at the end of the year.

Stage 4 housing construction progressed during the year with 92% completion attained by year's end.

Bachelor accommodation B blocks were complete and occupied with some external works outstanding. Bachelor A Block was nearing completion.

Public Buildings and Facilities

Work continued on all public buildings and a number were completed and handed over during the year. Position at the end of the year was as follows:-

- | | | |
|---------------|---|--|
| Supermarket | - | Completed and handed over during November. |
| B Sports Club | - | Construction well advanced but finishes and fittings lag behind. |
| School | - | Construction well advanced. However, airconditioning units, finishes and fittings are delaying completion. |

3.0 Construction - Continued

Public Buildings and Facilities - Continued

- Medical Clinic - Virtually complete and handover was imminent.
- Shops/Post Office/Bank - Partially occupied with telephone PABX in use. Final finishing only outstanding.
- Maintenance Depot - Partially handed over but administration offices still being worked on. External works in progress.
- Kindergarten - Handed over on 30th December with air conditioning tests outstanding.

External works in the Town Centre were well advanced but landscaping designs have not been submitted by the Contractor.

Services

Electrical distribution continued apace with completion of buildings.

Telephone and TV systems were commissioned during the year but faults in the systems which became apparent in use have not been fully corrected by December.

Sewage treatment works were substantially complete but have not been commissioned. Only minor works were outstanding on the water distribution system.

Water supply boreholes, Mazra Pumping Station and pumping main were commissioned during the year but problems with burst in the high pressure section of the uPVC pipe were experienced. Investigation into the causes of the problem was well advanced at year's end.

Road shoulder and footpath construction continued intermittently but progress was poor. At year's end the Contractor had not put forward firm proposals for road shoulder materials meeting specified requirements.

Staff and Labour

Staff numbers have stayed substantially constant throughout the year but both on Site and in Jordan reorganisation of the Contractor's administration resulted in significant changes in senior personnel.

Labour numbers have been variable but rarely have numbers of skilled trades been sufficient for the work in hand.

3.0 Construction - Continued

Contract 3 - Solar Evaporation System

Consultant: Sir Alexander Gibb & Partners
Contractor: George Wimpey International Ltd.,

Piling and Structural

Piling for the brine intake jetty commenced early in the year and work proceeded successfully. Some delays were experienced through faults in factory applied protection coating to steel pile tube which had to be re-done on Site. Dredging of the intake channel had generally kept only just ahead of the piling operation. Erection of structural steelwork proceeded successfully, with timber decking following.

Earthworks

Dike construction continued satisfactorily throughout the period as did works in connection with filling scour channels. See Attachment 5.2 for the construction progress charts for January, 1980 and December 1980.

The brine canal was commissioned at Phase 1 completion and has operated throughout the period of temporary brine pumping.

Diaphragm wall construction commenced slightly behind programme but good progress was achieved and work was completed substantially as programmed.

All work on dike construction was well advanced having attained the required levels.

Monitoring of settlement of dikes continued.

Construction of the dikes proceeded, mainly on dikes 2, 3 and 5, which were substantially completed to Phase 2A levels. The gabion work at Pan C2 boat jetty was completed and work commenced on the gabions at Pan C1 waste station.

Placement of zone 1 on the dikes was adversely affected during the second half of the month due to wet weather. Flood water from Wadi Hasa, Wadi Araba and Wadi Hudeira filled Pan C3, and the flow in the truce line flood channel at peak was estimated to be between 300 and 400 m³/s. The remedial works to the zone 1 lining at the outfall end of the canal were completed together with the lining at the end of the canal. The canal outfall was also substantially completed and the temporary sheet piled weir was constructed to -396.05 level.

Estimated total volume of fill to the permanent works in exceeding the causeway and the canal road, was estimated to be 5,735,750 m³.

3.0 Construction - Continued

Pipelines and Structures

Brine Supply

Temporary Brine Supply system was installed and commissioned in early April. Operation of the system continued throughout the evaporation season with minor interruptions only. Salt build-up in pumps and pipelines was insignificant during this first year of operation.

Installation of the main brine supply pumps on the intake jetty together with the ancillary pipes, valves, electrical sub-stations and distribution cables proceeded during the year and was reaching substantial completion at year's end. Construction of Brine transfer stations continued concurrently with the above works. Temporary arrangements for discharging waste brine from carnallite Pan C1 were made.

1600 mm diameter Brine Supply Pipeline - Pipeline number B001 was installed on the jetty along with some 12m of pipeline No. B002. Spools Nos. B001/13 and B002/10 at the settlement bridge were being installed. Formwork for anchor blocks in hand at year end.

1200mm diameter Temporary Brine Supply Pipeline - Damage occurred to sections of the pipeline either side of the high water table. Once it had been dewatered to allow completion of the canal works. All the bolts on the Teekay couplings were replaced by Umbreako bolts.

The Annubar flow measuring equipment was installed.

Carnallite Pan Outlet Pipes - Pan C1 - a temporary bund has T piece Spool No. 041/3 to be installed.

Pan C2 - the 1200 mm diameter pipeline through Dike 5 has been laid.

Freshwater Supply to Process Plant

Pipelines to brine intake and canal outfall pump stations together with storage tanks were completed early in the year to provide flushing water for the Temporary Brine Supply system. Water source for this supply was the Township Pump Station at Mazra. Work on the permanent supply to the Process Plant continued throughout the year connecting pipework, electrical supply control wiring, installation of borehole pumps and contact tank, the construction of the pump house, the installation of pumps and the main pipeline to the Process Plant reservoir. All this work was well advanced at the end of the year.

Safi Wellfield Production Boreholes - all the borehole pump bases have been concreted with the exception of boreholes S2 and BN309. The installation of borehole pumps and ancillary pipework continued.

3.0 Construction - Continued

600 mm diameter Pipeline - construction of the wadi crossings and valve chambers continued throughout the month and was substantially complete at year end. The line was satisfactorily pressure tested.

Collector Pipework - the pipework was substantially complete and all sections were tested with the exception of those from manholes 30-32 and 37-38.

Saff Pump Station and Collecting Tank - the collecting tank was substantially complete but some repair work was being carried out to the splitter wall.

Dredge Intake Channel

Dredging has continued throughout the last quarter with some stoppages due to wind and rough seas. The present system of grabbing the material employed by the Contractor is operating satisfactorily.

To date a total of some 35-40,000m³ of material has been removed from the dredged channel and an accurate survey of this area is scheduled for the first week of January, 1981.

Brine Intake Jetty

The main structural steelwork was substantially complete and the wearing course was placed in the area to the south of the switchgear building and to the east of the crane outrigger beams.

Canal Outfall Bridge

The structural steelwork for the deck was completed and installation of the main timber beams was in hand at the year end.

Brine Transfer Stations

PCI Feed - the sheet piling for the discharge channels was completed and placing of zone 5 and the concrete protection to the temporary brine supply pipeline was in hand.

PC2 Feed - the sheet piling for the discharge channels was completed and fixing of walings and bracings continues.

C1/C2 Feed - placing of Zone 5 material in the discharge channels was substantially complete.

3.0 Construction - Continued

Mechanical and Electrical Works - Phase 1

Construction of the several Sub-Stations, erection of high tension power lines along the Lisan peninsula, between the Township and Process Plant in the Safi well field and the network along the dikes continued during the year.

All electrical works were generally on schedule with Phase 1 completion achieved in early April and well advanced for Phase 2A completion at end of period under review.

Continuous Brine Pumping into Carnallite Pan C1

No brine pumping took place during December 1980 with the exception of approx. 6.5 hours pumping for permeability tests.

Electrical Works - Materials

No electrical material for Phase 1 arrived on site by year end.

Township Sub-Station

The electrical sub-contractor continued work in this area with the installation and pre-commissioning checks of the two voltage transformers and their busbar connections.

The electrical sub-contractor completed work with further pre-commissioning checks of the two voltage transformers and their busbar connections.

The electrical sub-contractor completed work with further pre-commissioning checks on the OCE for the township overhead transmission line and the final connection of the township overhead line terminal section of the sub-station with terminal pole of the 33kV township overhead transmission line.

33kV Lisan Overhead Transmission Line

The installation of surge arrestors, jumpers and the fused isolator with its operating mechanism at Harvester - tap - off pole No. L151 was completed.

The Lisan overhead transmission line was still de-energised at the end of December 1980.

3.0 Construction - Continued

Temporary Brine Intake Sub-Station

The switchgear room of the sub-station complex was cleaned and the mechanical/electrical equipment in this room serviced.

Canal Outfall Pump Station Sub-Station

The faulty capacitor bank for the power factor correction unit was replaced.

The switchgear room of the sub-station building was cleaned and the mechanical/electrical equipment in this room serviced.

Mechanical Works - Materials

No further mechanical material for Phase 1 arrived on site in December.

Temporary Brine Intake Pump Station Pontoon - G002

The counterweight guard for the 700 mm dia hydraulically operated control butterfly valve was installed. Two air vent valves were also installed at the centreline on either side of the 700 mm dia suction pipework, to improve the operating conditions of the pump.

Canal Outfall Pump Station G003

The counterweight guards for the 1.2m dia hydraulically operated control butterfly valve were installed. Two air vent valves were also installed at the centreline on either side of the suction side of the 750 mm dia brine pipework loop to improve the operating conditions of the pump. The electrical control panel G003 was re-wired. The emergency shut-down has become the normal shut down made at this pump station.

Mechanical and Electrical Works - Phase 2

Electrical Works - Materials

Further electrical material for Phase 2 arrived on site, including one 11kV/400V, 320 KVA transformer and one switchgear and LV-distribution board for the Safi pump station, distribution boards for the Safi well heads, 4 No. 11kV fused isolator switches complete with fuses for any Safi OHL, steelwork for intermediate line poles and section/angle poles, one set steelwork for terminal pole No. L163 at the main brine intake of the Lisan OHL, two sets operating rods and accessories for the main brine intake terminal and the harvester tap off pole fuse switches, several sets of ASH conductor dead ends, lot of lighting fittings for the Safi area and earthing and lighting material for all other areas.

3.0 Construction - Continued

33kV Lisan Overhead Transmission Line

Pegging out of the location for the section/angle poles No. L161 and L162 was carried out and the precast pole foundation units placed and backfilled.

The two section/angle poles at the causeway end of the Lisan overhead transmission line extension were installed. The terminal pole L163 at the jetty platform was installed.

33kV Township Overhead Transmission Line

The township overhead transmission line terminal pole T175 was finally connected with the township sub-station terminal and the OHL pressure tested.

11kV Safi Overhead Transmission Line (Wellfield Area)

Installation commenced of structural steelwork, surge arrestors, isolators with operating mechanism and pole mounted 11kV/400V transformers, where applicable, at all terminal poles of the various boreholes - this work was complete by the end of December 1980. Completion of this section of work was approx. 13 weeks behind programme in December 1980 and becoming most critical.

11kV Safi Overhead Transmission Line (Process Plant Area)

All intermediate line poles of the section of the 11kV Safi overhead transmission line between the process plant area and the main Mazra-Aqaba road crossing were provided with the air post insulators during the month of December. Stringing of the 50mm² (HAZEL) at minimum alloy overhead line conductors commenced.

Outstanding work in this area is the installation of the 11kV post insulators at the various section/angle poles, jumpers, anti-climbing devices and installation of number and danger plates at the individual line poles.

Completion of this section of work remained 14 weeks behind programme.

Multicore Control Cables at Safi Wellfield Area

A number of control cables laid during the month between the control roof of the Safi pump station complex and borehole SPB5, and the cable trench backfilled. Work in this area was approx. 95% complete and 12 weeks behind programme, becoming critical.

3.0 Construction - Continued

33kV Dikes Overhead Transmission Lines

Work in this area continued with the installation of structural steelwork, isolators, operating mechanism and ancillary equipment at the various terminal poles, tap-off and isolator poles, between the process plant area, Dikes 3 and 4 up to brine transfer station C1/C2 feed, and this was completed by the end of December.

The installation of post insulators and jumpers at the various section/angle pole No. D35 and post insulators and jumpers at single tap-off pole No. D30 on Dike 8 was complete. The temporary link between the township overhead transmission line terminal pole No. T1 and Dikes overhead transmission lines terminal pole No. D1 was completed and the dikes overhead transmission line pressure tested up to brine transfer station C1/C2 feed.

Main Brine Intake Sub-Station

Mechanical and electrical installation of the 6 MVA, 33kV/3.3kV transformer and the 100 KVA transformer at the transformer bay of the sub-station was completed, the 6 MVA transformer filled with transformer oil and the entire equipment tested and pre-commissioned.

Mechanical installation within the control room, i.e. the 33kV Merlin switchgear, the 3.3kV Hawkvac starter panel, the tap change panel, the power factor correction units, the tripping battery, the LV-distribution board and the GOOL control panel was completed. Installation of cable trays within the transformer bay and in the control room was complete, together with the installation of all HV-power cables and their termination at the various electrical components.

All HV power cables were pressure tested.

Installation of the LV-control cables was completed.

Installation of the cable trays alongside the jetty platform was complete and installation of the HV-power cables and the LV-control cables progressed well during December.

The installation and termination of the three 33kV HV-power cables between the terminal pole at the jetty platform and the switchgear in the control room was complete and the cables tested.

The installation of the 3.3kV power cables to the pump motors was substantially complete by the end of the month.

Work in this area was on program at the end of December, 1980.

Brine Transfer Station PC1-Feed Sub-Station

Installation of LV-power and control cables between the sub-station and the pump station continued and was complete and the cable trench backfilled.

The electrical cables were megger tested and tested for earth continuity.

The termination of all LV-power and control cables at the LV-distribution board of the sub-station was completed.

3.0 Construction - Continued

Brine transfer Station PC2 - Feed Sub-Station

The cable trench between pump station and sub-station was completed during the month.

The LV-power cables were laid in the trench between pump station and sub-station and their termination at the LV-distribution board was complete.

Overall progress in this area was approx. four weeks behind programme.

Brine Transfer Station C1/C2 Feed Sub-Station

The excavation of the cable trench for the 33kV power cable between transformer and tap-off pole No. D147 was carried out. The installation of the power cables was completed, the cables pressure tested and terminated at the transformer and the tap-off pole and backfilled.

Pre-commissioning testing of the transformer was substantially complete by the end of December.

There were still minor outstanding electrical and mechanical items and final completion in this area was approximately four weeks behind programme.

Safi Pump Station Sub-Station

The electrical sub-contractor commenced work in this area with the mechanical installation of the 11kV/400V, 320 KVA transformer in the corresponding transformer room and the switchgear unit and Safi pump station control panel in the control room of the Safi pump station building.

Installation of the HV power cable in a cable trench between the tap-off pole adjacent to the pump station building and the 320kV transformer commenced.

Installation of cable trays and LV power and control cables between the transformer, the electrical components within the control room and the pump basement started.

Installation of the earthing system outside and inside the pump station also started.

Installation of lighting fittings in the pump basement of the pump station complex started during December.

Wiring up of the switchgear unit and the Safi control panel started.

Overall progress in this this area was rather slow and the work was approx. 2 weeks behind programme.

Mechanical Works

Materials

Further mechanical material for Phase 2 arrived on site during December 1980 including one Safi pump station control panel, outstanding pipework for the Safi pump station and the brine transfer stations, the mechanical and electrical components for the seven Safi borehole pumps and other minor items.

3.0 Construction - Continued

Safi Pump Station G011

Mechanical work in this area continued with the installation of the outstanding spool bend at the discharge side of pump G011C, the blank flanges at the future pipework in the pump basement, various air vents and drainage pipework and valves as well as the various pressure transmitters and their supporting columns.

Safi wellfield

Work commenced in this area with the mechanical installation of the freshwater borehole pumps G018, G019, and G020 at boreholes SPB2, SPB3 and SPB5, and this work was substantially completed.

Main Brine Intake Jetty

The Metalock specialist team for the U.K. continued with the repair work to the cracked pump casing top elements and the repair work of the first pump casing top element was completed on 6th December, '80. Both pump casing elements were pressure tested after completion of the repair work.

Installation of pump casings continued and all four pumps G001A to G001D were completely installed, together with their electric motors before the end of the year.

The Contractor continued work in this area with the installation together with the four 1.2m dia. cross manifolds and associated 1.2m dia. control butterfly valves.

Installation of chequer plates at the operating platform commenced. Installation of the structural steelwork for the canopy and the four foot bridges also started.

The Contractor continued the installation of the vertical flushing pipework to the pump casings and the freshwater pipework system above operating platform level, together with all associated butterfly valves and the 300 mm dia. hydraulically operated by-pass butterfly valves.

All 1.6m and 1.2m diameter Teekay couplings were installed during the month of December.

Installation of anti-vacuum valves was also completed.

Installation of small size diameter fresh water supply pipework to the pumps commenced, together with the flushing pipework to the various flushing connections at the butterfly valves and anti-vacuum valves and this work was substantially complete.

Installation of the access platforms and vertical access ladders to the four pumps commenced.

Installation of the Amri hydraulic powerpack, the supporting frames for the cable trays and hydraulic oil pipes commenced during December and this work was approximately 80% complete at month end. Overall progress in this area was on schedule.

3.0 Construction - Continued

Brine Transfer Station PC1 Feed (G004)

Installation of the 150mm and 100mm dia freshwater pipework and the 50mm dia pipework to the various flushing connections ceased during the month.

The counterweights to the 600mm dia control butterfly valves were installed and the hydraulic system filled with hydraulic oil.

Installation of the buffers and buffer supports for the counterweights were complete.

The Amri valves supervisors commenced during the month with pre-commissioning checks on the Amri hydraulic power pack and the adjustment of operating times of the 600mm dia hydraulically operated control butterfly valves. Mechanical installation of the temporary freshwater storage tank and ancillary equipment was complete. The freshwater tank was completely filled with freshwater for test purposes. Installation of the freshwater pipework and associated valves at the storage tank was substantially completed.

Installation of the LV-power and control cables continued.

Mechanical and electrical works are approximately 85% complete.

Overall progress was approximately 4 weeks behind programme, but not critical.

Brine Transfer Station PC2 Feed (G005)

The 1.2m dia discharge butterfly valve was installed during the month.

Installation of the various sited freshwater pipework and flushing connections continued but ceased due to outstanding material. The Amri hydraulic powerpack, the vertical supporting framework for the trays and the trays themselves were installed.

Installation of the hydraulic oil pipework commenced and was approximately 50% completed.

Installation of the hydraulic oil control valves on separate brackets adjacent to the 600mm dia control butterfly valves was complete.

The Contractor commenced during December with the installation of the temporary freshwater storage tank and this work was approximately 80% complete.

Installation of the LV-power cables at the cable trays continued.

Mechanical and electrical works were approximately 75% complete.

Overall progress in this area was approximately four weeks behind programme but not critical.

Brine Transfer Station C1/C2 Feed (G006/7)

Installation continued during December of outstanding items of the 150mm and 100mm dia freshwater pipework.

The temporary electric control panel G006D and its supporting framework was installed by year end.

Installation of the temporary freshwater storage tank and its associated pipework and valves was complete and the storage tank filled with freshwater for test purposes.

3.0 Construction - Continued

Brine Transfer Station C1/C2 Feed (G006/7) - Continued

The counterweights to the 600mm dia hydraulically operated control butterfly valves were fitted and the hydraulic system filled with hydraulic oil.

The Amri valves supervisors commenced during the month with pre-commissioning checks at the Amri hydraulic powerpack and adjustment of operating hours of the 600mm dia control valves. The electrical sub-contractor continued work in this area during the month with the termination of the LV-power cables to the pump motors and the termination of the power cable at the terminal box of pump motor G006A was complete.

No further mechanical and electrical works took place. Mechanical and electrical works were approximately 90% complete.

Overall progress in this area was approximately three weeks behind programme.

Contract No. 4 - Moveable Furniture

Furniture was provided under this Contract for the Contract No. 2 houses as they were completed.

3.0 Construction - Continued

Contract 11 - Steam and Power Plant

Contractor Brown Boveri & Cie.
Sub-contractor Sam Whan Corporation (Civil)

Construction Progress (Reporting against BBC Time Schedule EDS
1 Rev A)

Area 1 - Switchgear Building

- Concrete ground slab	100%
- Foundations 2 - emergency generator	100%
- Foundations 3 - transformer	100%
- Column foundations	100%
- Steelwork fabrication	commenced

Area 2 - Turbine/Generator Foundations

- Foundations and ground slab	100%
- Columns	100%
- Table formwork and reinforcing	60%

Note: concrete to air chamber condemned

Area 3 - Turbine/Generator Area

- Backfill and compaction	70%
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Area 4 - Pipe Racks

- Foundations completed	100%
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Area 5 - Boiler Foundations Area

- Boiler foundations	100%
- F.W. pump foundations	100%
- Preheater No. 1 foundations	100%
- Preheater No. 2 foundations	50%
- Burner platform foundations	50%

Area 6 - Chimney Stacks

- Foundations - Stack No. 1	100%
- Foundations - Stack No. 2	95%

Area 7 - Air Compressor

- Foundations completed	100%
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3.0 Construction - Continued

Area 8 - Water Treatment

- Works not commenced.

Area 9 - Tanks

- Excavation completed	100%
- Lean concrete completed	100%
- Formwork	In progress

General

The structural steelwork for the contract arrived at site on 27/28 December, 1980 and fabrication commenced immediately. Because of the late delivery of steel, this section of the programme was approximately 6 weeks behind schedule. Brown Boveri are updating the programme to incorporate this latest information but are confident that they can hold the original commencement dates for mechanical/electrical activities. Fabrication commenced on the Switchgear Building and Piperack in line of T/G area to meet the scheduled activities.

Brown Boveri advised that they had contingency plans for increasing manpower and equipment to meet programme requirements.

Mobilisation

Manpower on site

Brown Boveri & Cie	Staff	2
	Labour	1
Sam Whan Corp.	Staff	4
	Labour	39

The Sam Whan welders will be tested by the Insurance Company Inspector on site.

Sub-contractor Aalborg (Boilers and Piping) are anticipated to arrive on site towards end of January, 1981.

Materials

BBC have advised that the stacks, tank materials and piping will arrive at Aqaba in mid-January. These items have been shipped by container for easy handling and quick clearance from docks.

Model Room and Offices

The Model Room, APC and JILI (OMT) offices were fully established. Minor remedial measures were still required and the Contractor was notified to complete the necessary repairs.

3.0 Construction - Continued

Pan C1

No pumping was carried out during December due to the closure of the canal system while extension to the salt pan and other remedial measures were undertaken.

Opportunity was taken to construct a bund around the outfall to the channel to finalise works to the outfall pipe and valve system.
S.G. 1.2289

Pan C2

WIL plant and APC labour continued the operation of filling and levelling the areas affected by scour channels. This operation was halted as a result of the heavy rains which fell on 26th December, 1980 and flooded the working area.

Pan C3

The heavy rains of December flooded this pan area. The pan was being drained at year end, hopefully clearing the deposited bischofite salts.

4.0 Procurement

4.1 JIL

The following is the status of procurement at the end of December, 1980.

PO-08-1875-01-1 : Centrifugal Pumps - Mather & Platt

The funds for payment have not yet been transferred to Mather & Platt's bank. Equipment is packed and will not be shipped until the funds are available.

PO-08-1875-01-2 : Rotating Pumps - Mirlecc Ltd.,

This Purchase Order is 100% complete. Payment has been made.

PO-08-1875-01-3 : Fire Pumps - Aurora Ltd.,

This Purchase Order is 100% complete. Payment has been made.

PO-08-1875-01-4 : Slurry Pump - Worthington Canada

Final shipment on original Purchase Order was delivered to Aqaba on 14th November, 1980. Letter of Credit has been extended to allow for delivery of equipment on Amendments 4 and 5.

4.0 Procurement - Continued

PO-08-1875-01-5 : Slurry Booster Pump - Simon Warman

This Purchase Order is complete. 100% payment has been made.

PO-08-1875-04-1 : Thickener Mechanisms - Esmil

This purchase order is now complete. 100% payment has been made.

PO-08-1875-05-1 : Agitators-Philadelphia Gear

This Purchase Order is complete. 100% payment has been made.

PO-08-1875-16-1 : Crystallizer System - Whiting Fermont.

Vessel 040 is now complete and rubber lined and was vulcanised on 28th December, 1980. Rubber lining on 050 is 80% complete and Whiting Fermont hope to have it complete and ready for shipping by 12th January, 1981. The main problem effecting the rubber liners at this stage is extremely cold and unseasonal weather in Tarragona area.

PO-08-1875-18-1 : Cooling Tower - Marley International

This Purchase Order is complete but Marley will not ship until the funds for payment are transferred to their bank.

08-1875-21-2
and

08-1875-21-4 : Centrifuges - Bird Machine Co.
This purchase order is complete. 100% payment have been made.

08-1875-22-1 : Belt Filters - Eimco.

This purchase order is now complete. 100% payment has been made.

08-1875-23-2 : Product Hydrocyclones - Dorr Oliver.

Delivery is scheduled for July, 1981.

08-1875-23-3 : Tails Hydrocyclones - Krebs

Fabrication is complete and equipment is ready for export boxing. Delivery to docks at Houston is scheduled for the second half of January, 1981.

4.0 Procurement - Continued

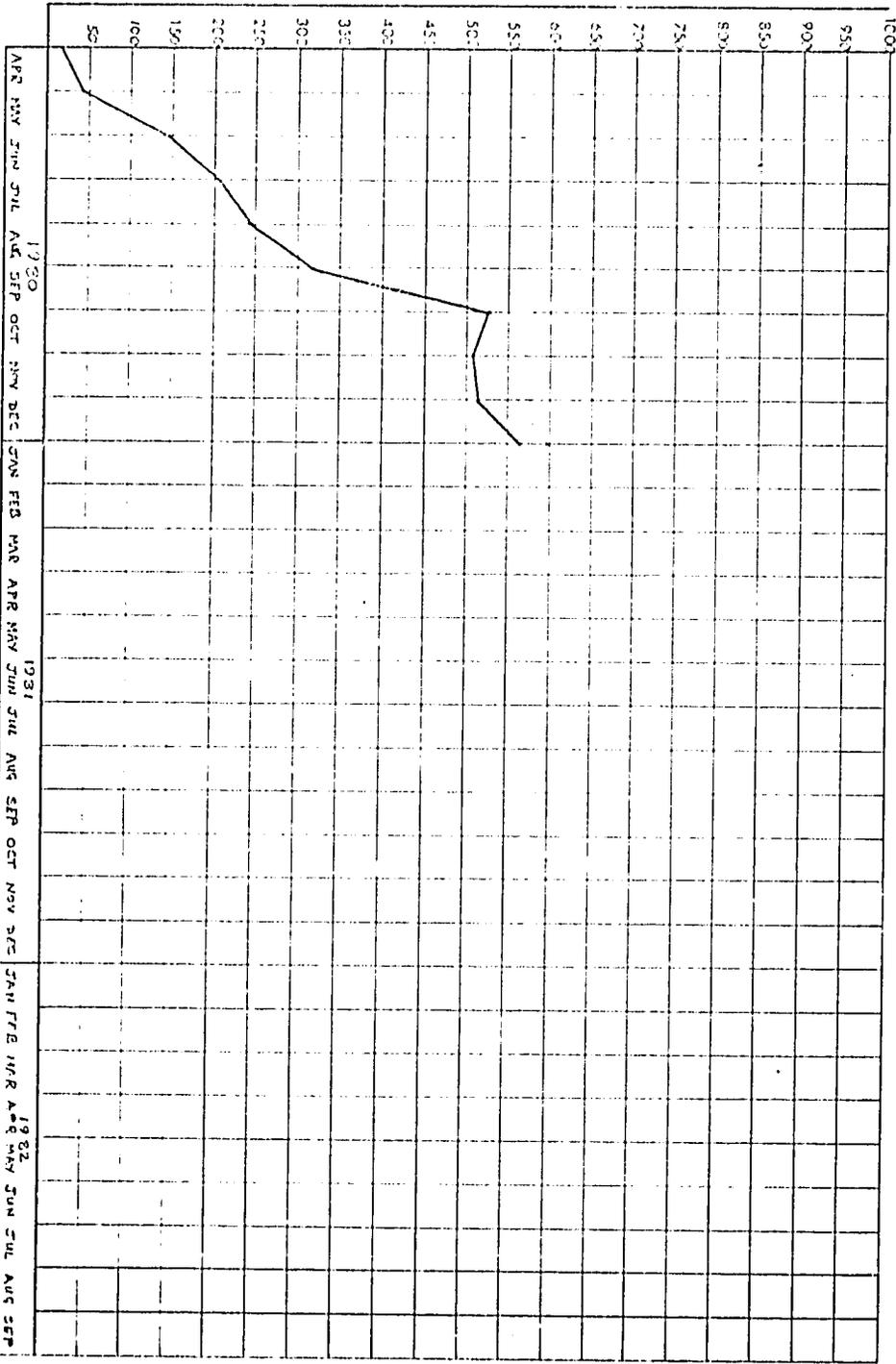
- 08-1875-29-1 Wet Mechanical Handling - Precismeca SA
This purchase order is complete. 90% payment has been made.
- 08-1875-29-2 Screening & Compaction - Fried Krupp
Eight shipments have been made to date, and the Letter of Credit has been extended to March 15th 1981.
- 08-1875-34-1 Truck Scales - Pfister
This purchase order is complete. 90% payment has been made.
- 08-1875-39-1 Prototype Harvester - Rahco.
Harvester is assembled and ready for testing. Westinghouse advised to ship one transformer to site early January - this is required for testing Harvester.
- 08-1875-40-6 Condensate Pump Set - Worthington Canada.
This purchase order is complete. 100% payment has been made.
- 08-1875-58-2 Maintenance Building - Ward Bros.
This purchase order is complete. 90% payment has been made.
- 08-1875-64-15 Process Instruments - Foxboro-Yoxall
First shipment arrived Aqaba on 2nd November, 1980. Second shipment is scheduled for January, 1981.
- 08-1875-64-45 Control Valves - Fisher Controls
First shipment was made late December 1980 and E.T.A. Aqaba is Mid-January, 1981.
- 08-1875-65-4 Electrical Switchgear & MCC's - Westinghouse.
One transformer required for testing the Prototype Harvester was due to be shipped on 20th December, 1980 ex-Baltimore. Question of tagging equipment has not yet been resolved. Twenty nine (29) boxes of equipment still in the warehouse in Baltimore.

4.0 Procurement - Continued

4.2 AGP

Essentially all mechanical and electrical have been acquired and were present on site at year end.

No OF MEN



LEGEND

PLANNED PROGRESS
ACTUAL PROGRESS
ACTUAL HOURS

—

JACOBS INTERNATIONAL LTD.

TITLE
-ACTUAL MANPOWER-

CUSTOMER: AEGAR POTASSIUM LTD
 TYPE OF UNIT: LABORATORY
 PROJECT NUMBER: 4013
 ORIGINAL ISSUE DATE: 1/1/32
 REVISION DATE: No
 PROGRESS REPORT TO: 3 Lines
 BY: B2
 BY: B2
 BY: F4

43

Attachment 5.1

Purchase Order Status Report

45

* = A.P.C.

** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 5.1

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-01-1 Amendment 2	Mather & Platt Ltd. Mather & Platt Ltd.	11.6.1979 Signed in Dublin office 11.01.1980.	12.6.1979 ** mailed 16.1.'80	30.7.1979 20.5.1980	1.8.1979 23.5.'80				Mailed
03-1875-01-2 Amendment 2	Mirrlees Pumps Ltd. Mirrlees Pumps Ltd.	21.4.1979 Signed in Dublin office 11.01.1980	2.5.1979 ** mailed 16.1.'80	24.7.1979 30.1.1980	1.8.1979 1.2.1980				By Courier
03-1875-01-3	Aurora Pump	Signed in Dublin Office April 1979	20.4.1979	30.4.1979	29.6.1979				

up

** = SELLER

RECHASE ORDER STATUS REPORT

ATTACHMENT NO. 5.1

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-01-4	Worthington (Canada)	11.6.1979	12.6.1979	6.7.1979	1.8.1979				
Amendment 2	Worthington (Canada)		18.6.1979	9.11.1979	13.11.1979				Courier to Sell
Amendment 3	Worthington (Canada)	Signed in Dublin Office 11.01.1980	** mailed 16.1.'80	10.3.1980	13. 3.1980				Courier to APC
Amendment 4	Worthington (Canada)	30.6.1980 Courier	* 14.7.1980 ** 15.7.1980	25.9.1980	26.9.1980				
Amendment 5	Worthington (Canada)	13.8.1980 Courier.	* 9.9.1980 ** Courier 9/9/80	25.9.1980	26.9.1980				Courier

57

* = A.P.C.
 ** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 57/

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
05-1875-01-5	Simon-Warman Ltd.	Hand Carried to APC by MWF 11.11.1979	22.11.1979 Ret'd 23.11.1979 Seller	10.12.1979	11.12.'79				

Handwritten initials

* = A.P.C.
 ** = SELLER

PURCHASE ORDER STATUS REPORT

ATTACHMENT NO. 51

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-C4-1	Esmil Envirotech Ltd.	Signed in Dublin Office April 1979	20.4.1979	24.5.1979	1.8.1979				
Amendment 2	Esmil Envirotech Ltd.	Signed in Dublin Office 11.01.1980	** mailed 16.1.'80	25.1.1980	28.1.1980				Mailed to APC
Amendment 3	Esmil Envirotech Ltd.	30.6.1980 Courier	* 14.7.1980 ** 15.7.1980	23.7.1980	29.7.1980				

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* = A.P.C.

** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 57

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-05-1	Philadelphia Gear Middle East Corp.	3.5.1979	9.5.1979	31.5.1979	29.6.1979				
Amendment 2	Philadelphia Gear	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	28.2.1980	29.2.1980 Courier				
08-1875-11-2	Alfa-Laval AB	21.4.1979	2.5.1979	24.5.1979	29.6.1979				
08-1875-16-1	Whiting-Fermont	11.6.1979	12.6.1979	9.8.1979	23.8.1979				
Amendment 2	Whiting-Fermont	8.8.1979	5.9.1979	12.9.1979	7.9.1979				
Amendment 3	Whiting-Fermont	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	28.01.1980	1.02.1980				By Courier
Amendment 4	Whiting-Fermont	12.5.1980 Courier	4.6.1980	11.6.1980	13.6.1980				Courier

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* = A.P.C.
 ** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 51

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C.* & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
CS-1875-18-1	Marley International Inc.	Signed in Dublin Office April 1979	20.4.1979	24.5.1979	1.8.1979				
Amendment 3	Marley Inter. Inc.	Hand Carried to APC by MCF 11/11/'79	* 4.12.1979 Courier 5.12.1979	25.2.1980	25.2.1980 Courier				Letter of Credit enclosed with purchase order
CS-1875-21-2	Bird Machine Co.	3.5.1979	9.5.1979	August '79	1.8.1979				
Amendment 3	Bird Machine Co.	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	25.2.1980	25.2.1980 Courier				

51

* = A.P.C.
 ** = SELLER

PURCHASE ORDER STATUS REPORT

ATTACHMENT NO. 5.1

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-21-4	Bird Machine Co.	3.5.1979	9.5.1979	August '79	1.8.'79				
Amendment 3	Bird Machine Co.	21.12.1979 Courier	* 9.1.1980 10.1.1980	29.01.1980	29.01.1980				By Courier
Amendment 4	Bird Machine Co.	Signed in Dublin office 11.01.'80	** mailed 16.1.'80	4.02.1980	8.02.1980				By Courier
08-1875-22-1	Eimco Process Mach. Division.	3.5.1979	9.5.1979	18.6.'79	1.8.'79				
Amendment 3	Eimco Process Mach.	Signed in Dublin office 11.01.'80	** mailed 16.1.'80	8.4.1980	10.4.1980 Courier				
08-1875-23-2	Dorr-Oliver Inc.	Signed in Dublin Office April 1979	20.4.1979	14.5.'79	1.8.'79				
Amendment 3	Dorr-Oliver Inc.	26.10.1979	15.11.1979	20.12.1979	21.12.1979 Courier				

57

* = A.P.C.
 ** = SELLER

PURCHASE ORDER STATUS REPORT

ATTACHMENT NO. 577

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-25-1	Allis-Chalmers	15.6.1979	20.6.1979	3.10.1979	5.10.'79				Hand Carried to A.P.C. by M.E.
Amendment 2	Allis-Chalmers	3.10.1979	16.10.1979		5.10.'79				Telex from APC (courier to Seller)
3	Allis-Chalmers	11.3.1980 Courier	* 25.3.1980 ** 27.3.1980	15.4.1980	25.4.1980				
4	Allis-Chalmers	25.3.1980 Courier	* 8.4.1980 ** 9.4.1980	15.4.1980	25.4.1980				
08-1875-29-1	Precismeca S.A.	9.7.1979	25.7.1979	21.9.'79	25.9.'79				
Amendment 2	Precismeca S.A.	5.9.'80 Courier	* 25.9.1980 ** 26.9.1980 Courier.	14.10.'80	17.10.80 Courier				
CS-1875-29-2	Fried Krupp Gmbh (Draft Purchase Order)		By courier to Seller 20.12.1979						
08-1875-29-2	Fried Krupp Gmbh	25.01.1980 Courier	* Returned 12/2/80 ** Courier 14/2/80	20.2.1980	21.2.1980 Courier				
Amendment 2	Fried Krupp Gmbh	12.5.1980 Courier	** 29.5.1980	23.6.1980	27.6.1980				

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* = A.P.C.
 ** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 57

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
03-c875-29-2 Amendment 3	Fried Krupp GMBH	22nd July 1980	* 9.9.1980 ** Hand Carried 9.9.1980 (F.K.)	15.9.1980	16.9.1980 Courier				

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A.P.C.
SELLER

PURCHASE ORDER STATUS REPORT

Page 10 of 13

ATTACHMENT NO. 57

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. REC'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-34-1	Pfister Waagen Gmbh	11.6.1979	12.6.1979	25.9.1979	27.9.'79				By Courier
Amendment 2	Pfister Waagen Gmbh	9.7.1979	25.7.1979	25.9.1979	27.9.'79				
Amendment 3	Pfister Waagen Gmbh	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	4.02.1980	8.02.1980				
08-1875-39-1	Rahco Disc Inc.	Signed in Washington Sept.13th.'79	Issued to Seller at meeting in Washington	13.9.1979	20.9.'79				By Courier
Amendment 1	Rahco Disc Inc.	12.9.1980 Courier.							
Amendment 2	Rahco Disc Inc.	7.11.1980 Hand Carried (MMF)	5.12.1980						
08-1875-39-3	GPE Teo Ltd.	Hand carried to APC by DG	8.10.1979	12.10.1979	18.10.'79				By Courier
Amendment 2	GPE Teo Ltd.	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	31.01.1980	1.02.'80				

A.P.C.

SELLER

PURCHASE ORDER STATUS REPORT

Page 11 of 13

ATTACHMENT NO. 5.1

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER	DATE COUNTER- SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
08-1875-40-6	Worthington-Simpson Ltd.	3.5.1979	9.5.1979	18.5.1979	29.6.1979				
08-1875-58-2	Ward Brothers (Sher- burn) Ltd.	9.7.1979	25.7.1979	8.8.1979	23.8.1979				
Amendment 2	Ward Brothers.	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80	25.01.1980	28.01.1980				Mailed to APC
Amendment 3	Ward Brothers	5.11.1980 Courier	* 12.1.1981 ** 13.1.1981	2.2.1981	3.2.1981				
08-1875-64-15	Foxboro-Yoxall Ltd.	22.6.1979	(1) 25.7.1979 (2) 20.8.1979	21.9.1979	21.9.1979				
08-1875-64-15 Amendment 2	Foxboro-Yoxall Ltd.,	14.11.80 Courier	* 23.11.1980 **25.11.1980 Hand Carried	1.12.1980	1.12.1980 Courier				

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* = A.P.C.
 ** = SELLER

PURCHASE ORDER STATUS REPORT

ATTACHMENT NO. 571

PURCHASE ORDER NO.	NAME OF SELLER	DATE P.O. SENT TO A.P.C. FOR SIGNING	DATE SIGNED P.O. RET'D FROM A.P.C. & ISSUED TO SELLER**	DATE COUNTER-SIGNED COPY OF P.O. REC'D FROM SELLER	SIGNED COPY OF P.O. SENT TO A.P.C.	GUARANTEE'S			REMARKS
						PERFORMANCE GUARANTEE FOR 10%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
8-1875-64-45	Fisher Controls Ltd.	9.7.1979	25.7.1979	2.01.1980					
Amendment 3	Fisher Controls	By Courier 13.11.1979	* 4.12.1979 Courier 4.12.79		2.01.'80 Courier				
Amendment 4	Fisher Controls	Signed in Dublin Office 11.01.'80	** mailed 16.1.'80						
8-1875-65-4	Westinghouse Electric	By Courier 13.11.1979	* 4.12.1979 Courier 5.12.1979	10.1.1980	11.1.1980				
8-1875-65-4 Amendment 2	Westinghouse Electric	Signed in Dublin Office 10.1.1980	Signed in Dublin Office 10.1.80 **	10.1.1980	11.1.1980				
Amendment 3	Westinghouse Electric	By Courier 27.3.1980	* 9.4.1980 ** 11.4.1980						
Amendment 4	Westinghouse Electric	By Courier 26.9.1980	* 13.10.1980 **14.10.1980 Courier						
Amendment 5	Westinghouse Electric	25.11.1980 Courier	* 8.12.1980 ** 12.12.1980						

51

* = A.P.C.
 ** = SELLER

CHASE ORDER STATUS REPORT

ATTACHMENT NO. 5.1

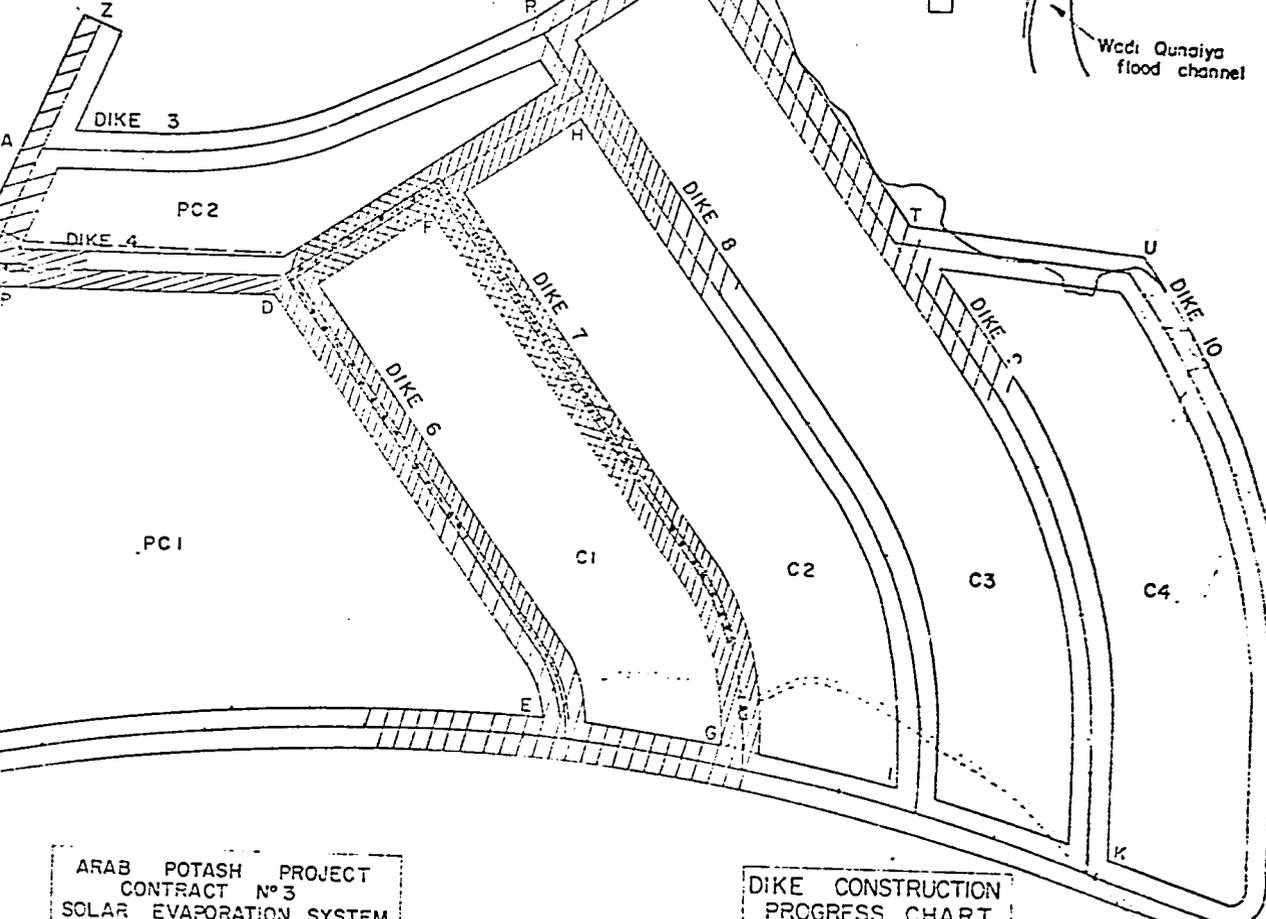
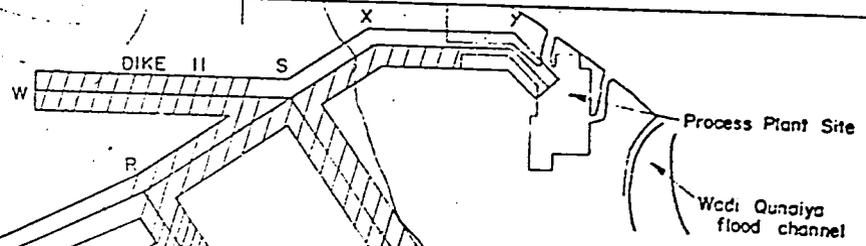
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						PERFORMANCE GUARANTEE FOR 15%	BANK GUARANTEE FOR 15%	BANK GUARANTEE FOR 25%	
06-1875-23-3	Krebs Engineers Int	30.4.'80 by Courier	* 14.5.1980 ** 15.5.1980 By Courier	27.5.1980	28.6.1980				
06-1875-64-44	Telectron Instrumentation Systems Ltd.	9.5.1980 Courier.	* 23rd. May 1980 ** 29th. May 1980	17th. June '80	18th. June 80				

5

Attachment 5.2

Dike Construction

Wadi Hudeira
flood channel

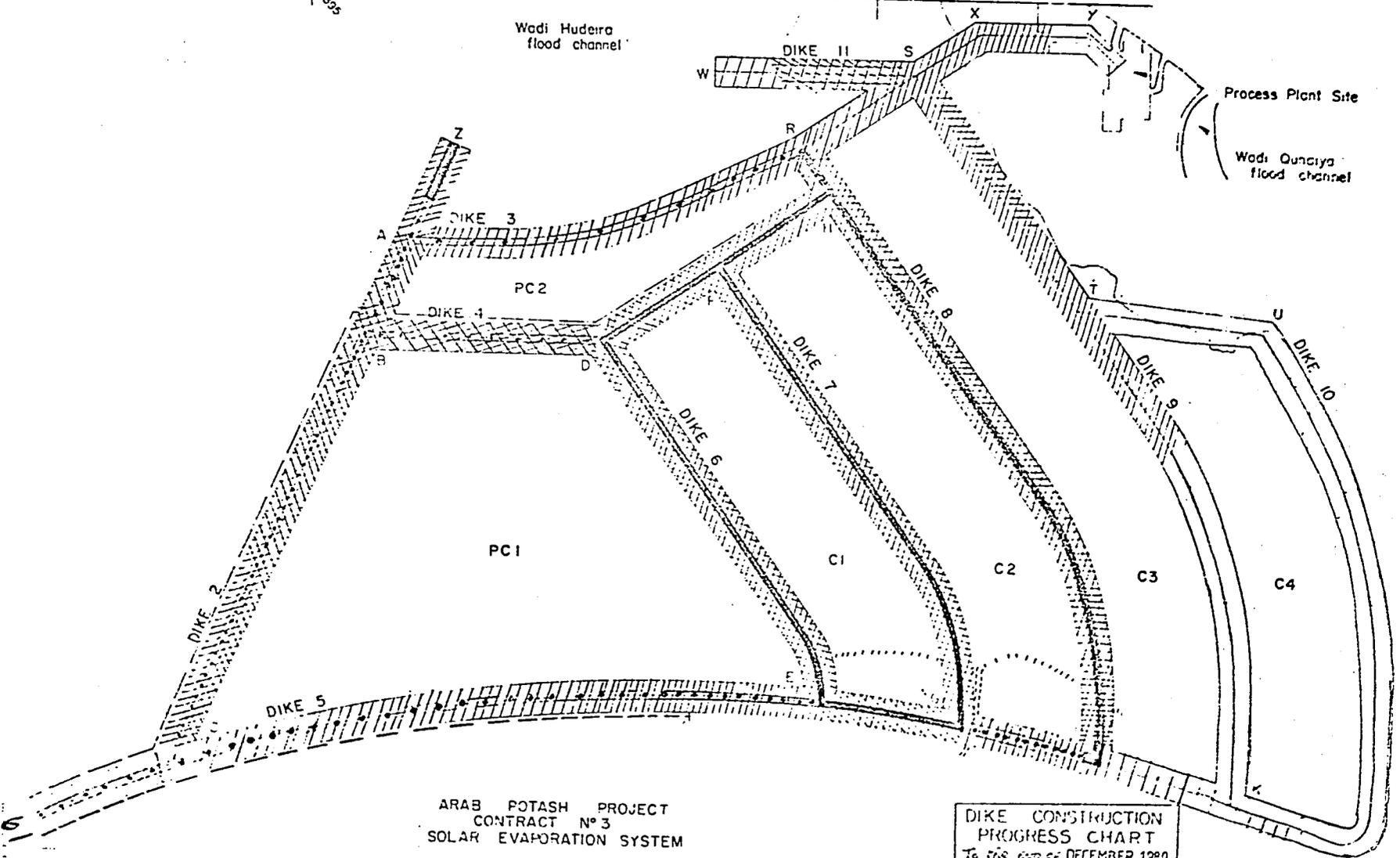
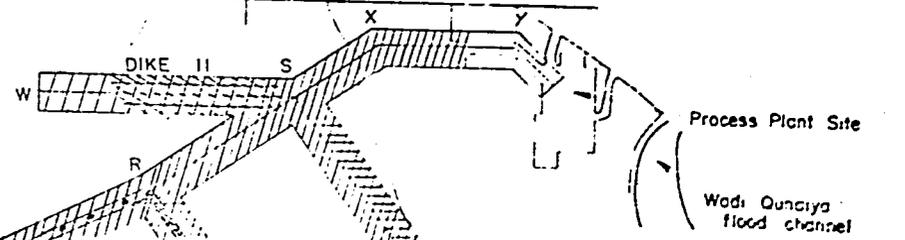


ARAB POTASH PROJECT
 CONTRACT N° 3
 SOLAR EVAPORATION SYSTEM

DIKE CONSTRUCTION
 PROGRESS CHART
 To the end of January 1980

04

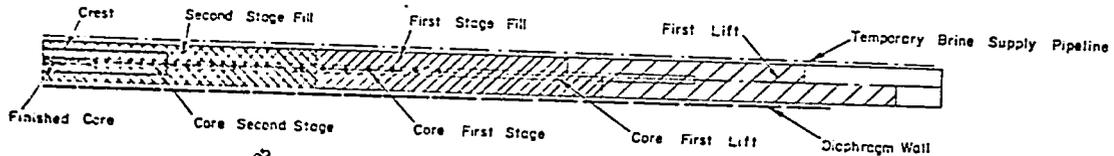
Wadi Hudera
flood channel



ARAB POTASH PROJECT
 CONTRACT N° 3
 SOLAR EVAPORATION SYSTEM

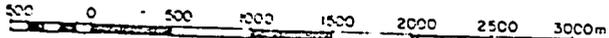
DIKE CONSTRUCTION
 PROGRESS CHART
 To the end of DECEMBER 1990

LEGEND

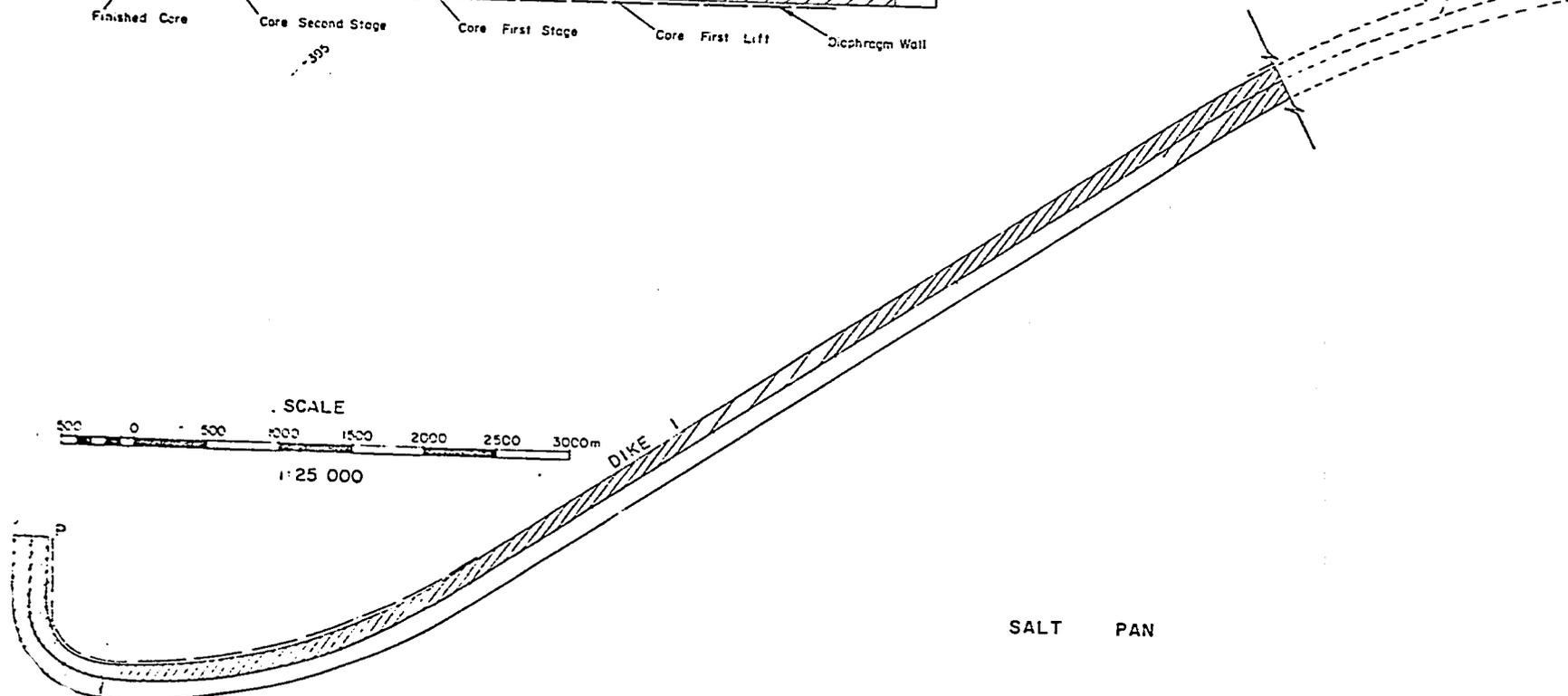


-500

SCALE



1:25 000



SALT PAN

To the end of January 1980

69

Attachment 5.3

Drawing List

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION ARCHITECTURAL

FOR ARAB POTASH CO. LTD.

PROJECT NO 08-1875

DATE 31-12-60

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
		START DATE	LAYOUT		DESIGN						CHECK		FINISH DATE	NO	DATE				
			10	20	30	40	50	60	70	80	90	100							
	ADMINISTRATION BUILDING																		
AD-100	Plans: Basement & First Floor	2/2/57												2/5/60	1	2/5/60	81	81	ISS FOR CONSTRUCTION
AD-101	Plans: Second & Third Floor	2/2/57												2/5/60	1	2/11/60	84	84	ISS FOR CONSTRUCTION
AD-102	Plans: Second & Third Floor Exp. (T)	2/2/57															15		Void
AD-103	Plans: Fourth & Fifth Floor Exp. (O)	2/2/57															15		Void
AD-104	Roof Plan East & West Elevation	2/2/57												2/5/60	0	2/5/60	18	18	ISS FOR CONSTRUCTION
AD-105	E-W Section & North Elevation	2/2/57												2/5/60	0	2/5/60	18	18	ISS FOR CONSTRUCTION
AD-106	N-S Sect's & South Elevation	2/2/57												2/5/60	0	2/5/60	18	18	ISS FOR CONSTRUCTION
AD-107	General Arr. Plan, Sections Elevation	2/2/57												2/5/60	0	2/5/60	77	77	ISS FOR CONSTRUCTION
AD-108	Theatre Plan & Section	2/2/57												2/5/60	1	2/5/60	30	30	ISS FOR CONSTRUCTION
AD-109	Basement Plan & Section	2/2/57												2/5/60	1	2/5/60	17	17	ISS FOR CONSTRUCTION
AD-110	Basement & 1st Fl. Furniture Layout	2/2/57												2/5/60	1	"	19	19	ISS FOR CONSTRUCTION
AD-111	2nd & 3rd Fl. Furniture Layout	2/2/57												2/5/60	1	2/11/60	19	19	ISS FOR CONSTRUCTION
AD-112	Perimeter Wall & Internal Well Sections	2/2/57												2/5/60	1	"	20	20	ISS FOR CONSTRUCTION
AD-113	Lobby Details 1	2/2/57												2/5/60	2	"	15	15	ISS FOR CONSTRUCTION
AD-114	Window Details	2/2/57												2/5/60	1	"	20	20	ISS FOR CONSTRUCTION
AD-115	Lobby Details 2	2/2/57												2/5/60	2	"	18	18	ISS FOR CONSTRUCTION
AD-116	Details: Stairs/Balustrade:Offices	2/2/57												2/5/60	1	30/11/60	21	21	ISS FOR CONSTRUCTION
AD-117	Details: Stairs/Balustrade:Theatre	2/2/57												2/5/60	0	2/5/60	21	21	ISS FOR CONSTRUCTION
AD-118	Lift Details	2/2/57												2/5/60	2	2/11/60	18	21	ISS FOR CONSTRUCTION
AD-119	Toilet Details:Offices 1st & 2nd Floor	2/2/57												2/5/60	0	2/5/60	21	21	ISS FOR CONSTRUCTION
AD-120	Details of Vanitory Units	2/2/57												2/5/60	0	2/5/60	18	21	ISS FOR CONSTRUCTION
AD-121	Toilets Details: 3rd Floor Suite & Private	2/2/57												2/5/60	0	2/5/60	25	21	ISS FOR CONSTRUCTION

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION ARCHITECTURAL

FOR ARAB POTASH CO. LTD.
 PROJECT NO 08-1875 DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS		
		START DATE	LAYOUT			DESIGN					CHECK		FINISH DATE	NO				DATE	
			10	20	30	40	50	60	70	80	90	100							
	CAFETERIA																		
AD-150	Plan, Section, Elevations	24/7/77												0	1/10/78	54	54	ISSUED FOR CONSTRUCTION	
AD-151	Roof Plan, Reflected Ceiling Plan/ Section/Elevation	9/8/78												0	1/10/78	29	29	ISSUED FOR CONSTRUCTION	
AD-155	Detail of Style "B" Shipping Crates	15/11/77												0	15/11/77	2	2	ISSUED FOR CONSTR	
	TYRE RE-CAP BUILDING																		
AD-160	Plans, Section, Elevations	27/10/78												0	1/10/79	16	16	ISSUED FOR CONSTRUCTION	
	PANS OPERATIONS BUILDING																		
AD-170	Plan, Section, Elevations	21/11/78												0	1/11/79	15	15	ISSUED FOR CONSTRUCTION	
	33KV SWITCH ROOM																		
AD-175	Plans, Sections, Elevations	21/8/78												1	18/7/80	24	24	ISSUED FOR CONSTRUCTION	
	PRODUCT STORAGE BUILDING																		
AD-280	Plan, Sections, Elevations	13/6/78												B		16		VOID	
AD-281	Hopper Pit & Lean To Section & Elevations	14/6/78												B		19		VOID	

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PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION ARCHITECTURAL

PROJECT NO 08-1875

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		START DATE	LAYOUT			DESIGN					CHECK			NO.				DATE	
			10	20	30	40	50	60	70	80	90	100	FINISH DATE						
	PROCESS CONTROL BUILDING																		
AD-180	Plan, Section, Elevations	14/7/78													0	11/10/78	34	34	ISSUED FOR CONSTRUCTION
AD-181	Roof Plan, Reflected Ceiling Plan	14/7/78													0	11/10/78	14	14	ISSUED FOR CONSTRUCTION
	TRUCK SERVICE STATION																		
AD-190	Plan, Section, Elevations	22/10/78													0	11/10/78	16	16	ISSUED FOR CONSTRUCTION
	MAINTENANCE BUILDING																		
AD-200	Floor Plan	21/7/78													1	22/8/78	62	62	ISSUED FOR CONSTRUCTION
AD-201	Roof Plan	7/8/78													1	20/8/78	17	17	REVISED FOR LOCATION OF DEFS
AD-202	Elevations	22/7/78													2	22/8/78	17	17	REVISED FOR LOCATION OF DEFS
AD-203	Sections	14/7/78													0	6/7/78	17	17	ISSUED FOR CONSTRUCTION
AD-204	Sections	21/7/78													0	9/7/78	17	17	ISSUED FOR CONSTRUCTION
AD-205	Receipt Dock/Warehouse/Plan	14/5/78													0	11/10/78	18	18	ISSUED FOR CONSTRUCTION
AD-206	Central Offices/Maintenance Area Office Block Plan F/FL.	21/11/78													1	22/8/78	16	16	ISSUED FOR CONSTRUCTION
AD-207	Central Offices/Maintenance Area Office Block Plan 2nd/FL.	21/11/78													0	11/10/78	18	18	ISSUED FOR CONSTRUCTION
AD-208	Central Offices 3rd/Fl. Plan	21/11/78													0	11/10/78	18	18	ISSUED FOR CONSTRUCTION
AD-209	Part Plan Maintenance Wareshops	23/8/78													0	11/10/78	22	22	ISSUED FOR CONSTRUCTION
AD-210	Part Plan : Mobile Equip. Repair Area	14/9/78													0	11/10/78	19	19	ISSUED FOR CONSTRUCTION
AD-211	Facilities Annex Plans	4/12/78													0	11/10/78	19	19	ISSUED FOR CONSTRUCTION
AD-212	Wall Sections, Openings, Cills, Parapets	13/5/78													1	24/10/78	19	19	ISSUED FOR CONSTRUCTION
AD-213	Wall Sections, Openings, Cills, Parapets	29/5/78													1	24/10/78	19	19	ISSUED FOR CONSTRUCTION

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PROJECT ARAB POTASH
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FOR ARAB POTASH CO. LTD.
 PROJECT NO. 08-1875 DATE 31-12-80

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		START DATE	LAYOUT			DESIGN					CHECK			FINISH DATE				NO	DATE	
			10	20	30	40	50	60	70	80	90	100								
AD-246	FIRE AND AMBULANCE STATION Plans, Sections, Elevations	11/9/78														0	11/12/78	22	22	ISSUED FOR CONSTRUCTION
AD-260	SWITCHROOM NO. 2 Plan, Section, Elevations	2/9/78														0	11/12/78	16	16	ISSUED FOR CONSTRUCTION
CD.195	DETAILS OF SIGN	2/16/78														0	11/12/78			ISSUED FOR CONSTRUCTION
AD 270	DIESEL GENERATOR BUILDING PLANS, SECTIONS & ELEVATIONS	2/10/78														0	11/12/78			ISSUED FOR CONSTRUCTION
AD 280	DRYER CONTROL ROOM	12/8/80														0	12/8/80			ISSUED FOR CONSTRUCTION

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JACOBS ENGINEERING (C) JACCO INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION CIVIL

FOR ARAB POTASH CO. LTD.

PROJECT NO. 08-1875

DATE 31/12/80

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		START DATE	LAYOUT			DESIGN				CHECK		FINISH DATE	NO.	DATE					
			10	20	30	40	50	60	70	80	90				100				
CD-150	Vicinity Map	3/78												2/80	0	12/80	23	23	ISSUED FOR CONSTR
CD-151	Plan of Works	5/78												2/80	0	12/80	23	23	
CD-152	General Plan of Plant Area	8/78												2/80	0	12/80	23	23	
CD-153	General Setting Out Plan	8/78												2/80	0	12/80	23	23	
CD-154	Refinery Site Plan	8/78												2/80	0	12/80	15	15	
CD-155	Refinery Plan - Horizontal Control & Street Layouts	8/78												2/80	0	12/80	23	23	
CD-156	Refinery Plan - Vertical Control & Grading Plan	8/78												2/80	0	12/80	25	25	
CD-157	Refinery Area Sections	5/78												2/80	1	8/80	27	27	
CD-158	Detail Plan - Area A	8/78												2/80	1	8/80	24	24	
CD-159	Detail Plan - Area B	8/78												2/80	1	8/80	26	26	
CD-160	Detail Plan - Area C	8/78												2/80	2	11/9/80	33	33	
CD-161	Detail Plan - Area D	5/78												2/80	0	12/80	25	25	
CD-162	Detail Plan - Area E	8/78												2/80	0	12/80	26	26	
CD-163	Road Profiles	8/78												2/80	0	12/80	21	21	
CD-164	Road Sections & Details	1/79												2/80	0	12/80	19	19	
CD-165	Site Plan - Shop Area	10/78												2/80	3	22/9/80	23	23	
CD-166	Site Plan - Process Area	12/78												2/80	3	10/9/80	23	23	
CD-167	Site Plan - Admin. Area, Misc. Details	12/78												2/80	2	31/7/80	26	26	
CD-168	Street Details - Refinery Area	7/78												2/80	0	12/80	21	21	
CD-169	Street Details - Refinery Area	7/78												2/80	0	12/80	24	24	
CD-170	Grading & Paving Details - Refinery Area	9/78												2/80	0	12/80	16	16	
CD-171	Fencing Details	4/79												2/80	0	12/80	25	25	
CD-172	Lagoon and Reservoir Details	3/79												2/80	1	14/9/80	23	23	
CD-173	Lagoon and Reservoir Details	3/79												2/80	0	12/80	22	21	

JACOBS ENGINEERING & JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION CIVIL

PROJECT NO. 08-1875

DATE 31/12/80

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		START DATE	LAYOUT			DESIGN					CHECK		FINISH DATE	NO.				DATE		
			10	20	30	40	50	60	70	80	90	100								
CD-174	Underground Utilities - Composit Plan	7	75												1	18	9.80	30	30	ISSUED FOR CONSTRUCTION
CD-175	Utilities Plan - Area A Sewer - Storm Drain - Brine Return	6	72												2	17	7.80	21	21	
CD-176	Utilities Plan - Area B Sewer - Storm Drain - Brine Return	6	72												3	21	1.80	22	22	
CD-177	Utilities Plan - Area C Sewer - Storm Drain - Brine Return	6	78												3	21	12.80	24	24	
CD-178	Sewage Lift Station	3	79												0	12	2.80	21	21	
CD-179	Profiles - Sanitary Sewers	7	75												0	12	2.80	23	23	
CD-180	Profiles - Brine Return Line	11	78												0	12	2.80	13	13	
CD-181	Profiles - Storm Drain	11	75												0	12	2.80	17	17	
CD-182	Profiles - Storm Drain	11	75												2	25	6.80	17	17	
CD-183	Profiles - Storm Drain	11	73												0	12	5.80	16	16	
CD-184	Underground Utilities - Details	3	79												1	15	7.80	20	20	
CD-185	Underground Utilities - Details	3	79												0	12	2.80	18	18	
CD-186	Underground Utilities - Details	3	79												0	12	2.80	25	25	
CD-187	Tailings Disposal Plan	4	79												0	12	2.80	18	18	
CD-188	Street Signing and Striping	3	79												0	12	2.80	20	20	
CD-189	Miscellaneous Details - Refinery	3	79												2	11	8.80	20	20	
CD-190	Miscellaneous Details - Solar Pans	7	79												0	12	2.80	20	20	
CD-191	Miscellaneous Details - Solar Pans	7	79												0	12	2.80	15	15	
CD-192	Employer's Land	3	79												0	12	2.80	15	14	
CD-193	Construction Materials - Sand and Gravel	3	79												1	12	2.80	4	4	
CD-194	Meteorological Information	5	75												0	12	2.80	10	10	
CD-195	Details of Company Sign	7	79												0	10	7.79	20	19	

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION ELECTRICAL

FOR ARAB POTASH CO. LTD.

PROJECT NO. 06-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % CDMPL	REMARKS	
		START DATE	LAYOUT			DESIGN					CHECK		FINISH DATE	NO.	DATE				
			10	20	30	40	50	60	70	80	90	100							
	UTILITIES & POWER DISTRIBUTION																		
EE-100	Main Single Line Diagram	5-2-78																	
ED-101	Proposed 3,3KV " " " MCC 'C' Power St.	10-3-78												0	9-10-79	100	90	ISSUED FOR PURCHASE	
ED-102	3,3KV " " " MCC 'D' Process Sw. Rm.2	10-3-78												1	27-7-80	25	25	ISSUED FOR CONST. PART OF STA PWR. PL. P.O.	
ED-103	" " " " " MCC 'E' Process Sw. Rm.1	10-3-78												2	11-7-80	30	30	ISSUED FOR CONST.	
ED-104	Proposed 380V " " " MCC '1-1' Sh-1 Power Station	7-3-78												2	11-7-80	30	30		
ED-105	" " " " " " Sh-2	11-3-78												2	11-7-80	25	25	ISSUED FOR CONST. PART OF STA PWR. PL. P.O.	
ED-106	" " " " " MCC '2-1' Sh-1 Power Station	17-3-78												2	17-7-80	25	25		
ED-107	" " " " " " Sh-2	7-3-78												2	17-7-80	25	25		
ED-108	380V " " " " " MCC's '3-1' & '4-1' Maint. Bld. Sh-1	7-11-78												1	13-11-80	13	13	ISSUED FOR CONST.	
ED-109	" " " " " " Sh-2	7-11-78												0	1-12-79	13	13		
ED-110	" " " " " " Sh-3	7-11-78												2	13-11-80	13	13	ISSUED FOR CONST.	
ED-111	" " " " " " Sh-2																	Void	
ED-112	" " " " " " MCC '5-1' Sn-1 Process Sw. Rm.2	17-3-78												1	10-7-80	25	25	ISSUED FOR CONST.	
ED-113	" " " " " " " Sh-2	17-3-78												2	18-7-80	25	25		
ED-114	" " " " " " MCC '6-1' Sn-1 Process Sw. Rm.2	17-3-78												2	18-7-80	25	25		
ED-115	" " " " " " " Sh-2	17-3-78												2	18-7-80	25	25		
ED-116	" " " " " " MCC '7-1' Sh-1																	Void	
ED-117	" " " " " " " Sh-2																	Void	
ED-118	" " " " " " MCC '8-1' Sn-1 Process Sw. Rm.1	17-3-78												1	10-3-80	25	25	ISSUED FOR CONST.	
ED-119	" " " " " " " Sh-2	17-3-78												2	18-7-80	25	25		
ED-120	" " " " " " MCC '9-1' Sn-1 Process Sw. Rm.1	17-3-78												2	11-7-80	25	25		
ED-121	" " " " " " " Sh-2	17-3-78												2	11-7-80	25	25		
ED-122	" " " " " " MCC '9-1-1' Sh-1																	Void	

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PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION ELECTRICAL

PROJECT NO Q8-1875

DATE 31-12-80

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		START DATE	LAYOUT			DESIGN					CHECK		FINISH DATE	NO.				DATE	
			10	20	30	40	50	60	70	80	90	100							
	UTILITIES & POWER DISTRIBUTION - contd.																		
ED-123	380V Single Line Diagram MCC '10-1' Sh-1	7-3-78													2	18-78	25	25	ISSUED FOR CONST.
ED-124	" " " " " " Sh-2	7-3-78												2	18-78	25	25		
ED-125	380V Single Line Diagram Admin. Bld.	7-11-78												1	17-8-80	15	15	ISSUED FOR CONST.	
ED-126	Admin. Bld. HVAC Panel Power S.L.D.	5-1-78												0	13-6-80	15	15	ISSUED FOR CONST.	
ED-127	Basic Electrical Main S.L.D.	16-10-78												0	2-1-80	25	24	ISSUED FOR CONST.	
ED-128	33 KV Switchgear, Elev. & Nameplate Schd.	25-1-78												0	9-10-79	20	20	ISSUED FOR PURCHASE	
ED-129	3, 3KV MCC Layouts, 'C', 'D' & 'E' Power Station - Process Sw. Rm's. No. 1 & No. 2 - Proposed	10-3-78												C	5-1-79	20	17	VOID SUPERSEDED BY VENDOR	
ED-130	380V MCC Layouts, '1' & '2' Pwr. Stat.	10-3-78												C	6-1-79	20	16		
ED-131	380V " " '1' & '2' Maint. Bld. Admin. Bld.	10-3-78												C	6-1-79	25	21		
ED-132	" " " '5-1' & '6-1' Process	9-7-78												C	7-1-79	25	20		
ED-133	" " " '8-1' & '10-1' Sw. Rm. 1	7-7-78												C	5-1-79	25	20		
ED-134	Not used																		
ED-135	33 KV Switchroom, Equip. Layout & Details	21-7-78												1	24-7-80	25	25	ISSUED FOR CONST.	
ED-136	Arrangement of cable racks on main pipe supports. Sh-1	11-10-79												0	30-1-80	10	10	ISSUED FOR CONST.	
ED-137	Arrangement of cable rack on main pipe supports. Sh-2	11-10-79												0	30-1-80	10	10		
ED-138	Maintenance Bld. Sub-Station Layout	11-4-79												0	11-7-80	20	20		
ED-139	Process Sub-Station No. 1 (Process Control Building)	15-4-78												0	18-7-80	30	30		
ED-140	Process Sub-Station No. 2	15-4-78												0	11-7-80	30	30		
ED-141	Process Sub-Station No. 3 (Shipping and Storage)	11-1-78																	
ED-142	Administration Building	6-11-78														25	5	VOID	
ED-143	Telephone System Cable Block Diagram	7-3-79												0	25-6-80	25	25	ISSUED FOR CONST.	
ED-144	Fire Alarm System Cable Block Diagram	29-1-79												1	8-8-80	10	10	ISSUED FOR CONST.	
														0	15-1-80	10	9		

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			10	20	30	40	50	60	70	80					90			
	UTILITIES & POWER DISTRIBUTION - contd.																	
ED-145	Not used																	
ED-146	Not used																	
ED-147	33KV Switchroom Elev. & Details																	
ED-148	Not used																	Void
ED-149	Process Sub-station No. 1 (Process Control Building) Elev. & Details	10-3-78												0	30-6-80	13	13	ISSUED FOR CONST.
ED-150	Process Sub-Station No. 2 " "	10-3-78												0	30-6-80	13	13	
ED-151	Maint. Bld. Sub-Station " "	11-3-78												0	11-7-80	13	13	
ED-152	Process Sub-Station No. 3 (Shipping and Storage) " "																	
ED-153	" " Btg. & Pwr. Layout																	VOID
ED-154	Process Area Power-Details of Cable Groups	3-10-79																VOID
ED-155	Main Transformer Compound Layout Sh-1	24-7-78												0	26-5-80	10	10	ISSUED FOR CONST.
ED-156	" " " " Sh-2	24-7-78												0	17-6-80	25	25	ISSUED FOR CONST.
ED-157	H.T. Cable Routes & Plant Earthing Network	25-4-78												0	26-6-80	25	25	
ED-158	Site Roadway Cable Crossing Layout & Dets.	25-4-78												0	15-4-80	15	15	ISSUED FOR CONST.
ED-159	Site Roadway & Security Lighting Layout & Cable Routes	25-4-78												1	4-7-80	15	15	
ED-160	Site Sub-Main Telephone & Fire Alarm Cable Routes	25-4-78												0	15-4-80	30	30	
ED-161	Not used	23-1-79												0	15-4-80	13	13	
ED-162	" "																	
ED-163	" "																	
ED-176	Fuel Oil Storage-Lighting & Power Layout	17-4-78																
ED-177	Not Used													0	19-5-80	25	25	ISSUED FOR CONST.
ED-178	Fuel Oil Storage Instrumentation Layout	26-11-78												0	30-4-80	13	13	ISSUED FOR CONST.
ED-179	Not Used																	

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			10	20	30	40	50	60	70	80	90	100							
ED-180	UTILITIES & POWER DISTRIBUTION - contd.. Cooling Tower & Fire Water Pump Station. LTG & Power Layout	4-11-78													0	19-5-80	30	30	ISSUED FOR CONST.
ED-181	Not Used																		
ED-182	Cooling Tower & Fire Water Pump Station. Instrumentation Layout	4-11-78															23	5	VOID
ED-183	Not Used																		
ED-184	Misc. Details, Fuel Oil Storage, Cooling Tower & Fire Water Pump St.	17-11-78													0	19-5-80	25	25	
ED-185	Not Used																		
ED-186	Not Used																		
EB-189	Inst. Conn. Diagrams Fuel Oil Storage, Cooling Tower & Pump St. Sh-1-4	11-4-79													0	30-1-80	25	24	ISSUED FOR CONST.
ED-191	Not Used																		
ED-194	3,3KV Single Line Diagram Process Sw.Rm.2 MCC 'F'	1-3-79													1	10-3-80	10	10	ISSUED FOR CONST.
ED-195	Not Used																		
ED-196	3,3KV Single Line Diagram Process Sw.Rm.3 MCC 'H'																		
ED-197	380V Single Line Diagram Process Sw.Rm.3 Sh-1, MCC 'I2-1'																		VOID
ED-198	" " " " " Sh-2																		VOID
ED-199	3,3KV & 380V MCC Layouts Process Sw.Rm.2 'F' 'H' & 'I2-1' & Process Sw.Rm.3	2-4-79																	VOID
															A	5-4-79	40	5	SUPERSEDED BY VENDOR DWG
	PROCESS PLANT																		
ED-200	Carnallite Structure Pwr.Lay. Sh-1	5-6-78													0	15-4-80	20	20	ISSUED FOR CONST.
ED-201	Carnallite Structure Pwr.Lay. Sh-2	5-11-78													0	15-4-80	20	20	
ED-202	Carnallite Structure Ltg.Lay. Sh-1	5-11-78													0	15-1-80	20	20	

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PROJECT NO 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	START DATE	% COMPLETE										FINISH DATE	REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
			LAYOUT			DESIGN				CHECK				NO	DATE				
			10	20	30	40	50	60	70	80	90	100							
	PROCESS PLANT - contd..																		
ED-203	Carnallite Structure Ltd. Lay. Sheet-2	6-11-78												0	15-1-80	20	20	ISSUED FOR CONST.	
ED-204	Carnallite Structure Inst. Lay. Sheet-1	6-11-78												0	15-1-80	15	15		
ED-205	Carnallite Structure Inst. Lay. Sheet-2	6-11-78												0	15-1-80	15	15		
ED-206	Sylvinite Structure Pwr. Lay. Sheet-1	6-11-78												1	27-7-80	25	25		
ED-207	Sylvinite Structure Pwr. Lay. Sheet-2	6-11-78												1	27-7-80	25	25		
ED-208	Sylvinite Structure Ltq. Lay. Sheet-1	6-11-78												1	25-7-80	25	25		
ED-209	Sylvinite Structure Ltq. Lay. Sheet-2	6-11-78												1	30-7-80	25	25		
ED-210	Sylvinite Structure Inst. Lay. Sheet-1	6-11-78												1	5-8-80	20	20		
ED-211	Sylvinite Structure Inst. Lay. Sheet-2	6-11-78												1	5-8-80	20	20		
ED-212	Product Dewt. Structure Pwr. Lay. Sheet-1	6-11-78												0	15-1-80	25	25		
ED-213	Product Dewt. Structure Pwr. Lay. Sheet-2	6-11-78												1	30-7-80	25	25		
ED-214	Product Dewt. Structure Ltq. Lay. Sheet-1	6-11-78												0	15-1-80	25	25		
ED-215	Product Dewt. Structure Ltq. Lay. Sheet-2	6-11-78												1	27-7-80	25	25		
ED-216	Product Dewt. Structure Inst. Lay. Sheet-1	6-11-78												1	5-8-80	20	20		
ED-217	Product Dewt. Structure Inst. Lay. Sheet-2	6-11-78												1	6-8-80	20	20		
ED-218	Dryer Area - Power Layout	4-1-79												0	15-1-80	30	30		
ED-219	Dryer Area - Lighting Layout	5-11-79												0	11-1-80	20	20		
ED-220	Dryer Area - Inst. Layout	1-1-79												1	6-8-80	25	25		
ED-221	Misc. Details Process Structures Sheet-1	1-3-79												A	2-1-79	5	3	VOID	
ED-222	Misc. Details Sheet 1.	1-3-79												0	26-6-80	5	5	ISSUED FOR CONST	
ED-223	Misc. Details Sheet 2.	1-3-79												0	11-6-80	5	5		
ED-224	Carnallite Surge Tanks Area-Sheet-1 ^{Pwr. Lay.}	25-5-78												0	30-1-80	20	20	ISSUED FOR CONST.	

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		START DATE	LAYOUT		DESIGN						CHECK			FINISH DATE				NO	DATE
			10	20	30	40	50	60	70	80	90	100							
	PROCESS PLANT -contd...																		
ED-225	Carnallite Surge Tanks Area Pwr. Lay. Sheet-2	6-11-78																	
ED-226	Carnallite Surge Tanks Area Ltg. Lay. Sheet-1	6-11-78												0	30/80	13	13	ISSUED FOR CONST.	
ED-227	Carnallite Surge Tanks Area Ltg. Lay. Sheet-2	6-11-78																	
ED-228	Carnallite Surge Tanks Area Inst. Lay. Sheet-1	6-11-78												0	30/80	10	10		
ED-229	Carnallite Surge Tanks Area Inst. Lay. Sheet-2	6-11-78																	
ED-230	Crystallizers Area Power Layout Sheet-1	6-11-78																	
ED-231	Crystallizers Area Power Layout Sheet-2	6-11-78												0	30/80	30	30		
ED-232	Crystallizers Area Lightning Layout Sheet-1	6-11-78																	
ED-233	Crystallizers Area Lighting Layout Sh-2	6-11-78												0	30/80	25	25		
ED-234	Crystallizers Area Inst. Layout Sheet-1	6-11-78																	
ED-235	Crystallizers Area Inst. Layout Sheet-2	6-11-78																	
ED-236	Carnallite Thickener Area Pwr. Layout	25-5-78												0	30/80	20	20		
ED-237	Carnallite Thickener Area Ltg. Layout	6-11-78												0	30/80	18	18		
ED-238	Carnallite Thickener Area Inst. Layout	6-11-78												0	30/80	18	18		
ED-239	Sylvinite Surge Tanks & Thick. Pwr. Layout	6-11-78												0	30/80	25	25		
ED-240	Sylvinite Surge Tanks & Thick. Ltg. Layout	6-11-78												0	30/80	20	20		
ED-241	Sylvinite Surge Tanks & Thick. Inst. Layout	6-11-78												0	30/80	18	18		
ED-242	Hot Thickener Area Pwr. Layout	6-11-78												0	22/80	25	25		
ED-243	Hot Thickener Area Ltg. Layout	6-11-78												0	15/78	20	20		
ED-244	Hot Thickener Area Inst. Layout	6-11-78												0	25/80	18	18		
ED-245	Carnallite Structure Pwr. Lay. Sheet-3	4-1-79												0	15/80	10	10	ISSUED FOR CONST.	
ED-246	Carnallite Structure Ltg. Lay. Sheet-3	4-1-79												0	15/80	10	10		

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			10	20	30	40	50	60	70	80	90	100								
	PROCESS PLANT - contd.																			
ED-247	Carnallite Structure Inst. Lay. Sheet-3	4-1-79														0	15-2-80	5	5	ISSUED FOR CONST.
ED-248	De-Composition Area-Power Layout	5-11-78														0	30-2-80	25	25	
ED-249	De-Composition Area-Lighting Layout	6-11-78														0	30-2-80	25	25	
ED-250	Electrical Layout Key Plan - Refinery	2-3-79														0	11-4-80	5	5	
ED-251	Maintenance Bld. Warehouse Power Layout	25-5-78														0	18-9-80	15	15	
ED-252	Maintenance Bld. Warehouse Racking	6-11-78																15	5	VOID
ED-253	Maintenance Bld. Workshop Grid 11-16 "	6-11-78														1	1-12-80	20	20	ISSUED FOR CONSTRUCTION
ED-254	Maintenance Bld. Workshop Grid 16-20 "	6-11-78														1	1-12-80	20	20	
ED-255	Maintenance Bld. Repair Area / Engine Rebuild Power Layout	6-11-78														1	1-12-80	15	15	
ED-256	Maintenance Bld. Central Office Area Power Layout	25-5-78														0	29-2-80	15	14	
ED-257	Maintenance Bld. Facilities Annex Power Layout	6-11-78														0	29-2-80	15	14	
ED-258	Maintenance Bld. Warehouse Lighting Layout	6-11-78														0	18-9-80	15	15	
ED-259	Maintenance Bld. Warehouse Racking - Lighting Layout	6-11-78																15	8	VOID
ED-260	Maintenance Bld. Workshop Grid 11-16 "	6-11-78														1	1-12-80	15	15	
ED-261	Maintenance Bld. Workshop Grid 16-20 "	6-11-78														0	29-2-80	15	15	
ED-262	Maintenance Bld. Repair Area & Engine Rebuild Lighting Layout	6-11-78														1	1-12-80	15	15	
ED-263	Maintenance Bld. Central Office Area Lighting Layout	6-11-78														0	29-2-80	23	23	
ED-264	Maintenance Bld. Facilities Annex Lighting Layout	6-11-78														0	29-2-80	15	15	
ED-265	Maintenance Bld. Misc. Details Sheet-1	19-4-79														0	29-2-80	10	10	
ED-266	Admin. Bldg. HVAC Plant Room Pwr Layout	1-3-79														0	27-6-80	5	5	ISSUED FOR CONST.
ED-279	Admin. Bldg. 1st Floor & Basement Power Layout	7-4-78														0	18-1-80	28	28	
ED-280	Admin. Bld. 1st Floor & Basement Ltg. Lay.	7-4-78														0	26-5-80	28	28	ISSUED FOR CONST.

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			10	20	30	40	50	60	70	80	90	100	FINISH DATE						
	PROCESS PLANT -contd..																		
ED-281	Admin. Bld. 2nd Floor Power Layout	17-4-78													0	17-4-80	28	28	ISSUED FOR CONST.
ED-282	Admin. Bld. 2nd Floor Ltg. Layout	17-4-78													0	26-5-80	28	28	ISSUED FOR CONST.
ED-283	Admin. Bld. 3rd. Flr. Power Layout	1-11-78													0	17-4-80	28	28	ISSUED FOR CONST.
ED-284	Admin. Bld. 3rd Flr. Ltg. Layout	1-11-78													0	26-5-80	28	28	ISSUED FOR CONST.
ED-285	Admin. Bld. Ltg. Cond. Layout 1st Floor	1-11-78													0	26-5-80	28	28	
ED-286	Admin. Bld. Ltg. Cond. Layout 2nd Floor	1-11-78													0	26-5-80	28	28	
ED-287	Admin. Bld. Ltg. Cond. Layout 3rd Floor	1-11-78													0	26-5-80	28	28	
EB-288	Inst. Conn. Diagrams, Carnallite Th. Tank Area-Sh. 1-1	11-12-78													0	30-4-80	10	9	ISSUED FOR CONST.
EB-289	Inst. Conn. Diagrams, Carnallite Surge Tank, Area-Sh 1-1	4-1-79													0	30-4-80	10	9	
EB-290	Inst. Conn. Diagrams, Carnallite Cent. Area Sh-1-13	11-12-78													0	15-4-80	30	28	
EB-291	Inst. Conn. Diagrams, Sylvinite Belt Filter Area Sh. 1-8	1-3-79													0	30-4-80	20	18	
EB-292	Inst. Conn. Diagrams, Sylvinite Surge & TH. Tank Area-Sh. 1-2	1-3-79													0	30-4-80	20	18	
EB-293	Inst. Conn. Diagrams, Cryst. Area-Sh. 1-19	1-1-79													0	31-3-80	30	28	ISSUED FOR CONST.
EB-294	Inst. Conn. Diagrams, Hot Th. Tank Area - Sheet 1-4	1-3-79													0	6-8-80	25	24	
EB-295	Inst. Conn. Diagrams, Prod. & Tail Cent. Area-Sh. 1-7	1-3-79													0	15-4-80	25	23	ISSUED FOR CONST.
EB-296	Inst. Conn. Diagrams, Area - Prod Dryer Sh. 1-5	11-12-78													0	11-4-80	10	9	
EB-297	Inst. Conn. Diagrams, Area - Decomp. Tank Sh. 1-1	1-3-79													0	30-4-80	5	4	
-EB-298	Inst. Conn. Diagrams, Shipping Sh. 1-10																25		VOID
ED-299	Inst. Block Cable Diaq. Process Area	22-1-78													1	8-8-80	20	20	ISSUED FOR CONST.

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			10	20	30	40	50	60	70	80	90	100	FINISH DATE						
ED-304	Product Storage Bld. Power Layout	5-6-78															30	3	VOID
ED-305	Carnallite Surge Tanks, Stairway & Platforms Lighting Elevation A-A	14-9-77													0	30-4-80	15	15	ISSUED FOR CONST.
ED-306	Granular Product Storage Bld. Power Lay.																38		VOID
ED-307	Product Storage Bld. Lighting Layout	5-6-78															30	21	VOID
ED-308	Granular Product Storage Bld. Ltg. Layout																38		VOID
ED-309	Shipping Area Power Layout Sh-1																25		VOID
ED-310	Shipping Area Power Layout Sh-2																25		VOID
ED-311	Shipping Area Lighting Layout Sh-1																25		VOID
ED-312	Shipping Area Lighting Layout Sh-2																25		VOID
ED-313	Shipping Area Inst. Layout Sh-1																20		VOID
ED-314	Shipping Area Inst. Layout Sh-2																20		VOID
ED-315	Not Used																		
ED-316	Not Used																		
ED-320	Type 'A' Schematic & Connection Diagram	4-7-78													2	21-7-80	15	14	ISSUED FOR PURCHASE
ED-321	Type 'B' Schematic & Connection Diagram	4-7-78													1	22-2-80	15	14	
ED-322	Type 'C' Schematic & Connection Diagram	4-7-78													2	21-7-80	15	14	
ED-323	Type 'D' Schematic & Connection Diagram	4-7-78													1	22-2-80	15	14	
ED-324	Type "E" Schematic & Connection Diagram	4-7-78													1	22-2-80	18	17	
ED-325	Type 'F' Schematic & Connection Diagram	4-7-78													A	30-11-78	18	14	VOID
ED-326	Type 'G' Schematic & Connection Diagram	4-7-78													1	22-2-80	18	17	
ED-327	Type 'H' Schematic & Connection Diagram	4-7-78													1	22-2-80	15	14	VOID
ED-328	Misc. Details Process Structures Sheet 2.	17-4-77													0	30-4-80	5	5	ISSUED FOR CONST.

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			10	20	30	40	50	60	70	80	90	100							
ED-329	Misc. Details Process Structures Sheet 3.	19-4-77													0	30-4-80	5	5	ISSUED FOR CONST.
ED-344	Type '1' Schematic & Connection Diagram	4-7-78													1	29-2-80	25	24	ISSUED FOR PURCHASE
ED-345	Type '2' Schematic & Connection Diagram	4-7-78													2	21-7-80	25	24	
ED-346	Type '3' Schematic & Connection Diagram	4-7-78													A	30-11-78	25	21	VOID
ED-347	Type '4' Schematic & Connection Diagram	4-7-78													A	29-11-78	25	21	VOID
ED-348	Type '5' Schematic & Connection Diagram	4-7-78													1	29-2-80	25	24	ISSUED FOR PURCHASE
ED-349	Type '6' Schematic & Connection Diagram	4-7-78													1	29-2-80	20	19	
ED-350	Type '7' Schematic & Connection Diagram Sht. 1	4-7-78													1	29-2-80	25	24	
ED-351	Type '7' Schematic & Connection Diagram Sht. 2	4-7-78													1	29-2-80	20	19	
ED-352	Type '7' Schematic & Connection Diagram Sht. 3	4-7-78													1	29-2-80	25	24	
ED-353	Type '7' Schematic & Connection Diagram Sht. 4	4-7-78													1	29-2-80	15	14	
ED-354	Type '8' Schematic & Connection Diagram	4-7-78													1	29-2-80	13	12	
ED-355	Type '9' Schematic & Connection Diagram	4-7-78													2	21-7-80	25	24	
ED-356	Type '10' Schematic & Connection Diagram	6-11-78													1	29-2-80	13	12	
ED-357	Type '11' Schematic & Connection Diagram	26-9-78													1	29-2-80	13	12	
ED-358	Type '12' Schematic & Connection Diagram Sht. 1	4-7-78													2	21-7-80	15	14	
ED-359	Type '12' Schematic & Connection Diagram Sht. 2	4-7-78													1	29-2-80	5	4	
ED-360	Type '13' Schematic & Connection Diagram																		VOID
ED-361	Type '13' Schematic & Connection Diagram																		VOID
ED-362	Type '13' Schematic & Connection Diagram																		VOID
ED-363	Type '13' Schematic & Connection Diagram																		VOID
ED-364	Type '13' Schematic & Connection Diagram																		VOID
ED-365	Type '13' Schematic & Connection Diagram																		VOID

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			10	20	30	40	50	60	70	80	90	100								
ED-366	Type '13' Schematic & Connection Diagram																			Void
ED-367	Type '13' Schematic & Connection Diagram																			Void
ED-368	Type '14' Schematic & Connection Diagram	6-11-78													1	29-2-80	13	12	ISSUED FOR PURCHASE ISSUED FOR CONST. PART OF 3-51 PWR. P.L.P.O.	
ED-369	Type '15' Schematic & Connection Diagram	6-11-78													0	2-1-80	13	12		
ED-370	Type '16' Schematic & Connection Diagram	6-11-78													1	29-2-80	13	12		
ED-371	Type '17' Schematic & Connection Diagram	6-11-78													1	29-2-80	13	12		
ED-372	Screening, Compaction, Shipping & Storage Plant, Schematic & Conn. Diag. Sh-1																			VOID
ED-373	" " " " Sh-2																			VOID
ED-374	" " " " Sh-3																			VOID
ED-375	" " " " Sh-4																			VOID
ED-376	" " " " Sh-5																			VOID
ED-377	" " " " Sh-6																			VOID
ED-378	" " " " Sh-7																			VOID
ED-379	" " " " Sh-8																			VOID
ED-380	" " " " Sh-9																			VOID
ED-381	" " " " Sh-10																			VOID
ED-382	Admin. Bld. HVAC Panel Control Sch. Sh-1	22-1-79														0	11-6-80	5	5	ISSUED FOR CONST
ED-383	" " " " " " Sh-2	22-1-79														0	11-6-80	5	5	↓
ED-384	Type '18' Schematic & Connection Diagram Sh-1	1-3-79														0	19-3-80	5	4	ISSUED FOR CONST.
ED-385	Type '19' " " " "	1-3-79														1	19-3-80	5	4	↓
ED-386	Type '20' " " " "	1-3-79														2	21-7-80	5	5	↓
ED-387	Type '21' " " " "	1-3-79														2	11-6-80	5	4	↓
ED-388	Type '22' Schematic & Connection Diagram	1-3-79														2	11-5-80	5	4	↓

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			10	20	30	40	50	60	70	80	90	100							
ED-389	Admin. Bld. HVAC Panel Conn. Diag. Sh-1	1-3-79													0	11-6-80	5	5	ISSUED FOR CONST.
ED-390	Admin. Bld. HVAC Panel Conn. Diag. Sh-2	1-3-79													0	12-6-80	5		↓
ED-391	Type 'J' Schematic & Connection Diagram	1-5-79													1	193-80	10	9	ISSUED FOR CONST.
ED-392	Type '23' Schematic & Connection Diagram	18-1-80													0	19-3-80	10	9	↓
ED-549	Primary Electrical Distribution	6-10-78													0	18-6-80	25	25	ISSUED FOR CONST.
ED-550	Pumping Station S1A and S1B	30-6-78													8	15-4-79	25	17	VOID
ED-551	Pumping Stations F1 and H2	30-6-78													8	10-6-79	25	17	VOID
ED-552	H.T. Distribution Route Dwg.	26-3-79													0	18-6-80	25	25	ISSUED FOR CONST.
ED-553	Carnallite pan area pumping station S1. Power lighting and Inst. layout.	4-1-79													0	18-6-80	20	20	↓
ED-554	Carnallite pan area pumping station H2 and F1 power lighting and Inst. layout	4-5-80													0	15-6-80	20	20	↓
ED-555	Pumping Station S1	1-5-79													A	11-5-79	20	3	VOID
ED-555	380 V & 3.3 KV MCC Single Line Diagram	1-5-79													A	11-5-79	20	3	VOID
EB-557	Carnallite Pan Area, pumping stations Instrument Conn. Diagrams Sh. 1-9	27-5-80													0	16-6-80	30	28	ISSUED FOR CONST.
ED-558	Carnallite Pan Area, pumping stations details.	5-11-78													0	23-6-80	25	25	↓
ED-559	Pumping Station F1 & H2 3,3KV MCC Single Line Diagram	1-5-79													1	193-80	10	10	ISSUED FOR PURCHASE
ED-600	Harvester Single Line Diagram	1-6-79													0	20-8-79	25	25	ISSUED FOR DESIGN
ED-610	Pumping Station F1 & H 2 380V MCC Single Line Diagram	20-9-77													2	18-6-80	10	10	ISSUED FOR CONST.
ED-611	Pumping Station S1 3.3kv MCC Single Line Diagram	1-5-79													2	26-6-80	10	10	
ED-612	Pumping Station S1 380 V MCC Single Line Diagram	1-5-79													2	18-6-80	10	10	
ED-613	Type '24' Schematic & Connection Diagram SH-1	20-9-77													1	193-80	10	9	
ED-614	" SH-2	20-9-77													1	193-80	10	9	
ED-615	" SH-3	20-9-77													1	193-80	10	9	↓

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PROJECT NO. 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
		START DATE	LAYOUT				DESIGN				CHECK		FINISH DATE	NO.	DATE				
			10	20	30	40	50	60	70	80	90	100							
ED - 616	Cryst. Area-Plan at EL.20,400-Ltg.Layout	5-11-79													0	29-2-80	5	5	ISSUED FOR CONST.
ED - 617	EL.25,200	5-11-79													0	29-2-80	5	5	
ED - 618	EL.32,400	5-11-79													0	29-2-80	5	5	
ED - 619	EL.35,400	5-11-79													0	29-2-80	5	5	
ED - 620	EL.38,400	5-11-79													0	29-2-80	5	5	
ED - 621	EL.41,400	5-11-79													0	29-2-80	5	5	
ED - 622	EL.45,900	5-11-79													0	29-2-80	5	5	
ED - 623	Section A-A-Ltg Layout	5-11-79													0	29-2-80	5	5	
ED - 624	Section B-B	5-11-79													0	29-2-80	5	5	
ED - 625	Section C-C D-D, E-E Ltg	5-11-79													0	29-2-80	5	5	
ED - 626	Plan at EL.20,400-Power Layout	5-11-79													0	29-2-80	5	5	
ED - 627	EL.25,200	5-11-79													0	29-2-80	5	5	
ED - 628	EL.29,400	5-11-79													0	29-2-80	5	5	
ED - 629	EL.45,900	5-11-79													0	29-2-80	5	5	
ED - 630	Section B-B-Power	5-11-79													0	29-2-80	5	5	
ED - 631	Section C-C, D-D, E-E, Power	5-11-79													0	29-2-80	5	5	
ED - 632	Dryer Control Room - Power Layout	5-11-79													0	11-4-80	5	5	
ED - 633	Dryer Area Section A-A, B-B Power Layout	5-11-79													0	11-4-80	5	5	
ED - 634	Dryer Area Section A-A, B-B, C-C Ltg.Layout	5-11-79													0	11-4-80	5	5	
ED - 635	Cryst. Area-Plan at EL.20,400 Inst. Layout	10-3-80													0	31-3-80	5	5	
ED - 636	Cryst. Area-Plan at EL.25,200 Inst. Layout	18-3-80													0	31-3-80	5	5	
ED - 637	Cryst. Area-Plan at EL.29,400 Inst. Layout	18-3-80													0	31-3-80	5	5	
ED - 638	Cryst. Area-Plan at EL.32,400 Inst. Layout	21-3-80													0	31-3-80	5	5	
ED - 639	Control Conn. Diagram for Sch, Type "J".	24-1-80													1	25-6-80	5	4	

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION Electrical

FOR ARAB POTASH CO. LTD.
 PROJECT NO. 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE										FINISH DATE	REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
		START DATE	LAYOUT				DESIGN				CHECK		NO.	DATE				
			10	20	30	40	50	60	70	80	90							100
ED - 640	Type "25" Schematic & Connection Diagram	8-2-80											0	29-2-80	5	5	Issued For Construction	
ED - 641	Type "26" Schematic & Connection Diagram	10-2-80											0	21-2-80	5	5		
ED - 642	Type "27" Schematic & Connection Diagram	12-2-80											0	27-2-80	5	5		
ED - 643	Cryst. Area-Plan at EL.35,400 Inst. Layout	5-3-80											0	31-3-80	5	5		
ED - 644	Cryst. Area-Plan at EL.41,400 Inst. Layout	13-3-80											0	31-3-80	5	5		
ED - 645	Cryst. Area-Plan at EL.45,900 Inst. Layout	15-3-80											0	31-3-80	5	5		
ED - 646	Cryst. Area Section B-B Inst.																	
ED - 647	Cryst. Area Section C-C/D-D/E-E/ Inst.																NOT USED	
ED - 648	Type "K" Schematic & Connection Diagram	18-2-80											0	27-2-80	5	5	NOT USED	
ED - 649	Type "28" Schematic & Connection Diagram	5-2-80											0	27-2-80	5	5		
ED - 650	Type "29" Schematic & Connection Diagram	22-2-80											0	19-3-80	5	4.5		
ED - 651	Type "18" Schematic & Connection Diag.Sh.2	3-3-80											0	19-3-80	5	5		
ED - 652	Type "18" Schematic & Connection Diag.Sh.3	3-3-80											0	19-3-80	5	5		
ED - 653	Type "30" " " " "	24-3-80											0	14-7-80	5	5		
ED - 654	Prepipitator Control Interconn. Diag.	28-3-80											0	11-4-80	5	4.5		
ED - 655	Dryer Burner Control Interconn. Diag.	26-3-80											0	11-4-80	5	4.5		
ED - 656	Harvester Feeder Station H1, H3, H4, and F2, power layouts Carnallite Pans Area	27-5-80											0	16-4-80	5	5		
ER - 657	Telemetering Conn. Diagrams SH1-9	23-4-80											0	26-6-80	5	4		
ED - 658	Type '31' Schematic & Connection Diagram	27-7-80											0	27-7-80	5	5		
ED - 659	Trace Heating Arrangement For F-O-L From PS60 to Product Dryer	14-5-80											0	15-8-80	5	5		
EB - 660	Elec. Conn. Diagrams, 33kV & 11kV Sw.gear 33kV & 380V MCC & Tx.	5-8-80											0	15-8-80	5	4.5		
ED - 661	MCC 'D' - Main Control Panel Interconnection Diagram	10-12-80													5	4		
ED - 662	MCC 'E' - Main Control Panel Interconnection Diagram	17-12-80													5	4		
ED - 663	MCC 'F' - Main Control Panel Interconnection Diagram Sheet 1	17-12-80													5	4		

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
DIVISION ELECTRICAL

FOR ARAB POTASH CO. LTD.
PROJECT NO. 08-1875 DATE 31-12-80

DWG. NO.	DRAWING TITLE CABLE SCHEDULES	START DATE	% COMPLETE													REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
			LAYOUT			DESIGN							CHECK			FINISH DATE	NO.				DATE
			10	20	30	40	50	60	70	80	90	100									
EB - 190	CABLE SCHEDULES SH1-14 <i>SEE ALSO BELOW</i>	6-11-78														0	13-880 23-580	13	13	Utilities area MCC's 'C'. 1-1 & 2-1	
192	LIGHTING PANEL SCHEDULES SH1-5	6-11-78														0	23-580	20	20	Street Lighting	
193	GENERAL SERVICES PANEL SCHEDULE SH1-3	6-11-78														0	23-580	5	5	Utilities Area	
300	CABLE SCHEDULES SH1-45	6-11-78														0	23-580	15	15	H.T. Cables	
	SH 46-66	6-11-78														0	23-580	15	15	MCC's 'D', 'E', & 'F'	
	SH 67-96	6-11-78														0	15-780	15	13	MCC's '8-1' to '11-1'	
301	SH1- 42	6-11-78														0	23-580	15	15	Telephone Fire Alarm & Inst. Cables	
302	LIGHTING PANEL SCHEDULES SH1-15	6-11-78														0	23-580	20	20	Process Area	
	SH16-40	6-11-78														0	23-580	25	25	Buildings	
303	GENERAL SERVICES PANEL SCHEDULES SH1-16	6-11-78														0	23-580	15	15	Process Area	
	SH17-70	6-11-78														6	31-10-77	30	27	Buildings	
-400-	CABLE SCHEDULES SH1-6																	25-		Shipping, Storage Compaction Plant	
-401-	GENERAL SERVICES PANEL SCHEDULES SH1-5																	25-		VOID "	
556	CABLE SCHEDULES SH1-28	1-6-80														0	16-7-80	13	13	Carnallite Pans	
601	GENERAL SERVICES PANEL SCHEDULES SH1-8	1-6-80														0	16-7-80	20	20	"	
193	SHEET. 3															1	13-880			ISSUED FOR CONSTRUCTION	
300	SHEETS. 2-4/7 10/12/17-20/22/23/															1	23-580 13-880				
	26-28/31/46-50/67-70/72/75/79/83-87															1	13-880 27-12-80				
300	SHEETS. 15/16/17/177															2	13-880				
301	SHEETS. 13/14/17/17/33/35-42															1	13-880				
302	SHEETS. 3/9/10/12/13/15/26-36/39-40															1	23-580 27-12-80				
302	SHEET. 14															2	13-880				
303	SHEETS. 5/8/12-14/16/27-62															1	13-880 27-12-80				

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION H.V.A.C.

PROJECT NO 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	START DATE	% COMPLETE										FINISH DATE	REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
			LAYOUT			DESIGN				CHECK				NO	DATE				
			10	20	30	40	50	60	70	80	90	100							
✓ HD-125	Air Conditioning Ductwork Layout—3rd Floor	12/1/78													0	28/4/80	28	28	ISS. FOR CONSTRUCTION
✓ HD-126	Water Services & Toilet Extract Layout 3rd, Floor	8/12/78													0	23/7/80	23	23	" " "
✓ HD-127	Soils & Wastes Layout—3rd Floor	13/12/78													0	28/4/80	23	23	" " "
HD-128	Air Cond. Ductwork Layout—Basement	20/1/79															28	14	VOID.
HD-129	Soils & Wastes Layout—Basement																22		VOID.
✓ HD-130	Air Cond. Ductwork Layout - Lecture Theatre - Plan	5/2/79													0	28/4/80	18	18	ISS. FOR CONSTRUCTION
✓ HD-131	Air Cond. Ductwork Layout—Sections Lecture Theatre	5/2/79													0	28/4/80	18	18	" " "
✓ HD-132	Extract Air & Water Services Systems Plan & Sections—Kitchen	8/2/79													0	25/7/80	18	18	" " "
✓ HD-133	Soils & Wastes—Plans - Kitchen	10/2/79													0	28/4/80	18	18	" " "
✓ HD-134	Chiller Compound Layout—Site Plan	20/2/79													0	25/4/80	13	13	" " "
✓ HD-135	Location of Air Handling Equip—Roof Plan														0	25/4/80	18	18	" " "
MAINTENANCE BUILDING																			
✓ KD-178	P&ID Air Conditioning System No. 1.	6/12/78													0	10/10	20	20	ISSUED FOR CONSTRUCTION
✓ KD-179	P&ID Air Conditioning System No. 2	6/12/78													0	10/10	20	20	" " "
KD-180	P&ID Ventilation Systems	9/1/79															20	8	VOID
✓ HD-180	Central Office Block 9-11; A-G Plant Room Air Cond. Plant No. 1	18/1/79													0	19/10	20	20	ISSUED FOR CONST.
✓ HD-181	Central Office Block 9-11; A-G Offices (1st & 2nd Floors—Air Cond. I/O)	14/3/79													0	10/10	20	20	" " "

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION _____

PROJECT NO 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS		
		START DATE	LAYOUT			DESIGN				CHECK		FINISH DATE	NO	DATE					
			10	20	35	40	50	60	70	80	90							100	
	MAINTENANCE BUILDING																		
✓ HD-184	Offices (1st & 2nd Floors) Fac. Annex 12-20; G-J Air Conditioning Layout	14/8/78												0	10/10	20	20	ISSUED FOR CONST.	
✓ HD-185	Offices (1st & 2nd Floors) Fac. Annex 12-20; G-J Sections & Details	14/8/78												0	10/10	20	20	" " "	
HD-190	Warehouse (first floor) 1-8, A-C : Ventilation Layout	24/7/78															20	0	VOID
HD-191	Warehouse (Mezzanine floor) 9, A-C : Ventilation Layout	24/7/78															20	0	VOID
HD-192	Warehouse (second floor) 1-8, A-C : Ventilation Layout	24/7/78															20	0	VOID
HD-193	Workshop (first floor) 11-16 A-D : Ventilation Layout	24/7/78															20	0	VOID
HD-194	Workshop (1st floor) 16-20 A-D : Ventilation Layout	24/8/78															20	0	VOID

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
DIVISION CONTROL SYSTEMS ENGINEERING

FOR ARAB POTASH CO. LTD.

PROJECT NO. 02-1875

DATE 21/11/80

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGT. FACTR.	WGT. % COMPL.	REMARKS		
		START DATE	LAYOUT				DESIGN				CHECKED				NO.				DATE	
			10	20	30	40	50	60	70	80	90	100	FINISH DATE							
ID-100	Main Process Control Panel Arra't	17/7/79													1/10	0	27/3/79	30	30	FIXED TO FORG 26
IE-101	Main Control Panel - Semi Graphic Carnallite Sect.	17/9/79													1/10	0	13/6/79	25	25	
IE-102	Main Control Panel - Semi Graphic Sylvinite Sect.	17/9/79													1/10	0	27/6/79	25	25	
IE-103	Main Control Panel - Semi Graphic Crystallization Sect.	17/9/79													1/10	0	7/4/79	25	25	
IE-104	Main Control Panel - Semi Graphic Dewatering Sect.	17/9/79													1/10	0	3/12/79	25	25	
IE-105	Main Control Panel - Semi Graphic Harvester&Pans Sect.																	25	25	
IE-106	Main Control Panel - Semi Graphic Screening, Compaction, Storage & Shipping	24/7/80													1/10	0	24/3/80	25	25	
IE-107	Main Control Panel - Front of panel Bin Layout	24/7/80													1/10	0	24/3/80	25	25	
IA-130	Inst. Details - Temp. Control Valves	12/2/79														0	7/12/79	3	3	ISSUED FOR CONTRACT 10 TENDAR
IA-131	" " - Pressure " "																	3	3	
IA-132	" " - Pressure Gauges																	3	3	
IA-133	" " - Press. Gauge with Syphon																	3	3	
IA-134	" " - Pressure Transmitters																	3	3	
IA-135	" " - Level "																	3	3	
IA-136	" " - Level Controller-Pneumatic																	3	3	VOID
IA-137	" " - Level Sw. Mounting Dets.																	3	3	
IA-138	" " - Flow Transmitters																	3	3	
IA-139	" " - Flow Transmitters with seal pots																	3	3	
IA-140	" " - I/P Converters																	3	3	
IA-141	" " - Control Valves, Pneumatic																	3	3	
IA-142	" " - D/P Cells, water purged																	3	3	
IA-143	" " - Misc. Inst. Supports																	3	3	
IA-144	" " - Protected Inst. Supports																	3	3	

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION CONTROL SYSTEMS ENGINEERING

FOR ARAB POTASH CO. LTD.

PROJECT NO 08-1875

DATE 31/12/80

DWG. NO.	DRAWING TITLE INSTRUMENT LOCATIONS	START DATE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
			LAYOUT			DESIGN						CHECK			FINISH DATE	NO				DATE
			10	20	30	40	50	60	70	80	90	100								
ID-160	Fuel Oil : Tank and Pumps	27/10																6	4.2	TRANSFERRED TO VOID - PIPING - RATHO'S
ID-161	Fuel Oil : Tank and Heater																	6	4.2	
ID-162	Fuel Oil ; Pumps (Elevation)																	6	4.2	
ID-163	Diesel Oil. Tanks and Pumps	30/10																6	4.2	
ID-164	Fire and Process Water Pumps																	6	4.2	
ID-165	Carnallite : Splitter Box																	6	4.2	
ID-166	Carnallite : Tank and Pump Area	31/10																6	4.2	
ID-167	Carnallite : Thickener Area	22/10																6	4.2	
ID-168	Carnallite : Surge Tank Area	1/11																6	4.2	
ID-169	Carnallite : Conveyor To Decomp. Tanks																	6	4.2	
ID-170	DeWatering : Mother Liquor Tank Area																	6	4.2	
ID-171	DeWatering: Mother Liquor Tank Area	26/10																6	4.2	
ID-172	Sylvinitic and DeWatering : Prod. & Tails Cent. Area	5/11																6	4.2	
ID-173	Sylvinitic : Filter Feed Pumps Area																	6	4.2	
ID-174	Sylvinitic : Thickener U/Flow Pumps Area																	6	4.2	
ID-175	Sylvinitic : Thickener O/Flow Pumps Area	12/10																6	4.2	
ID-176	Sylvinitic : Filter Feed Pumps Area	6/11																6	4.2	
ID-177	Sylvinitic : Hot Thickener Area																	6	4.2	
ID-178	Sylvinitic : Thickener & Tails Feed Tank Concentrate	12/10																6	4.2	
ID-179	Sylvinitic : Tanks and Pumps																	6	4.2	
ID-180	Sylvinitic : Belts Area	9/10																6	4.2	
ID-181	Sylvinitic : Brine Heaters Area																	6	4.2	
ID-182	Sylvinitic: Pumps	21/10																6	4.2	
ID-183	Hot Leach Area																	6	4.2	

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION PIPING PROCESS FLOW DIAGRAMS

FOR ARAB POTASH CO. LTD.
 PROJECT NO. 08-1875 DATE 31/12/80

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
		START DATE	LAYOUT		DESIGN						CHECK		FINISH DATE	NO	DATE				
			10	20	30	40	50	60	70	80	90	100							
	PROCESS FLOW DIAGRAMS																		
KE-101	Carnallite Processing PFD	9 FEB 77												1	15 JUL 78	20	18	GENERAL REVISIONS	
KD-102	Sylvinite Processing PFD	21 JAN 79												2	20 JUNE 80	20	18	REVIEWED FOR DESIGN	
KE-103	Crystallization Process PFD	12 FEB 78												2		20	18	"	
KE-104	Product DeWatering & Drying PFD	25 JAN 78												2		20	18	"	
KD-105	Product Storage & Shipping PFD	25 MAR 78														15		VOID	
KD-106	Water Distribution PFD	21 SEP 77														13		VOID	
KD-107	Cooling Water Distribution PFD	21 SEP 77														10		VOID	
KD-108	Steam Generation & Distr. PFD	21 SEP 77														10		VOID	
KD-109	Steam Turbine & L.R. Stm. Distr. PFD	21 SEP 77														10		VOID	
KD-110	Instrument & Plant Air Distr. PFD	21 SEP 77														5		VOID	
KD-111	Water Treatment PFD	21 SEP 77														5		VOID	
KD-112	Fuel Oil & Diesel Oil PFD	21 SEP 77														15		VOID	
KD-113	Schematic Process Flow Diagram PFD	11 APR 78														25		VOID	
KD-114	Solar Evaporation System PFD	10 MAY 80												0	11/78	5	5	ISSUED FOR DESIGN	
KE-115	Solar Evaporation System PFD	25 MAY 78												0	11/78	5	5	ISSUED FOR DESIGN	
KE-116	Solar Evaporation System PFD	25 MAY 78												0	11/78	5	5	ISSUED FOR DESIGN	
KE-117	Screening & Compaction Shipping and Storage PFD	15 DEC 78												2	13 AUG 80	30	30	ISSUED FOR CONTRACT TENDER	
KE-118	Overall Graphic PFD	15 JAN 78														30			
KD-119	Not Used																		

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION PIPING PROCESS P&ID DIAGRAMS

FOR ARAB POTASH CO. LTD.
 PROJECT NO. 08-1875 DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % CCMPL	REMARKS		
		START DATE	LAYOUT			DESIGN					CHECK			FINISH DATE				NO.	DATE
			10	20	30	40	50	60	70	80	90	100							
	PROCESS P&ID DIAGRAMS																		
KE-120	Field Thickening P&ID																		
KE-121	Carnallite Processing P&ID	15 MAY 78													4	31 JAN 80	73	69	ISSUED FOR CONTRACT 10
KE-122	Sylvinite Processing P&ID	2 MAY 78													4	28 APR 80	50	47	REDRAWN & REISSUED FOR CONTRACT 10
KE-123	Crystallization Process P&ID	9 MAY 78													4	31 JAN 80	65	61	ISSUED FOR VENDOR VERIFICATION
KE-124	Product Dewatering P&ID	23 MAY 78													3		48	46	ISSUED FOR CONTRACT 10
KE-125	Product Storage & Shipping P&ID	7 MAY 78															28	28	ISSUED FOR CONTRACT 2
KE-126	Solar Pan Carnallite Transfer Sys. P&ID	15 MAY 78													6	27 JUNE 80	26	25	RE ISSUED FOR CONTRACT 10
KE-127	Product Drying P&ID	17 MAY 78													5	31 MAY 80	45	42	ISSUED FOR CONTRACT 10
KE-128	Process Water Distribution System Solar Pan Area P&ID	13 MAY 78													4	27 JUNE 80	41	37	REISSUED FOR CONTRACT 10
KE-129	Screening & Compaction Shipping & Storage P&ID	13 MAY 78													5		30	30	VOID
KE-130	Proposed Water Treatment & Dist. Sys. P&ID	12 MAY 78													4	5 FEB 80	46	46	ISSUED FOR CONTRACT 10
KE-131	Cooling Water System P&ID	10 MAY 78													4	5 FEB 80	25	25	" "
KE-132	Proposed Steam & Condensate P&ID	15 MAY 78													4	3 MAY 80	79	71	REISSUED FOR CONTRACT 10 TENDER
KE-133	Fuel Oil & Diesel Oil System P&ID	1 MAY 78													4	5 FEB 80	48	48	ISSUED FOR CONTRACT 10
KE-134	Proposed Instrument & Plant Air P&ID	15 MAY 78													4	5 FEB 80	35	35	ISSUED FOR CONTRACT 10
KD-135	Petrol & Diesel Oil Storage Truck Fueling P&ID	10 NOV 78													0	28 FEB 80	38	38	" "
KD-136	Fire Protection Ring Main P&ID																		"
KD-137	Fireater Pumping Station																		"
KE-138	Carnallite Harvester P&ID Attach. No. 15.	9 MAY 79													1	5 FEB 80	63	63	ISSUED FOR CONTRACT 10 TENDER
KD-146	Steam & Condensate Schematic Flow Diag.	12 JAN 79													0	27 FEB 80	38	38	ISSUED FOR DESIGN
KD-147	Cooling Water Schematic Flow Diag. P&ID	12 JAN 79													0	27 FEB 80	38	38	" "
KD-148	Plant & Instrument Air Schematic Flow Dia	12 JAN 79													0	27 FEB 80	38	38	ISSUED FOR DESIGN
KD-149	Process Water Schematic Flow Diag. P&ID.	12 JAN 79													0	27 FEB 80	38	38	" "

DA

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION PIPING EQUIPMENT ARRANGEMENTS

PROJECT NO 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE												REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS	
		START DATE	LAYOUT			DESIGN					CHECK		FINISH DATE	NO	DATE				
			10	20	30	40	50	60	70	80	90	100							
	EQUIPMENT ARRANGEMENTS																		
KD-168	Not Used																		
KD-169	Not Used																		
KD-170	Carnallite Surge Tanks Plan	9 JUN 75												1	8 JAN 80	36	36	RE-ISSUED FOR CONSTRUCTION	
KD-171	Carnallite Surge Tanks Section	25 JULY 75												1	8 JAN 80	31	31	"	
KD-172	Plan Carnallite Thickener Tank	7 SEPT 75												1	8 JAN 80	34	34	"	
KD-173	Section Carnallite Thickener Tank	11 SEPT 75												1	8 JAN 80	29	29	"	
KD-174	Not Used																		
KD-175	Plan Hot Thickener Tank El. 24,900 & Above	2 JULY 75												2	6 MAY 80	35	34		
KD-176	Plan Hot Thickener Tank El. 24,900 to Gr	18 AUG 75												3	18 JULY 80	28	27	REISSUED FOR CONSTRUCTION	
KD-177	Section Hot Thickener Tank	15 AUG 75												3	18 JULY 80	30	29	REISSUED FOR CONSTRUCTION	
KD-178	NOT USED																		
KD-179	Truck Filling Area. Plan	2 MAY 75												1	24 MAR 80	5	5	ISSUED FOR CONSTRUCTION	
KD-180	SCREENING & COMPACTION - BATTERY LIMITS - LAYOUT	20 JULY 75																	
KD-181	SCREENING & COMPACTION - BATTERY LIMITS - DETAILS	23 JULY 75																	
KD-182	Decomposition Tanks Plan	15 JUN 75												1	8 JAN 80	35	35	"	
KD-183	Decomposition Tanks Section	10 JULY 75												0	20 JUNE 75	30	30	ISSUED FOR CONSTRUCTION	
KD-184	Plan Sylvinite Surge & Thickener Tanks	3 AUG 75												1	8 JAN 80	30	29	RE-ISSUED FOR CONSTRUCTION	
KD-185	Section Sylvinite Surge & Thickener Tanks	12 SEPT 75												1	8 JAN 80	29	28	"	
KD-186	Proposed Equip. Arrang. Crystallization Area	21 JUN 75												1	8 JAN 80	78	77	"	
KD-187	Crystallizer Plan El. 94,500	25 OCT 75																	
KD-188	Not Used																		VOID

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH

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DIVISION PIPING EQUIPMENT ARRANGEMENTS

PROJECT NO. 08-1875

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		START DATE	LAYOUT		DESIGN						CHECK		FINISH DATE	NO				DATE	
			10	20	30	40	50	60	70	80	90	100							
	EQUIPMENT ARRANGEMENTS - contd..																		
KD-189	Plan Product Drying Area	12 SEP 75													0	25 FEB 80	43	43	ISSUED FOR CONSTRUCTION
KD-190	Section A-A, Product Drying Area	12 SEP 75													0	25 FEB 80	33	33	" "
KD-191	Equipment Arrangement Plan Tyre Recap Building	10 SEP 75													0	0 JAN 80	5	4	ISSUED FOR CONSTRUCTION
KD-192	Equipment Location Plan Pans	20 JAN 78													0	22 MAY 79	35	35	ISSUED FOR CONSTRUCTION
KD-193	Equipment Location Plan Pans	20 JAN 78													0	24 MAY 79	35	35	ISSUED FOR CONSTRUCTION
KD-194	Equip. Arrang. Plan Maint. Building	31 JAN 79													0	8 JAN 80	5	4.5	"
KD-195	Equip. Arrang. Plan. Maint. Building	2 FEB 79													0	8 JAN 80	5	4.5	ISSUED FOR CONSTRUCTION
KD-196	Process Struct. Plan (Carn) El. 20,500	9 DEC 78													1	8 JAN 80	70	63	RE-ISSUED FOR CONSTRUCTION
KD-197	Process Struct. Plan (Carn) El. 31,330																		
KD-198	Process Struct. Plan (Syl) El. 33,300	17 AUG 78													2	26 MAY 80	40	38	"
KD-199	Process Struct. Plan (DeWtr.) El. 26,530	15 AUG 78													1	6 JAN 80	40	38	"
KD-200	Process Struct. Plan (Carn) El. 35,000 & El. 43,800	7 DEC 78													1	8 JAN 80	70	68	"
KD-201	Process Struct. Plan (Syl) El. 35,160 & ABOVE	16 AUG 78													2	26 MAY 80	35	34	"
KD-202	Process Struct. Plan (DeWtr.) El. 29,600 El. 33,700 & El. 41,900	15 AUG 78													2	26 MAY 80	58	56	"
KD-203	Process Struct. Carnallite Section 'F-F'	16 JAN 79													2	27 MAY 80	23	22	ISSUED FOR CONSTRUCTION
KD-204	Process Struct. Sylvinitite Section 'C-C'	25 AUG 78													2	26 MAY 80	23	22	RE-ISSUED FOR CONSTRUCTION
KD-205	Process Struct. Sylvinitite Section 'D-D'	23 AUG 78													1	8 JAN 80	23	22	"
KD-206	Process Struct. DeWaterir Section 'A-A' 'B-B'	25 AUG 78													2	26 MAY 80	23	22	"
KD-207	Process Struct. Carnallite Section 'E-E'	16 JAN 79													1	8 JAN 80	23	22	"

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JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION PIPING

FOR ARAB POTASH CO. LTD.
 PROJECT NO 08-1875

DATE 31-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS		
		START DATE	LAYOUT		DESIGN					CHECK		FINISH DATE	NO	DATE					
			10	20	30	40	50	60	70	80	90							100	
	PIPING																		
PD-235	Pipeway Layout between SL-13 & SL-96	25 FEB 79												1	22 AUG 80	10	10	ISSUED FOR CONSTRUCTION	
PD-236	Piping Plan & Sections - Dryer	15 FEB 79												1	22 SEPT 80	38	38	ISSUED FOR CONSTRUCTION	
PD-237	Piping Arrang. Petrol & Diesel Pumps.	6 MAY 79												1	24 MAY 80	15	15	ISSUED FOR CONSTRUCTION	
PD-238	Piping Plan Decomposition Tanks	6 NOV 78												2	22 SEPT 80	15	15	RE-ISSUED FOR CONSTRUCTION	
PD-239	Piping Plan Decomposition Tanks	6 NOV 78												2	21 SEPT 80	10	10	" " "	
PD-240	Piping Plan Decomposition Tanks	6 NOV 78												1	22 AUG 80	10	10	ISSUED FOR CONSTRUCTION	
PD-241	Piping Plan Sylvinitic Filter Feed Pumps	15 SEP 79												1	22 SEP 80	25	25	ISSUED FOR CONSTRUCTION	
PD-242	Piping Plan Sylvinitic Thickener U/Flow Pumps	17 JAN 79												2	20 OCT 80	25	25	" "	
PD-243	Piping Plan Sylvinitic Thickener	13 NOV 78												1	22 SEP 80	23	23	ISSUED FOR CONSTRUCTION	
PD-244	Piping Plan Sylvinitic Thickener O/Flow Pumps	20 NOV 78												1	22 SEP 80	15	15	" "	
PD-245	Piping Plan Sylvinitic Thickener	15 FEB 79												2	20 OCT 80	28	28	ISSUED FOR CONSTRUCTION	
PD-246	Piping Section-Sylvinitic Filter Fd.Pumps	6 DEC 78												1	22 SEP 80	16	16	" "	
PD-247	Piping Section-Sylvinitic Thck.Pumps U/Flow	25 JAN 79												1	22 SEP 80	28	28	ISSUED FOR CONSTRUCTION	
PD-248	Piping Section-Sylvinitic Thck.Pumps O/Flow	25 JAN 79												1	22 AUG 80	20	20	" "	
PD-249	Piping Plan Hot Thickener	21 NOV 78												2	22 SEP 80	28	28	REISSUED FOR CONSTRUCTION	
PD-250	Piping Plan Hot Thickener & Tails Centrifuge Feed Tank	16 NOV 78												3	22 AUG 80	20	20	" "	
PD-251	Piping Dets.&Sections Hot Thickener	22 NOV 78												2	11 JULY 80	20	20	" "	
PD-252	Piping Section & Details Dewatering Structure.	15 FEB 79												1	22 SEP 80	20	18	ISSUED FOR CONSTRUCTION	
PD-253	Piping Section & Details Dewatering Structure	15 FEB 79												2	22 SEP 80	20	18	RE-ISSUED FOR CONSTRUCTION	
PD-254	Piping Plan Mother Liquor Tank	7 NOV 78												3	7 OCT 80	30	28	RE-ISSUED FOR CONSTRUCTION	
PD-255	Piping Plan Dump and Wash Tank	27 OCT 78												2	22 SEP 80	25	23	" "	
PD-256	Piping Plan -Sects.& Sets. of Wash & Dump Tanks	6 NOV 78												2	22 SEP 80	25	23	" "	

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
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FOR ARAB POTASH CO. LTD.

PROJECT NO 08-1875

DATE 31-12-80

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			LAYOUT			DESIGN						CHECK				NO	DATE			
			10	20	30	40	50	60	70	80	90	100								
	PIPING																			
PD-257	Piping Section-Mother Liquor Tank	15 NOV 78													3	5 OCT 80	25	23	RE-ISSUED FOR CONSTRUCTION	
PD-258	Piping Plan- Process Structure	16 DEC 79													1	9 JUN 80	20	19	RE-ISSUED FOR CONSTRUCTION	
PD-259	Piping Plan Process Structure Sylvinitite	15 FEB 79													2	22 APR 80	25	24	RE-ISSUED FOR CONSTRUCTION	
PD-260	Piping Plan Process Structure (Sylvinitite)	15 NOV 78													2	22 SEP 80	40	39	"	
PD-261	Piping Plan Process Structure (Sylvinitite)	15 NOV 78													2	22 SEP 80	33	32	"	
PD-262	Piping Plan Process Structure(Dewatering)	15 NOV 78													2	22 SEP 80	38	36	"	
PD-263	Piping Plan Process Structure(Dewatering)	15 NOV 78													2	22 SEP 80	39	38	"	
PD-264	Piping Plan Process Structure(Carnallite)	15 DEC 79													2	22 SEP 80	45	43	RE-ISSUED FOR CONSTRUCTION	
PD-265	Piping Plan Process Structure(Carnallite)	15 DEC 79													2	22 SEP 80	45	43	RE-ISSUED FOR CONSTRUCTION	
PD-266	Piping Plan Process Structure(Sylvinitite)	16 NOV 78													2	22 SEP 80	40	38	"	
PD-267	Piping Plan Process Structure(Dewatering)	15 NOV 78													2	22 SEP 80	35	31	"	
PD-268	Piping Plan Process Structure(Dewatering)	15 DEC 78													2	22 SEP 80	35	31	"	
PD-269	Piping Sects. & Dets. Process Structure (Carnallite)	15 FEB 79													2	22 SEP 80	26	24	RE-ISSUED FOR CONSTRUCTION	
PD-270	Piping Sects. & Dets. Process Structure (Sylvinitite)	15 NOV 78													1	22 SEP 80	26	24	ISSUED FOR CONSTRUCTION	
PD-271	Piping Sects & Dets. Process Structure (Dewatering)	15 DEC 78													2	22 SEP 80	26	24	RE-ISSUED FOR CONSTRUCTION	
PD-272	Decomposition Overflow Launder & Carn. Centrifuge Disc. Launder	15 NOV 78													0	22 JAN 80	35	33	RE-ISSUED FOR CONSTRUCTION	
PD-273	Cent. Discharge Launder 13.35.030	15 NOV 78													0	22 JAN 80	35	33	"	
PD-274	Carn. Dist. Box O/Flow Launder 13.25.110	15 JAN 79													1	22 SEP 80	35	33	"	
PD-275	Product & Tails Launder	15 NOV 78													0	22 JAN 80	25	23	"	
PD-276	Maintenance Building, Utility Service Piping Plan.	16 FEB 79													1	22 SEP 80	15	13	"	
PD-277	Maintenance Building, Utility Service Piping Plan.	16 FEB 79													1	22 SEP 80	15	13	"	
PD-278	Tyre Recap Building Utility Services Piping Plan	16 FEB 79													1	22 SEP 80	10	9	"	

JACOBS ENGINEERING Co. / JACOBS INTERNATIONAL Limited.
 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION PIPING

FOR ARAB POTASH CO. LTD.
 PROJECT NO 08-1875 DATE 31-12-80

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		START DATE	LAYOUT		DESIGN					CHECK		FINISH DATE	NO	DATE					
			10	20	30	40	50	60	70	80	90							100	
PD-279	NOT USED																		
PD-280	Piping Section Hot Thickener	8 FEB 79												1	6 JUN 80	20	20	REISSUED FOR CONSTRUCTION	
PD-281	Maintenance Building Pipe Bridge	26 MAR 79												1	22 SEP 80	20	20	ISSUED FOR CONSTRUCTION	
PD-282	Pipe Racks Section	26 MAR 79												2	22 SEP 80	20	20	REISSUED FOR CONSTRUCTION	
PD-283	Piping Plan Process Struct. Carnallite	24 July 79												2	22 SEP 80	20	15	RE-ISSUED FOR CONSTRUCTION	
PD-284	Piping Plan Process Struct. Carnallite	20 July 79												2	22 SEP 80	20	15	RE-ISSUED FOR CONSTRUCTION	
PD-285	Hot Thickener Tank. Piping Sections "EE" & "J-J"	23 July 79												1	6 JUN 80	16	16	REISSUED FOR CONSTRUCTION	
PD-286	Tails Launderers	31 July 79												0	22 JAN 80	20	18	ISSUED FOR CONSTRUCTION	
PD-287	Canrallite Centrifuge Discharge Hoppers and Chutes	3 AUG 79												0	22 JAN 80	20	18	"	
PD-288	Canrallite Centrifuge Discharge Hoppers and Chutes	8 AUG 79												0	22 JAN 80	20	18	"	
PD-289	Piping Section Dewatering Structure	24 SEP 79												1	22 SEP 80	20	18	"	
PD-290	Piping Section Dewatering Structure	26 SEP 79												2	22 SEP 80	20	18	REISSUED FOR CONSTRUCTION	
* PD-300	FLOATING PIPELINE ANCHOR DETAILS	14 MAR 80												0	24 MAR 80	15	15	ISSUED FOR CONSTRUCTION	

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 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION MECHANICAL

FOR ARAB POTASH CO. LTD.

PROJECT NO 08-1875

DATE 3-12-80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS		
		START DATE	LAYOUT		DESIGN						CHECK		FINISH DATE	NO				DATE	
			10	20	30	40	50	60	70	80	90	100							
MD-101	Plan & Elev. Carnallite Cent. Discharge Conveyors 13.29.011 & 13.29.012	14 JULY 78													C	12 APR 79	25	22	VOID
MD-102	Product Shipping Schedule Module																20		VOID
MD-103	Plan & Elev. Carnallite Transfer Conveyor 13.29.020	14 JULY 78													C	12 APR 79	25	22	VOID
MD-104	Plan & Elev. Decomposition Feed Conveyor 13.29.030 Head Section																		VOID
MD-105	Details Composition Feed Conv. 13.29.030 Tails Section																		VOID
MD-106	Product Shipping Control Module																20		VOID
MD-107	Layout of Carnallite Convs. System																		VOID
MD-108	Not Used																		
MD-109	Plan & Elevation - Hot Leach Feed Conv. 13.29.040	18 JULY 78													C	12 APR 79	25	22	VOID
MD-110	Composite Plan Screening, Compaction, Shipping and Storage Area	21 OCT 78													A	12 APR 79	25	1	VOID
MD-111	Plan & Elevation - Product Cake Conveyor 13.29.050	25 OCT 78													C	12 APR 79	25	22	VOID
MD-112	Arrgt. of Conv. to Decomposition Tanks 13.29.030	16 JULY 78													C	12 APR 79	25	22	VOID
MD-113	Plan & Elevation - Oscillating Conveyor 14.33.020																		VOID
MD-114	Not Used																		
MD-115	" "																		
MD-116	Plan & Elev. Shipping Conv. 14.29.010																20	20	VOID
MD-117	Not Used																		
MD-118	Not Used																		
MD-119	Product Centrifuge Cake Transfer Conveyor 13.29.060	27 OCT 78													C	12 APR 79	25	22	VOID
MD-120	Not Used																		
MD-121	" "																		
MD-122	Plan & Elev. Product Storage Transfer Conv.																20		VOID
MD-123	Det. Product Storage Conv. Tripper																20		VOID
MD-124	Details Storage Conv. 14.29.020																20		VOID

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 ENGINEERING DESIGN — DRAWING LIST & PROGRESS REPORT

PROJECT ARAB POTASH
 DIVISION STRUCTURAL

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PROJECT NO. 08-1875

DATE 31/12/80

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		START DATE	LAYOUT										FINISH DATE	NO	DATE							
			10	20	30	40	50	60	70	80	90	100										
	STRUCTURAL STANDARDS																			197		
SD-101 ✓	Beam Connections	MAR 78												MAR 78	1	MAR 78	5	5	ISSUED FOR CONTRACT NO 10 TENDER			
SD-102 ✓	Bracing Connections	MAR 78											MAR 78	1	MAR 78	5	5					
SD-103	Grating and Chkd. Plate Details	MAR 78											MAR 78	1	MAR 78	5	5	"				
SD-104 ✓	Ladder and Handrail Details	MAR 78											MAR 78	1	MAR 78	5	5	"				
SD-105 ✓	Stair Details	MAR 78											MAR 78	1	MAR 78	5	5	"				
SD-106 ✓	Circular Platform Details	MAR 78											MAR 78	1	APR 78	10	10	"				
SD-107	Concrete Details, A-Bolts, Trench L's	MAR 78											MAR 78	1	MAR 78	5	5	"				
SD-108	Grade Slab Details	MAR 78											MAR 78	1	MAR 78	5	5	"				
SD-109	Masonry Details	DEC 77											DEC 77	1	JULY 80	11	11	ISSUED FOR CONSTRUCTION				
SD-110 ---	General Notes	MAR 78											MAR 78	1	AUG 80	15	15	"				
SD-111-149	Not Used	MAR 78											MAR 78	0	14/80	10	10	"				
SD-150 VOID	Foundations Location Plan, Sheet 1	JUN 78														19	9	VOID				
SD-151 VOID	" " " Sheet 2	JUN 78														19	9	VOID				
SD-152 VOID	" " " Sheet 3	JUN 78														19	9	VOID				
SD-153	" " " Sheet 4	JUL 78												0	30 MAR 80	19	19	ISSUED FOR CONSTRUCTION				
SD-154	" " " Sheet 5	JUL 78												1	1 JUL 80	19	19	"				
SD-155	" " " Sheet 6	JUL 78												1	12 MAY 80	19	19	"				
SD-156	" " " Sheet 7	JUL 78												1	20 MAY 80	19	19	"				
SD-157	" " " Sheet 8	JUL 78												2	80	19	19	"				
SD-158	" " " Sheet 9	JUL 78												0	30 APR 80	19	19	"				
SD-159	" " " Sheet 10	JUL 78												2	15 AUG 80	19	19	"				
SD-160	" " " Sheet 11	JUL 78												0	30 MAR 80	19	19	"				
SD-161	" " " Sheet 12	JUL 78												0	20 APR 80	19	19	"				
		JUL 79												0	30 APR 80	19	19	"				

MR

JACOBS ENGINEERING Co / JACOBS INTERNATIONAL Limited.
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			LAYOUT					DESIGN					CHECK					NO.
			10	20	30	40	50	60	70	80	90	100						
	STRUCTURAL																	
SD-162	Foundations Location Plan, Sheet 13	JUL 78																
SD-163	" " " " 14	FEB 79											1	30 APR 79	19	19	ISSUED FOR CONSTRUCTION	
SD-164	" " " " 15	FEB 79											0	30 APR 80	19	19	"	
SD-165	VOID Foundations Prod. Storage Building Details	AUG 78											0	30 APR 80	19	19	"	
SD-166	VOID " " " " "												VOID		39	19	SCREENING AND COMPLETION PLANT PACKAGE	
SD-167	VOID " " " " Wall "	AUG 78											VOID		20	0	"	
SD-168	VOID " " " " " "												VOID		39	19	"	
SD-169	VOID Concrete Prod. Storage Bldg. Floor Slab Plan												VOID		20	0	"	
SD-170	VOID " " " " " Details												VOID		18	0	"	
SD-171	VOID Foundations Srd. & Coarse Reclaim Hopper Pit Plan	NOV 78											VOID		15	0	"	
SD-172	VOID " " " " " Sections & Details	NOV 78											VOID		35	15	"	
SD-173	VOID " " " " " " "												VOID		36	16	"	
SD-174	VOID Foundations Shipping & Storage Bins Structural Plan	NOV 78											VOID		20	0	"	
SD-175	VOID " " " " " Details	NOV 78											VOID		35	15	"	
SD-176	VOID " " " " " "												VOID		20	0	"	
SD-177	FOUNDATION LOCATION PLAN SHEET 16 NOT USED (PAWS AREA)												VOID		20	0	"	
SD-178	VOID Foundations Rotary Heater Plan												1	21 JUL 80			ISSUED FOR CONSTRUCTION	
SD-179	VOID " " " " Details												VOID		20	0	"	
SD-180	Foundations Cyclone Precipitator Precip. Stack & DRYER WITH STRUCT. Plans & Dets.	MAR 79											0	14 JAN 80	20	20	ISSUED FOR CONSTRUCTION.	
SD-181	VOID Foundations Dryer Stack Plan & Details.												VOID		20	0	VOID	
SD-182	VOID " Cyclone & Precipitator Plan & Dets.												VOID		20	0	VOID	
SD-183	" Dryer Plan and details	APR 78											0	10 OCT 79	20	20	ISSUED FOR CONSTRUCTION	
SD-184	VOID " " Details												VOID		20	0	"	

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PROJECT ARAB POTASH
DIVISION STRUCTURAL

FOR ARAB POTASH CO. LTD.

PROJECT NO. 08-1375

DATE 31/12/80

DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGT. FACTR.	WGT. % COMPL.	REMARKS		
		START DATE	LAYOUT			DESIGN				CHECK		FINISH DATE	NO.	DATE					
			10	20	30	40	50	60	70	80	90							100	
	STRUCTURAL - contd...																		
SD-185	Not Used FOUNDATIONS LOCATIONAL PLAN FANS AREA SH 17													0	21-JUL-80				
SD-186 VOID	Foundations Precipitator Struct. Details													VOID			20	0	
SD-187 ✓	" DRYER BURNER STRUCT. DETAILS	MAR 79												1	25-APR-80		20	20	ISSUED FOR CONSTRUCTION
SD-188 ✓	Structural Steel Launder Bridge No. 1 Plans & Elevs.	MAR 79												1	20-APR-80		20	20	ISSUED FOR CONSTRUCTION.
SD-189 VOID	Foundations Dryer-Dump Ret. Wall-Plan													VOID			15	0	
SD-190	Structural Steel Launder Bridge No. 1 Sects. & Dets.	MAR 79												0	21-JAN-80		20	20	ISSUED FOR CONSTRUCTION
SD-191	Structural Steel Launder Bridge No. 2 Plans & Dets.	MAR 79												0	21-JAN-80		20	20	"
SD-192	Foundations Truck Weighing Scales Plan	MAR 79												0	11-OCT-79		20	20	ISSUED FOR CONSTRUCTION
SD-193 VOID	" " " " Details													VOID			20	0	
SD-194 VOID	" " " " "													VOID			13	0	VOID
SD-195	Structural Steel Launder Bridge No. 3 Plans & Dets.	MAR 79												0	15-JAN-80		20	20	ISSUED FOR CONSTRUCTION
SD-196 VOID	Structural Steel Carnallite Launder Trusses. Details													VOID			26	4	REPLACED BY
SD-197 VOID	" " Trestle Details													VOID			20	0	LGRS SD-198, 190
SD-198 VOID	" " " " "													VOID			20	0	191, 195, 252, 253
SD-199 VOID	Foundations Conveyor & Launder Location Plan	DEC 78												VOID			38	19	VOID
SD-200	" " " " Details	MAR 78												1	25-AUG-80		20	20	ISSUED FOR CONSTRUCTION
SD-201	" " " " "	MAR 78												0	25-AUG-80		20	20	"
SD-202 VOID	" " " " "													VOID			20	0	VOID
SD-203 ✓	STRUCTURAL STEEL LAUNDRER BR NO 2 SECTS & DETS													0	20-JAN-80		20	20	ISSUED FOR CONSTRUCTION.
SD-204 ✓	Concrete Admin Bld Found. Plan	SEP 78												1	22-APR-80		22	20	ISSUED FOR CONTRACT ID TENDER
SD-205	" " " " Basement Plan	SEP 78												2	19-APR-80		20	18	"
SD-206 ✓	" " " " Details	SEP 78												2	12-APR-80		20	18	"
SD-207 ✓	" " " " Found. Details	DEC 78												0	14-JUNE-80		21	19	"

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PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION STRUCTURAL

PROJECT NO. OB-1875

DATE 31/12/80

DWG. NO.	DRAWING TITLE	% COMPLETE										REVISION		WGHT. FACTOR	WGHT. % COMPL	REMARKS		
		START DATE	LAYOUT				DESIGN				CHECKED	FINISH DATE	NO				DATE	
			10	20	30	40	50	60	70	80								90
	STRUCTURAL - contd..																	
SD-208	Concrete Administration Bldg. Column Dets.	OCT 78												0	14-6-80	22	19	ISSUED FOR CONTRACT NO 10 TENDER
SD-209	" " " First Floor Plan	OCT 78												1	22-10-80	21	19	"
SD-210	VOID " " " Details													VOID		21	0	VOID
SD-211	" " " Second Floor Plan	NOV 78												1	22-12-80	21	18	"
SD-212	" " " " " Details	NOV 78												1	22-12-80	21	18	"
SD-213	" " " Third Floor Plan	NOV 78												1	22-12-80	21	18	"
SD-214	" " " " " Details	NOV 78												1	22-12-80	21	18	"
SD-215	" " " Roof Plan	NOV 78												1	22-12-80	21	18	"
SD-216	" " " Roof Details	NOV 78												2	31-10-80	21	18	"
SD-217	" " " Theatre Floor Plan	NOV 78												1	22-12-80	21	8	"
SD-218	" " " " " Details	NOV 78												0	22-6-80	23	20	"
SD-219	" " " Theatre Roof Plan & Dets	NOV 78												0	22-6-80	24	20	"
SD-220	" " " Wall Details	NOV 78												0	22-6-80	23	20	"
SD-221	" " " " "	NOV 78												1	22-10-80	20	18	"
SD-222	" " " " "	JAN 79												0	22-6-80	20	18	"
SD-223	" " " " "	JAN 79												1	22-10-80	16	14	"
SD-224	VOID " " " " "	JAN 79												1	22-10-80	16	14	"
SD-225	" " " " "	JAN 79												VOID		16	12	VOID
SD-226	" " " " "	JAN 79												1	22-10-80	16	14	"
SD-227	" " " Stair Details	MAR 79												1	22-10-80	16	14	"
SD-228	" " " " "	JUN 79												0	22-6-80	19	17	"
SD-229	" " " Misc. Details	JUN 79												0	22-6-80	19	17	"
SD-230	VOID " " " " "	JUN 79												1	22-6-80	20	18	"
		JUL 79												VOID	22-11-80	20	18	"

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PROJECT ARAB POTASH
 DIVISION STRUCTURAL

FOR ARAB POTASH CO. LTD.

PROJECT NO OS-1875

DATE 31/12/80

DWS. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS		
		START DATE	LAYOUT				DESIGN				CHECKED	FINISH DATE	NO.	DATE					
			10	20	30	40	50	60	70	80								90	100
	STRUCTURAL - contd..																		
SD-313	Not Used																		
SD-314	Not Used																		
SD-315	Foundts. Pump Foundation Schedule Sheet 1	NOV 78											25 MAR 80	2	15 AUG 80	19	19	ISSUED FOR CONSTRUCTION	
SD-316	" " " " Sheet 2	NOV 78											25 MAR 80	2	15 AUG 80	19	19	"	
SD-317	" " " " Sheet 3	NOV 78											25 MAR 80	1	17 NOV 80	19	19	"	
SD-318	" " " " Sheet 4	MAR 79											25 MAR 80	2		18	18	"	
SD-319	" " " " SHEET 5	MAR 79											25 MAR 80	0	25 MAR 80	18	18	"	
SD-320	Foundts. Transformers Plans and Sects.	MAR 79											APR 80	2	1 JULY 80	18	18	"	
SD-321	NOT USED																		
SD-322	NOT USED																		
SD-323	Foundts. Sumps Plans and Sects.	NOV 78											OCT 79	4	1 AUG 80	19	19	ISSUED FOR CONSTRUCTION	
SD-324	VOID " " Details																		
SD-325	Not Used																		
SD-326	" "																		
SD-327	" "																		
SD-328	" "																		
SD-329	VOID Foundts. Diesel storage Tanks Plans & Sects.																		
SD-330	Not Used																		
SD-331	Concrete Fire & Process Water Pump Station Plans & Sects.	JUN 78											AUG 79	0	27 AUG 79	44	44	ISSUED FOR CONSTRUCTION	
SD-332	" " " " " " Sects. & Details	JUN 78											AUG 79	0	27 AUG 79	44	44	" " "	
SD-333	" " " " " " Details	JUN 78											AUG 79	0	27 AUG 79	21	21	" " "	
SD-334	Not Used																		
SD-335	Foundations Hot Thickener Access Tunnel. Plan & Sects.	JAN 79											FEB 80	3	25 SEP 80	18	18	ISSUED FOR CONSTRUCTION	

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PROJECT ARAB POTASH

FOR ARAB POTASH CO. LTD.

DIVISION STRUCTURAL

PROJECT NO. 02-1875

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DWG. NO.	DRAWING TITLE	% COMPLETE											REVISION		WGHT. FACTR.	WGHT. % COMPL.	REMARKS			
		START DATE	LAYOUT				DESIGN				CHECK			FINISH DATE				NO.	DATE	
			10	20	30	40	50	60	70	80	90	100								
	STRUCTURAL - Contd...																			
SD-336 VOID	Foundations Hot Thickener Access Tunnel Sects & Det	JAN 79														VOID		18	7	
SD-337 VOID	Not Used LAYOUT & DETAILS															VOID				
SD-338	Not Used																			
SD-339	Foundations Carnallite Distr.Box Struct.Plan & Det	JAN 79														0	20 APR 80	18	18	ISSUED FOR CONSTRUCTION
SD-340	Not Used																			
SD-341 VOID	Foundt.Gran.Prod.Storage Bldg. Details																VOID	20	0	SCREENING AND COMP- ACTION PLANT PACKAGE
SD-342 VOID	" " " " " Details																VOID	20	0	
SD-343 VOID	" " " " " Walls Plan & Details																VOID	20	0	
SD-344 VOID	" " " " " Floor Slab Plan & Details																VOID	20	0	
SD-345	Not Used																			
SD-346 VOID	Foundt.Gran.Prod. Reclaim-Hopper-Pit Plan																VOID	20	0	
SD-347 VOID	" " " " " Sects. & Details																VOID	20	0	
SD-348 VOID	" " " " " Details																VOID	20	0	
SD-349 VOID	" " " " " Details																VOID	20	0	
SD-350	Not Used																			
SD-351	Not Used																			
SD-352	Not Used																			
SD-353	Structural Steel Carnallite Structure & 43,600 Elev.35,000 Plan	JUN 78														2	23 JUNE 80	83	83	ISSUED FOR CONSTRUCTION
SD-354	" " " Elev. 31,500 & 26,000 Pl.	SEP 79														0	5 FEB 80	80	80	"
SD-355	" " " Elev. 27,900 & 48,260 Plan	SEP 78														1	12 MAY 80	80	80	"
SD-356	" " " Elevs. Sheet 1	MAR 79														1	30 APR 80	20	20	"
SD-357	" " " Elevs Sheet 2	MAR 79														2	25 JUN 80	20	20	"
SD-358	" " " Sects. & Details	MAR 79														2	25 JUL 80	20	20	"

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			LAYOUT		DESIGN						CHECK					NO	DATE					
			10	20	30	40	50	60	70	80	90	100	FINISH DATE									
	STRUCTURAL - Contd...																					
SD-382	STRUCTURAL STEEL PIPE SUPPORTS	MAR 80																				
SD-383	Structural Steel Pipe Supports <i>ELEVATIONS SH. 1 OF 2</i>	JUL 78														4	6 OCT 80	20	10			
SD-384	" " -DETAILS <i>CONNECTIONS, BRACKETS & MISC.</i>	MAY 78														2	6 OCT 80	42	42	ISSUED FOR CONSTRUCTION		
SD-385	" " -DETAILS <i>P.S. 205-200 & P.S. 17-18; PETER, P.S. 47</i>	MAY 79														1	16 MAY 80	50	45	II		
SD-386	" " <i>ELEVATIONS SH. 2 OF 2</i>	MAY 79														1	8 OCT 80	20	20	II		
SD-387	Structural Steel Pipe Bridges <i>PLANS & SECTIONS SH. 1 OF 2</i>	JUN 78														0	20 MAR 80			II		
SD-388	" " <i>PLANS & SECTIONS SH. 2 OF 2</i>	JUL 78														0	20 MAR 80	30	30	II		
SD-389	Structural Steel Stair Tower No. 1 Plans & Details	FEB 79														0	20 MAR 80	30	30	II		
SD-390 VOID	" " Details	MAY 80														0	31 MAR 80	25	25	II		
SD-391	" No. 2 Plans & Details	FEB 79														VOID		25		VOID		
SD-392 VOID	" " Details	FEB 79														4	29 MAY 80	22	22	ISSUED FOR CONSTRUCTION		
SD-393	" No. 3 Plans & Details	MAY 79														VOID		18		VOID		
SD-394 VOID	" " Details	FEB 80														0	5 FEB 80	18	18	ISSUED FOR CONSTRUCTION		
SD-395	" No. 4 Plans & Details	FEB 79														VOID		18	0			
SD-396	Not Used.	FEB 80														1	24 JUN 80	18	18	DD		
SD-397	" No. 5 Plans & Details	FEB 79														0	24 APR 80	20	20	II		
SD-398	Not Used	APR 80														0	24 APR 80	20	20	II		
SD-399	" "																					
SD-400 VOID	Foundations Compaction Plant Struct Details																					
SD-401	Not Used															VOID		20	0	SCREENING & COMPACTION PLANT AREA SLAB		
SD-402 VOID	Concrete Compaction Plant Area Grade Slab Plan																					
SD-403 VOID	" " " " " Details															VOID		15	0	II		
SD-404	Not Used															VOID		15	0	II		

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PROJECT ARAB POTASH

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			LAYOUT		DESIGN						CHECK			NO	DATE			
			10	20	30	40	50	60	70	80	90	100						
	STRUCTURAL - Contd...																	
SD-429	Concrete Maint. Bld. Facfts. Annex Plans	DEC 79											OCT 79	0	10 OCT 79	20	20	ISSUED FOR CONSTRUCTION
SD-430	" " " " " Sects. & Dets.	DEC 79											OCT 79	0	10 OCT 79	20	20	" " "
SD-431	Masonry " " " " " Wall Elevs.	DEC 79											OCT 79	0	10 OCT 79	20	20	" " "
SD-432 V/D	" " " " " Walls & Dets.	FEB 79														20	0	VOID
SD-433	Concrete & Masonry " " Maint. Area Office Blk. Plan & Dets.	FEB 79											OCT 79	0	10 OCT 79	20	20	ISSUED FOR CONSTRUCTION
SD-434 V/D	Concrete & Masonry " " Equip. Area Office Blk. Plan & Dets.	FEB 79														20	0	VOID
SD-435	Concrete " " " " First Floor slab Plan Sheet 1	FEB 79											OCT 79	1	21 JULY 80	20	20	ISSUED FOR CONSTRUCTION
SD-436	" " " " " Sheet 2	FEB 79											OCT 79	2	22 SEP 80	20	20	" " "
SD-437	" " " " " Sheet 3	FEB 79											OCT 79	1	1.10.80	20	20	" " "
SD-438	" " " " " Sheet 4	FEB 79											OCT 79	1	1.10.80	20	20	" " "
SD-439 V/D	" " " " " First Floor Slab Details	FEB 79														20	0	VOID
SD-440	Foundations " " Equip. bases Sheet 1 of 7	FEB 79												1	30.9.80	20	2	ISSUED FOR CONSTRUCTION
SD-441	" " " " " Sheet 2 of 7	FEB 79												1	1.10.80	20	2	" " "
SD-442	Concrete " " " " Stair Details	MAR 79											OCT 79	0	10 OCT 79	20	20	ISSUED FOR CONSTRUCTION
SD-443	" " " " " Office Roof Slab plans & dets.	MAR 79											OCT 79	0	0 OCT 79	20	20	" " "
444	PIPEWAY CROSSING AT WADI MUSLEIRA DETAILS													A	30.9.80			ISSUED FOR ENQUIRY
445	STRUCTURAL STEEL MISC. PLATFORMS PLANS & DETAILS SHEET 4													0	25.3.80			ISSUED FOR CONSTRUCTION
446	FOUNDATIONS, MAINT EQUIP. FOUNDATIONS SHEET 2 OF 7													1	1.10.80			ISSUED FOR CONSTRUCTION
447	" " " " " SHEET 4 OF 7													2	10.11.80			PART ON HOLD
448	" " " " " SHEET 5 OF 7													1	1.10.80			ISSUED FOR CONSTRUCTION
449	" " " " " SHEET 6 OF 7													1	24.9.80			" " "
450	" " " " " SHEET 7 OF 7													2	1.12.80			PART ON HOLD

JACOBS INTERNATIONAL LIMITED

To: Mr. Ali Khasawneh,
Chairman/General Manager,
The Arab Potash Company Limited,
P.O. Box 1470,
Amman,
JORDAN.

From: Mr. M. M. Frimodig,
Vice President &
Deputy Project Director,
Jacobs International Ltd.,
Merrion House,
Merrion Road,
Dublin 4, IRELAND.

On Project 08-1875

attached are TWO enclosures ONE prints of each. We release them for
construction _____ purchase _____ approval _____ fabrication _____
design _____ your file _____ information XXXXX action _____

Enclosure	Rev	Description	Date	Pages
		<p><u>ARAB POTASH PROJECT</u></p> <p>YEARLY PROGRESS REPORT</p> <p>1980</p>		

Remarks/Special Instructions:

<u>Copies to:</u>	<u>Client</u>	<u>Jacobs</u>	<u>Other Parties</u>
	AK (2)	JMcLa/JDB MMF MJE/KB JC/RJB H. Ritchie SLK/AF Psd.	IBRD AID KFAED Arab Fund Lybian Fund AID - Amman AGP