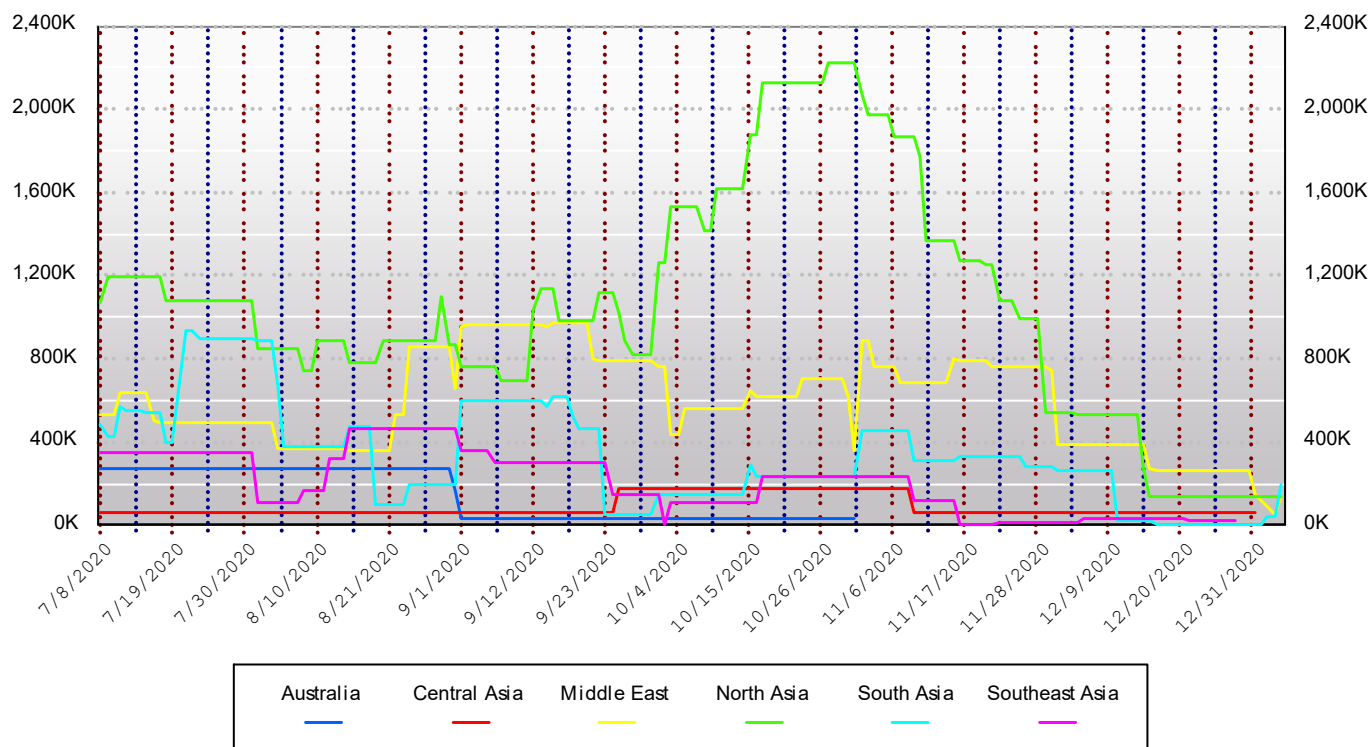




CRUDE DISTILLATION UNITS Offline



Last Date	Unit Name - Plant Name - Owner Name	Country	TA Start	TA End	Capacity	St	Utype Desc	Outage Type
Changes / Additions								
07/08/20	Crude Unit 2 - Jamnagar Refinery Special Economic Zone - Reliance Industries Limited	India	07/20/20	08/18/20	380,000 bbl/d	GU	Atmospheric Distillation	
CHANGE: Comments: Major Maintenance--PREVSTART: 10/14/2020--PREVEND: 11/12/2020								
06/05/20	FCCU I - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	01/04/21	01/15/21	20,000 bbl/d	MH	FCCU (Fluid Catalytic Cracker)	
New Turnaround: Comments:								
06/05/20	CDU 1 (FR) - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	01/04/21	03/04/21	80,000 bbl/d	MH	Atmospheric Distillation	
New Turnaround: Comments:								
06/05/20	CDU 2 (FRE) - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	01/04/21	01/15/21	70,000 bbl/d	MH	Atmospheric Distillation	
New Turnaround: Comments:								
06/05/20	FCCU II - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	01/04/21	03/04/21	28,000 bbl/d	MH	FCCU (Fluid Catalytic Cracker)	
New Turnaround: Comments: Refinery wide shutdown								
06/05/20	Reformer Unit - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	01/04/21	03/04/21	11,000 bbl/d	MH	CCR(Continuous Catalytic Reformer)	
New Turnaround: Comments: Refinery wide shutdown								
07/08/20	FCCU I - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	04/26/20	07/18/20	20,000 bbl/d	MH	FCCU (Fluid Catalytic Cracker)	U
New Turnaround: Comments: Unplanned derate due to low demand as a result of the Covid-19 Pandemic and issue in reactor internals.								
07/08/20	Crude Unit 1 - Jamnagar Refinery Special Economic Zone - Reliance Industries Limited	India	05/23/20	07/19/20	57,000 bbl/d	GU	Atmospheric Distillation	U

New Turnaround: Comments: Unplanned Derate due to low demand as a result of the Covid-19 Pandemic								
07/08/20	Full Conversion Hydrocracker - Bina Refinery - Bharat Oman Refineries Limited	India	06/26/20	07/20/20	10,200 bbl/d	MA	Distillate Hydrocracker	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic								
07/08/20	CCR Reformer Unit - Bina Refinery - Bharat Oman Refineries Limited	India	06/26/20	07/20/20	3,050 bbl/d	MA	CCR(Continuous Catalytic Reformer)	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic								
07/08/20	Crude Distillation Unit - Bina Refinery - Bharat Oman Refineries Limited	India	06/26/20	07/20/20	31,200 bbl/d	MA	Atmospheric Distillation	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic								
07/08/20	Delayed Coker - Bina Refinery - Bharat Oman Refineries Limited	India	06/26/20	07/20/20	7,060 bbl/d	MA	Delayed Coker	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic								
07/08/20	Crude Unit 2 - Jamnagar Refinery Special Economic Zone - Reliance Industries Limited	India	06/29/20	07/19/20	11,400 bbl/d	GU	Atmospheric Distillation	U
New Turnaround: Comments: Unplanned Derate due to low demand as a result of the Covid-19 Pandemic								
07/08/20	CDU 1 (FR) - Mumbai Refinery - Hindustan Petroleum Corporation Limited	India	07/05/20	07/14/20	14,400 bbl/d	MH	Atmospheric Distillation	U
New Turnaround: Comments: Unplanned derate due to lack of storage								

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Australia

Australia

Crude

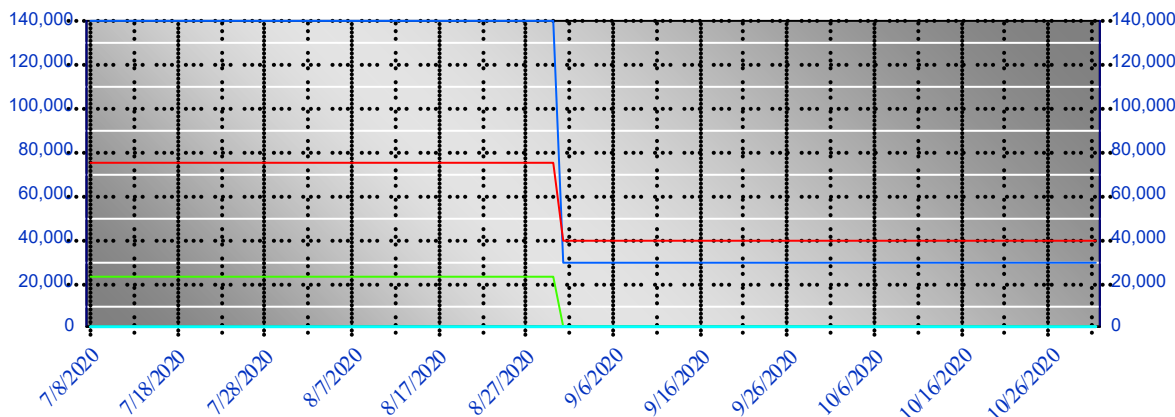
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 81,207 bbl/d

Total Off-line: 9,420,000

Date Range: 7/8/2020 - 10/31/2020

07/02/20	Caltex Refineries (QLD) Pty Limited - Lytton Refinery	Australia	05/08/20	08/30/20	55,000 bbl/d	QU Atmospheric Distillation	U
07/02/20	Caltex Refineries (QLD) Pty Limited - Lytton Refinery	Australia	05/08/20	08/30/20	55,000 bbl/d	QU Atmospheric Distillation	U
06/23/20	Viva Energy Australia Limited - Geelong Refinery	Australia	05/01/20	10/31/20	30,000 bbl/d	VI Atmospheric Distillation	U

Reformers: Daily Off-Line Capacity: 23,000 bbl/d

Total Off-line: 1,242,000

Date Range: 7/8/2020 - 8/30/2020

07/02/20	Caltex Refineries (QLD) Pty Limited - Lytton Refinery	Australia	05/08/20	08/30/20	23,000 bbl/d	QU CCR(Continuous Catalytic Reformer)	U
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FCCU: Daily Off-Line Capacity: 56,293 bbl/d

Total Off-line: 6,530,000

Date Range: 7/8/2020 - 10/31/2020

07/02/20	Caltex Refineries (QLD) Pty Limited - Lytton Refinery	Australia	05/08/20	08/30/20	35,000 bbl/d	QU FCCU (Fluid Catalytic Cracker)	
06/23/20	Viva Energy Australia Limited - Geelong Refinery	Australia	07/01/20	10/31/20	40,000 bbl/d	VI FCCU (Fluid Catalytic Cracker)	

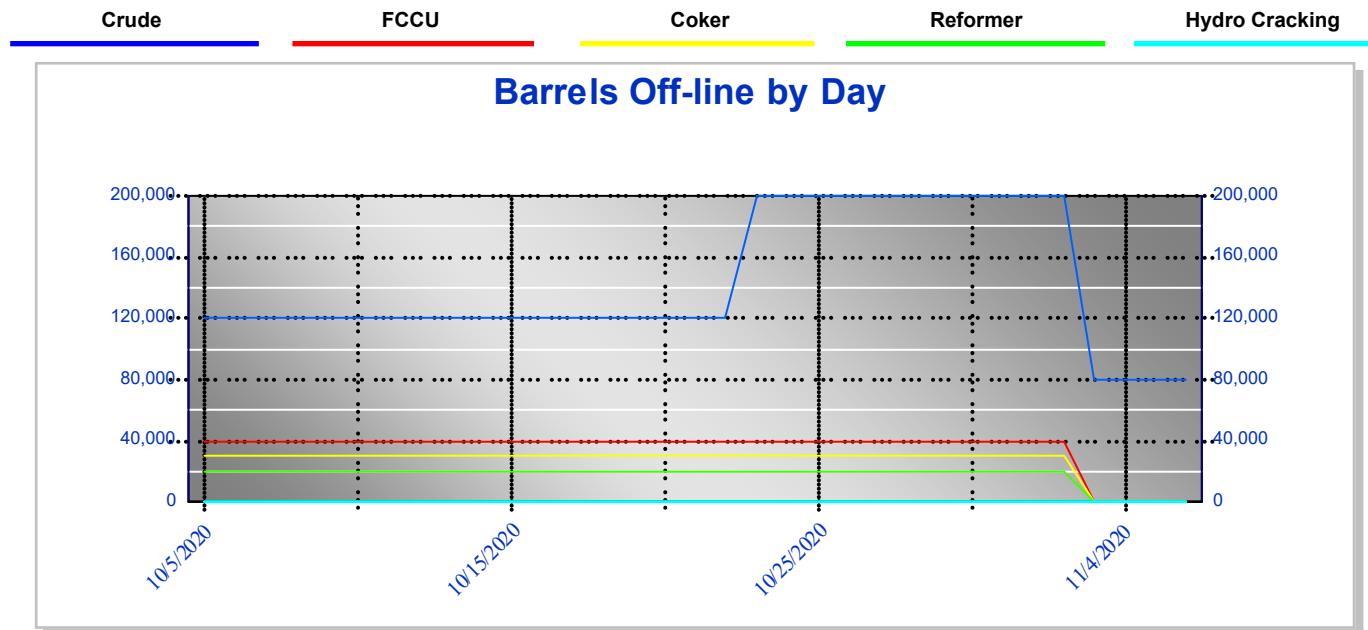
Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Azerbaijan



Crude Distillation: Daily Off-Line Capacity: 141,818 bbl/d

Total Off-line: 4,680,000

Date Range: 10/5/2020 - 11/6/2020

11/29/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Upper Refinery	Azerbaijan	10/05/20	11/02/20	120,000 bbl/d	AZ Atmospheric Distillation
11/06/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Lower Refinery (Azerneftiyag)	Azerbaijan	10/23/20	11/06/20	40,000 bbl/d	AZ Atmospheric Distillation
11/06/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Lower Refinery (Azerneftiyag)	Azerbaijan	10/23/20	11/06/20	40,000 bbl/d	AZ Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 20,000 bbl/d

Total Off-line: 580,000

Date Range: 10/5/2020 - 11/2/2020

11/29/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Upper Refinery	Azerbaijan	10/05/20	11/02/20	20,000 bbl/d	AZ CCR(Continuous Catalytic Reformer)
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FCCU: Daily Off-Line Capacity: 40,000 bbl/d

Total Off-line: 1,160,000

Date Range: 10/5/2020 - 11/2/2020

11/29/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Upper Refinery	Azerbaijan	10/05/20	11/02/20	40,000 bbl/d	AZ FCCU (Fluid Catalytic Cracker)
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Coker: Daily Off-Line Capacity: 30,000 bbl/d

Total Off-line: 870,000

Date Range: 10/5/2020 - 11/2/2020

11/29/19	Bakinsk NPZ JSC - Bakinsk Heydar Aliyev Upper Refinery	Azerbaijan	10/05/20	11/02/20	30,000 bbl/d	AZ Delayed Coker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Bahrain

Crude

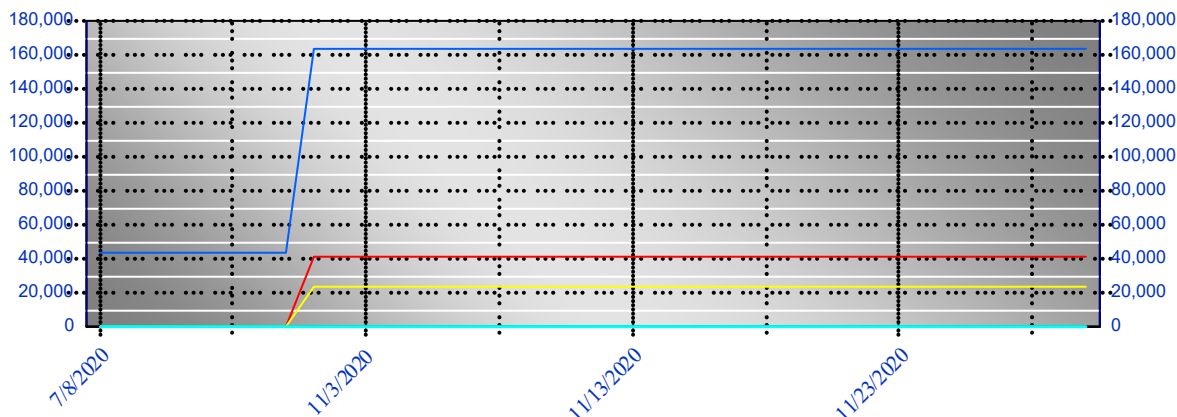
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 35,904 bbl/d

Total Off-line: 5,242,000

Date Range: 7/8/2020 - 11/30/2020

07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	69,000 bbl/d	SI	Atmospheric Distillation	
07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	50,000 bbl/d	SI	Atmospheric Distillation	
07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	22,000 bbl/d	SI	Atmospheric Distillation	
07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	22,000 bbl/d	SI	Atmospheric Distillation	
06/17/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	03/21/20	07/15/20	22,000 bbl/d	SI	Atmospheric Distillation	U
06/17/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	04/15/20	07/15/20	22,000 bbl/d	SI	Atmospheric Distillation	U

FCCU: Daily Off-Line Capacity: 41,500 bbl/d

Total Off-line: 1,245,000

Date Range: 11/1/2020 - 11/30/2020

07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	41,500 bbl/d	SI	FCCU (Fluid Catalytic Cracker)	
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Coker: Daily Off-Line Capacity: 24,000 bbl/d

Total Off-line: 720,000

Date Range: 11/1/2020 - 11/30/2020

07/06/20	Bahrain Petroleum Company - Sitrah Refinery	Bahrain	11/01/20	11/30/20	24,000 bbl/d	SI	Visbreaker	
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Barrels Off-line from 7/8/2020 to 1/4/2021



North Asia

China

Crude

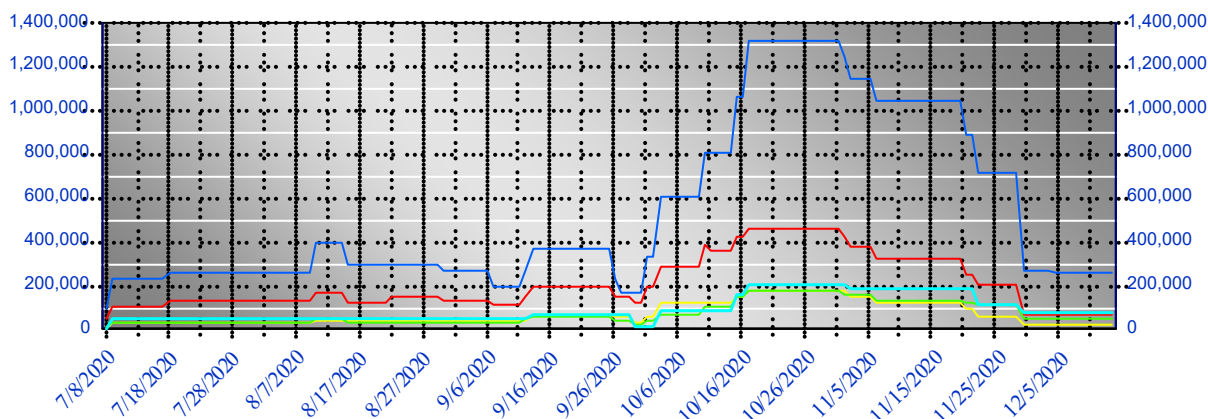
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 539,648 bbl/d

Total Off-line: 85,804,000

Date Range: 7/8/2020 - 12/13/2020

07/07/20	Zhonghai Petroleum Dongying Petrochemical Company Limited - Zhonghai Dongying Refinery	China	09/12/20	10/31/20	70,000 bbl/d	SH Atmospheric Distillation
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/06/20	70,000 bbl/d	LI Atmospheric Distillation
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/26/20	60,000 bbl/d	LI Atmospheric Distillation
07/02/20	CNOOC Huizhou Refining Company - Huizhou Refinery	China	10/10/20	11/28/20	200,000 bbl/d	GU Atmospheric Distillation
07/01/20	PetroChina Ningxia Petrochemical Company - Yinchuan Refinery	China	07/01/20	08/14/20	100,000 bbl/d	NI Atmospheric Distillation
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	260,000 bbl/d	YU Atmospheric Distillation
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	100,000 bbl/d	SH Atmospheric Distillation
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	160,000 bbl/d	JA Atmospheric Distillation
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	90,000 bbl/d	JA Atmospheric Distillation

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

China

06/10/20	Shandong Zhonghai Fine Chemical Company Limited - Binzhou Refinery	China	07/18/20	08/29/20	30,000 bbl/d	SH Atmospheric Distillation
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	100,000 bbl/d	HU Atmospheric Distillation
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	70,000 bbl/d	HU Atmospheric Distillation
03/24/20	Bluestar Petrochemical Jinan Changcheng Refinery Company Limited - Jinan Changcheng Refinery	China	10/01/20	12/03/20	6,000 bbl/d	SH Atmospheric Distillation
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	100,000 bbl/d	SH Atmospheric Distillation
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	40,000 bbl/d	SH Atmospheric Distillation
03/02/20	SINOPEC Changling Company Limited - Yueyang Refinery	China	10/01/20	11/19/20	160,000 bbl/d	HV Atmospheric Distillation
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	70,000 bbl/d	SH Atmospheric Distillation
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	30,000 bbl/d	SH Atmospheric Distillation
Reformers: Daily Off-Line Capacity: 73,044 bbl/d Total Off-line: 11,614,000 Date Range: 7/8/2020 - 12/13/2020						
07/07/20	Zhonghai Petroleum Dongying Petrochemical Company Limited - Zhonghai Dongying Refinery	China	09/12/20	10/31/20	20,000 bbl/d	SH CCR(Continuous Catalytic Reformer)
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/28/20	16,000 bbl/d	LI CCR(Continuous Catalytic Reformer)
07/02/20	CNOOC Huizhou Refining Company - Huizhou Refinery	China	10/10/20	11/28/20	36,000 bbl/d	GU CCR(Continuous Catalytic Reformer)
07/01/20	PetroChina Ningxia Petrochemical Company - Yinchuan Refinery	China	07/01/20	08/14/20	12,000 bbl/d	NI CCR(Continuous Catalytic Reformer)
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	48,000 bbl/d	YU CCR(Continuous Catalytic Reformer)
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	5,000 bbl/d	SH CCR(Continuous Catalytic Reformer)
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	30,000 bbl/d	JA CCR(Continuous Catalytic Reformer)

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

China

06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	8,000 bbl/d	HU CCR(Continuous Catalytic Reformer)
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	12,000 bbl/d	SH CCR(Continuous Catalytic Reformer)
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	6,000 bbl/d	SH CCR(Continuous Catalytic Reformer)
03/02/20	SINOPEC Changling Company Limited - Yueyang Refinery	China	10/01/20	11/19/20	14,000 bbl/d	HV CCR(Continuous Catalytic Reformer)
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	20,000 bbl/d	SH CCR(Continuous Catalytic Reformer)
FCCU: Daily Off-Line Capacity: 209,899 bbl/d Total Off-line: 33,374,000 Date Range: 7/8/2020 - 12/13/2020						
07/07/20	Zhonghai Petroleum Dongying Petrochemical Company Limited - Zhonghai Dongying Refinery	China	09/12/20	10/31/20	40,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/28/20	36,000 bbl/d	LI FCCU (Fluid Catalytic Cracker)
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/06/20	20,000 bbl/d	LI FCCU (Fluid Catalytic Cracker)
07/02/20	CNOOC Huizhou Refining Company - Huizhou Refinery	China	10/10/20	11/28/20	96,000 bbl/d	GU FCCU (Fluid Catalytic Cracker)
07/01/20	PetroChina Ningxia Petrochemical Company - Yinchuan Refinery	China	07/01/20	08/14/20	52,000 bbl/d	NI FCCU (Fluid Catalytic Cracker)
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	66,000 bbl/d	YU FCCU (Fluid Catalytic Cracker)
06/29/20	Sinopec Qilu Company Limited - Zibo Refinery	China	08/22/20	10/10/20	30,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	28,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	12,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	9,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	40,000 bbl/d	JA FCCU (Fluid Catalytic Cracker)

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

China

06/10/20	Shandong Zhonghai Fine Chemical Company Limited - Binzhou Refinery	China	07/18/20	08/29/20	20,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	24,000 bbl/d	HU FCCU (Fluid Catalytic Cracker)
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	20,000 bbl/d	HU FCCU (Fluid Catalytic Cracker)
03/24/20	Bluestar Petrochemical Jinan Changcheng Refinery Company Limited - Jinan Changcheng Refinery	China	10/01/20	12/03/20	4,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	28,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	16,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
03/02/20	SINOPEC Changling Company Limited - Yueyang Refinery	China	10/01/20	11/19/20	56,000 bbl/d	HV FCCU (Fluid Catalytic Cracker)
03/02/20	SINOPEC Changling Company Limited - Yueyang Refinery	China	10/01/20	11/19/20	20,000 bbl/d	HV FCCU (Fluid Catalytic Cracker)
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	28,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	20,000 bbl/d	SH FCCU (Fluid Catalytic Cracker)

Coker: Daily Off-Line Capacity: 73,177 bbl/d

Total Off-line: 11,562,000

Date Range: 7/9/2020 - 12/13/2020

07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/28/20	30,000 bbl/d	LI Delayed Coker
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	24,000 bbl/d	YU Delayed Coker
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	32,000 bbl/d	SH Delayed Coker
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	32,000 bbl/d	JA Delayed Coker
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	24,000 bbl/d	HU Delayed Coker
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	20,000 bbl/d	HU Delayed Coker

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

China

03/19/20	SINOPEC Jinan Company Limited - Jinan Refinery	China	08/10/20	09/25/20	10,000 bbl/d	SH Delayed Coker
03/02/20	SINOPEC Changling Company Limited - Yueyang Refinery	China	10/01/20	11/19/20	24,000 bbl/d	HV Delayed Coker
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	12,000 bbl/d	SH Delayed Coker
01/23/20	Zhenghe Group - Dongying Refinery	China	10/03/20	11/05/20	12,000 bbl/d	SH Delayed Coker

Hydrocrackers: Daily Off-Line Capacity: 93,671 bbl/d

Total Off-line: 14,800,000

Date Range: 7/9/2020 - 12/13/2020

07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/28/20	30,000 bbl/d	LI Distillate Hydrocracker
07/06/20	PetroChina Jinxi Petrochemical Company - Huludao Refinery	China	07/09/20	09/28/20	20,000 bbl/d	LI Distillate Hydrocracker
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	42,000 bbl/d	YU Distillate Hydrocracker
06/30/20	PetroChina Yunnan Petrochemical Company - Kunming Anning Refinery	China	10/15/20	12/13/20	36,000 bbl/d	YU Distillate Hydrocracker
06/29/20	Sinopec Qingdao Petrochemical Company Limited - Qingdao Refinery	China	09/13/20	11/01/20	14,000 bbl/d	SH Distillate Hydrocracker
06/21/20	SINOPEC Yangzi Petrochemical Company Limited - Nanjing Refinery	China	10/17/20	11/28/20	40,000 bbl/d	JA Residual Hydrocracker
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	36,000 bbl/d	HU Distillate Hydrocracker
06/08/20	Sinopec Wuhan Company Limited - Wuhan Refinery	China	10/03/20	11/21/20	36,000 bbl/d	HU Distillate Hydrocracker

Barrels Off-line from 7/8/2020 to 1/4/2021

The Following are a list of Turnarounds that are "no longer" within the 180 day range that may have appeared in previous day 180 Report:

China

Quanzhou Refinery

China

Sinochem Quanzhou Petrochemical Company Limited

UNIT NAME:	Fluid Catalytic Cracker (FCC)	UNIT DESC:	FCCU (Fluid Catalytic Cracker)	OUTAGE ID:	355540
BBL/D:	68000	TA START:	12/03/2020	TA END:	01/21/2021
COMMENTS:	Plant wide turnaround				
UNIT NAME:	CDU	UNIT DESC:	Atmospheric Distillation	OUTAGE ID:	355544
BBL/D:	240000	TA START:	12/03/2020	TA END:	01/21/2021
COMMENTS:	Plant wide turnaround				
UNIT NAME:	Delayed Coker	UNIT DESC:	Delayed Coker	OUTAGE ID:	355538
BBL/D:	32000	TA START:	12/03/2020	TA END:	01/21/2021
COMMENTS:	Plant wide turnaround				
UNIT NAME:	CCR	UNIT DESC:	CCR(Continuous Catalytic Reformer)	OUTAGE ID:	355551
BBL/D:	40000	TA START:	12/03/2020	TA END:	01/21/2021
COMMENTS:	Plant wide turnaround				

Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Egypt

Crude

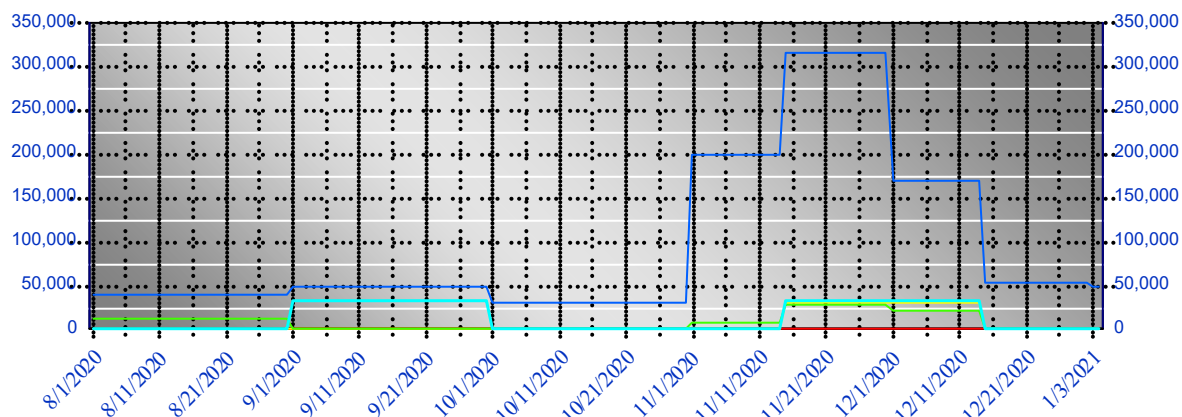
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 94,076 bbl/d

Total Off-line: 14,770,000

Date Range: 8/1/2020 - 1/4/2021

06/15/20	Middle East Oil Refinery (MIDOR) - Alexandria Middle East Oil Refinery (MIDOR)	Egypt	11/15/20	12/14/20	115,000 bbl/d	AH	Atmospheric Distillation
04/27/20	Alexandria Petroleum Company - Alexandria (El-Mex) Refinery	Egypt	11/01/20	11/30/20	36,500 bbl/d	AH	Atmospheric Distillation
04/27/20	Alexandria Petroleum Company - Alexandria (El-Mex) Refinery	Egypt	11/01/20	11/30/20	33,500 bbl/d	AH	Atmospheric Distillation
04/27/20	Alexandria Petroleum Company - Alexandria (El-Mex) Refinery	Egypt	11/01/20	11/30/20	30,000 bbl/d	AH	Atmospheric Distillation
04/06/20	Suez Oil Processing Company - Suez Refinery	Egypt	08/01/20	08/30/20	40,000 bbl/d	AU	Atmospheric Distillation
03/12/20	Nasr Petroleum Company - Suez Refinery	Egypt	09/01/20	09/30/20	50,000 bbl/d	AU	Atmospheric Distillation
03/05/20	Nasr Petroleum Company - Suez Refinery	Egypt	10/01/20	10/30/20	30,000 bbl/d	AU	Atmospheric Distillation
01/23/20	Assiut Oil Refining Company - Assiut Refinery	Egypt	11/01/20	11/30/20	40,000 bbl/d	AY	Atmospheric Distillation
01/23/20	Assiut Oil Refining Company - Assiut Refinery	Egypt	01/03/21	02/01/21	50,000 bbl/d	AY	Atmospheric Distillation

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Egypt

12/12/19	Cairo Oil Refining Company - Tanta Refinery	Egypt	12/01/20	12/30/20	54,000 bbl/d	AG Atmospheric Distillation
12/02/19	Cairo Oil Refining Company - Mostorod Refinery	Egypt	11/01/20	11/30/20	30,000 bbl/d	AQ Atmospheric Distillation
12/02/19	Cairo Oil Refining Company - Mostorod Refinery	Egypt	11/01/20	11/30/20	30,000 bbl/d	AQ Atmospheric Distillation
Reformers: Daily Off-Line Capacity: 9,253 bbl/d Total Off-line: 1,258,440 Date Range: 8/1/2020 - 12/14/2020						
06/15/20	Middle East Oil Refinery (MIDOR) - Alexandria Middle East Oil Refinery (MIDOR)	Egypt	11/15/20	12/14/20	21,700 bbl/d	AH CCR(Continuous Catalytic Reformer)
04/27/20	Alexandria Petroleum Company - Alexandria (El-Mex) Refinery	Egypt	11/01/20	11/30/20	7,248 bbl/d	AH Semiregen/Cyclic Reformer
04/06/20	Suez Oil Processing Company - Suez Refinery	Egypt	08/01/20	08/30/20	13,000 bbl/d	AU CCR(Continuous Catalytic Reformer)
Coker: Daily Off-Line Capacity: 30,000 bbl/d Total Off-line: 900,000 Date Range: 11/15/2020 - 12/14/2020						
06/15/20	Middle East Oil Refinery (MIDOR) - Alexandria Middle East Oil Refinery (MIDOR)	Egypt	11/15/20	12/14/20	30,000 bbl/d	AH Delayed Coker
Hydrocrackers: Daily Off-Line Capacity: 18,714 bbl/d Total Off-line: 1,965,000 Date Range: 9/1/2020 - 12/14/2020						
06/15/20	Middle East Oil Refinery (MIDOR) - Alexandria Middle East Oil Refinery (MIDOR)	Egypt	11/15/20	12/14/20	33,500 bbl/d	AH Distillate Hydrocracker
03/12/20	Nasr Petroleum Company - Suez Refinery	Egypt	09/01/20	09/30/20	32,000 bbl/d	AU Distillate Hydrocracker

Barrels Off-line from 7/8/2020 to 1/4/2021



South Asia

India

Crude

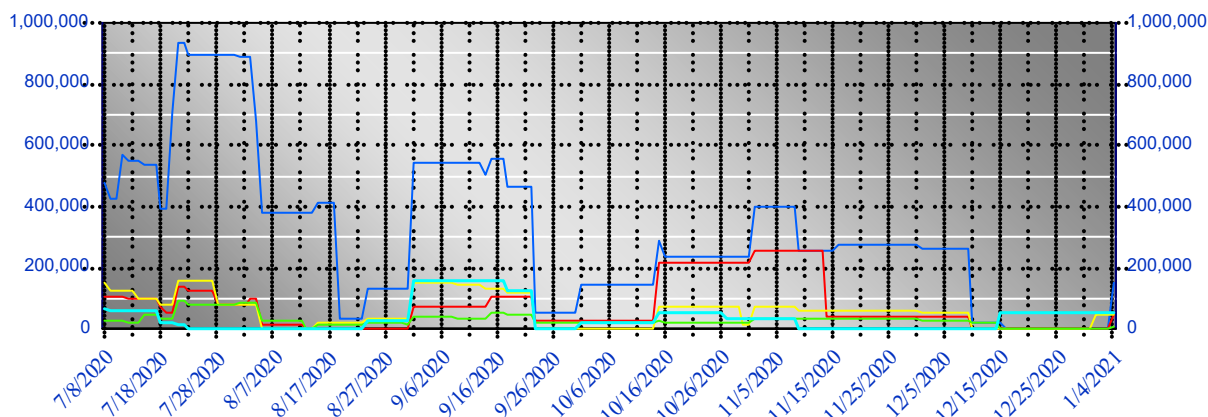
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 312,714 bbl/d

Total Off-line: 56,601,320

Date Range: 7/8/2020 - 1/4/2021

07/08/20	Reliance Industries Limited - Jamnagar Refinery Special Economic Zone	India	05/23/20	07/19/20	57,000 bbl/d	GU Atmospheric Distillation	U
New Turnaround: Comments: Unplanned Derate due to low demand as a result of the Covid-19 Pandemic							
07/08/20	Bharat Oman Refineries Limited - Bina Refinery	India	06/26/20	07/20/20	31,200 bbl/d	MA Atmospheric Distillation	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic							
07/08/20	Reliance Industries Limited - Jamnagar Refinery Special Economic Zone	India	06/29/20	07/19/20	11,400 bbl/d	GU Atmospheric Distillation	U
New Turnaround: Comments: Unplanned Derate due to low demand as a result of the Covid-19 Pandemic							
07/08/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	07/05/20	07/14/20	14,400 bbl/d	MH Atmospheric Distillation	U
New Turnaround: Comments: Unplanned derate due to lack of storage							
07/08/20	Reliance Industries Limited - Jamnagar Refinery Special Economic Zone	India	07/20/20	08/18/20	380,000 bbl/d	GU Atmospheric Distillation	
CHANGE: Comments: Major Maintenance--PREVSTART: 10/14/2020--PREVEND: 11/12/2020							
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	04/22/20	07/17/20	144,000 bbl/d	KA Atmospheric Distillation	U
07/07/20	Reliance Industries Limited - Jamnagar Refinery Domestic Tariff Area	India	05/26/20	07/20/20	19,800 bbl/d	GU Atmospheric Distillation	U
07/07/20	Reliance Industries Limited - Jamnagar Refinery Domestic Tariff Area	India	07/01/20	07/20/20	19,800 bbl/d	GU Atmospheric Distillation	U
07/07/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/03/20	07/22/20	36,000 bbl/d	MH Atmospheric Distillation	U

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

South Asia

India

07/07/20	Indian Oil Corporation Limited - Bongaigaon Refinery	India	07/06/20	07/31/20	5,940 bbl/d	AS Atmospheric Distillation	U
07/07/20	Indian Oil Corporation Limited - Bongaigaon Refinery	India	07/06/20	07/31/20	2,700 bbl/d	AS Atmospheric Distillation	U
07/01/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	06/15/20	07/10/20	67,200 bbl/d	KE Atmospheric Distillation	U
07/01/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	07/01/20	07/11/20	16,500 bbl/d	KE Atmospheric Distillation	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	04/03/20	07/08/20	42,000 bbl/d	GU Atmospheric Distillation	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/09/20	07/08/20	8,820 bbl/d	GU Atmospheric Distillation	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/16/20	07/08/20	3,040 bbl/d	GU Atmospheric Distillation	U
06/25/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	07/11/20	08/03/20	210,000 bbl/d	KE Atmospheric Distillation	
06/25/20	Indian Oil Corporation Limited - Paradip Refinery	India	07/21/20	08/04/20	300,000 bbl/d	OR Atmospheric Distillation	
06/05/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	01/04/21	03/04/21	80,000 bbl/d	MH Atmospheric Distillation	
New Turnaround: Comments:							
06/05/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	01/04/21	01/15/21	70,000 bbl/d	MH Atmospheric Distillation	
New Turnaround: Comments:							
06/01/20	HPCL-Mittal Energy Ltd - Bathinda Guru Gobind Singh Refinery	India	11/01/20	12/09/20	242,000 bbl/d	PU Atmospheric Distillation	
05/20/20	Indian Oil Corporation Limited - Barauni Refinery	India	08/15/20	09/13/20	35,000 bbl/d	BI Atmospheric Distillation	
05/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	10/15/20	11/08/20	144,000 bbl/d	KA Atmospheric Distillation	
05/06/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	09/15/20	10/15/20	54,000 bbl/d	GU Atmospheric Distillation	
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	365,000 bbl/d	GU Atmospheric Distillation	
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	45,000 bbl/d	GU Atmospheric Distillation	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

South Asia

India

03/18/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	08/24/20	09/17/20	96,000 bbl/d	KA Atmospheric Distillation	
11/28/19	Indian Oil Corporation Limited - Digboi Refinery	India	11/01/20	11/30/20	16,000 bbl/d	AS Atmospheric Distillation	
04/23/19	Indian Oil Corporation Limited - Haldia Refinery	India	10/01/20	10/31/20	93,500 bbl/d	WE Atmospheric Distillation	
02/07/19	Indian Oil Corporation Limited - Guwahati Refinery	India	11/16/20	12/15/20	20,000 bbl/d	AS Atmospheric Distillation	
Reformers: Daily Off-Line Capacity: 30,651 bbl/d Total Off-line: 5,547,805 Date Range: 7/8/2020 - 1/4/2021							
07/08/20	Bharat Oman Refineries Limited - Bina Refinery	India	06/26/20	07/20/20	3,050 bbl/d	MA CCR(Continuous Catalytic Reformer)	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic							
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	04/22/20	07/17/20	13,500 bbl/d	KA CCR(Continuous Catalytic Reformer)	U
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	07/01/20	07/17/20	740 bbl/d	KA CCR(Continuous Catalytic Reformer)	U
07/07/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/03/20	07/22/20	7,200 bbl/d	MH CCR(Continuous Catalytic Reformer)	U
07/01/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	06/15/20	07/11/20	3,414 bbl/d	KE CCR(Continuous Catalytic Reformer)	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/09/20	07/08/20	1,450 bbl/d	GU CCR(Continuous Catalytic Reformer)	U
06/30/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/15/20	08/12/20	24,000 bbl/d	MH CCR(Continuous Catalytic Reformer)	
06/29/20	Indian Oil Corporation Limited - Panipat Refinery	India	08/15/20	09/08/20	11,000 bbl/d	HA Semiregen/Cyclic Reformer	
06/25/20	Indian Oil Corporation Limited - Paradip Refinery	India	07/21/20	08/04/20	60,000 bbl/d	OR CCR(Continuous Catalytic Reformer)	
06/05/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	01/04/21	03/04/21	11,000 bbl/d	MH CCR(Continuous Catalytic Reformer)	
New Turnaround: Comments: Refinery wide shutdown							
06/01/20	HPCL-Mittal Energy Ltd - Bathinda Guru Gobind Singh Refinery	India	11/01/20	12/09/20	10,000 bbl/d	PU CCR(Continuous Catalytic Reformer)	
05/06/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	09/15/20	12/14/20	13,900 bbl/d	GU CCR(Continuous Catalytic Reformer)	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

South Asia

India

05/06/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	09/15/20	10/15/20	7,250 bbl/d	GU CCR(Continuous Catalytic Reformer)
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	26,000 bbl/d	GU CCR(Continuous Catalytic Reformer)
03/31/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	08/24/20	09/17/20	7,400 bbl/d	KA CCR(Continuous Catalytic Reformer)
03/06/20	Indian Oil Corporation Limited - Barauni Refinery	India	11/15/20	12/14/20	7,000 bbl/d	BI Semiregen/Cyclic Reformer
11/28/19	Indian Oil Corporation Limited - Digboi Refinery	India	11/01/20	11/30/20	1,800 bbl/d	AS Semiregen/Cyclic Reformer
09/11/19	Indian Oil Corporation Limited - Haldia Refinery	India	08/01/20	08/30/20	5,000 bbl/d	WE Semiregen/Cyclic Reformer
11/22/16	Indian Oil Corporation Limited - Mathura Refinery	India	10/15/20	11/14/20	10,000 bbl/d	UT CCR(Continuous Catalytic Reformer)

FCCU: Daily Off-Line Capacity: 75,925 bbl/d

Total Off-line: 13,742,400

Date Range: 7/8/2020 - 1/4/2021

07/08/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	04/26/20	07/18/20	20,000 bbl/d	MH FCCU (Fluid Catalytic Cracker)	U
New Turnaround: Comments: Unplanned derate due to low demand as a result of the Covid-19 Pandemic and issue in reactor internals.							
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	05/18/20	07/17/20	22,000 bbl/d	KA FCCU (Fluid Catalytic Cracker)	U
07/07/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/03/20	07/22/20	7,560 bbl/d	MH FCCU (Fluid Catalytic Cracker)	U
07/07/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/03/20	07/22/20	5,400 bbl/d	MH FCCU (Fluid Catalytic Cracker)	U
07/01/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	06/15/20	07/11/20	7,000 bbl/d	KE FCCU (Fluid Catalytic Cracker)	U
06/25/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	06/24/20	07/27/20	44,000 bbl/d	KE FCCU (Fluid Catalytic Cracker)	
06/25/20	Indian Oil Corporation Limited - Paradip Refinery	India	07/21/20	08/04/20	84,000 bbl/d	OR FCCU (Fluid Catalytic Cracker)	
06/05/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	01/04/21	03/04/21	28,000 bbl/d	MH FCCU (Fluid Catalytic Cracker)	
New Turnaround: Comments: Refinery wide shutdown							
06/05/20	Hindustan Petroleum Corporation Limited - Mumbai Refinery	India	01/04/21	01/15/21	20,000 bbl/d	MH FCCU (Fluid Catalytic Cracker)	
New Turnaround: Comments:							

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

South Asia

India

06/01/20	HPCL-Mittal Energy Ltd - Bathinda Guru Gobind Singh Refinery	India	11/01/20	12/09/20	44,000 bbl/d	PU FCCU (Fluid Catalytic Cracker)	
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	78,000 bbl/d	GU FCCU (Fluid Catalytic Cracker)	
04/06/20	Indian Oil Corporation Limited - Barauni Refinery	India	09/15/20	10/14/20	28,000 bbl/d	BI FCCU (Fluid Catalytic Cracker)	
03/06/20	Indian Oil Corporation Limited - Panipat Refinery	India	08/03/20	08/12/20	17,000 bbl/d	HA FCCU (Fluid Catalytic Cracker)	
03/06/20	Reliance Industries Limited - Jamnagar Refinery Special Economic Zone	India	10/15/20	11/13/20	215,000 bbl/d	GU FCCU (Fluid Catalytic Cracker)	
Coker: Daily Off-Line Capacity: 58,150 bbl/d Total Off-line: 10,525,200 Date Range: 7/8/2020 - 1/4/2021							
07/08/20	Bharat Oman Refineries Limited - Bina Refinery	India	06/26/20	07/20/20	7,060 bbl/d	MA Delayed Coker	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic							
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	04/22/20	07/17/20	15,340 bbl/d	KA Visbreaker	U
07/01/20	Bharat Petroleum Corporation Limited - Kochi Refinery	India	06/30/20	07/27/20	76,800 bbl/d	KE Delayed Coker	
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/09/20	07/08/20	14,800 bbl/d	GU Delayed Coker	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/09/20	07/08/20	6,120 bbl/d	GU Visbreaker	U
06/29/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	06/22/20	07/13/20	30,000 bbl/d	KA Delayed Coker	U
06/29/20	Indian Oil Corporation Limited - Panipat Refinery	India	08/15/20	09/08/20	8,000 bbl/d	HA Visbreaker	
06/25/20	Indian Oil Corporation Limited - Paradip Refinery	India	07/21/20	08/04/20	82,000 bbl/d	OR Delayed Coker	
06/01/20	HPCL-Mittal Energy Ltd - Bathinda Guru Gobind Singh Refinery	India	11/01/20	12/09/20	55,400 bbl/d	PU Delayed Coker	
05/20/20	Indian Oil Corporation Limited - Barauni Refinery	India	08/15/20	09/13/20	12,000 bbl/d	BI Delayed Coker	
05/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	10/15/20	10/29/20	60,000 bbl/d	KA Delayed Coker	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

South Asia

India

05/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	10/15/20	11/08/20	15,340 bbl/d	KA Visbreaker	
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	120,000 bbl/d	GU Delayed Coker	
03/31/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	08/24/20	09/17/20	15,000 bbl/d	KA Visbreaker	
11/28/19	Indian Oil Corporation Limited - Digboi Refinery	India	11/01/20	11/30/20	3,400 bbl/d	AS Delayed Coker	
10/23/19	Indian Oil Corporation Limited - Panipat Refinery	India	01/01/21	01/30/21	48,000 bbl/d	HA Delayed Coker	
Hydrocrackers: Daily Off-Line Capacity: 38,156 bbl/d Total Off-line: 6,906,150 Date Range: 7/8/2020 - 1/4/2021							
07/08/20	Bharat Oman Refineries Limited - Bina Refinery	India	06/26/20	07/20/20	10,200 bbl/d	MA Distillate Hydrocracker	U
New Turnaround: Comments: Unplanned Derate due to Low Demand as a result of Covid-19 Pandemic							
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	04/22/20	07/17/20	34,000 bbl/d	KA Distillate Hydrocracker	U
07/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	06/07/20	07/17/20	3,200 bbl/d	KA Distillate Hydrocracker	U
07/07/20	Bharat Petroleum Corporation Limited - Mumbai Refinery	India	07/03/20	07/22/20	13,050 bbl/d	MH Distillate Hydrocracker	U
06/30/20	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	06/09/20	07/08/20	4,800 bbl/d	GU Distillate Hydrocracker	U
06/02/20	Reliance Industries Limited - Jamnagar Refinery Special Economic Zone	India	12/15/20	01/08/21	55,000 bbl/d	GU Distillate Hydrocracker	
05/07/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	10/15/20	11/08/20	34,000 bbl/d	KA Distillate Hydrocracker	
05/05/20	Nayara Energy Limited - Vadinar Refinery	India	09/01/20	09/22/20	126,000 bbl/d	GU Distillate Hydrocracker	
03/31/20	Mangalore Refinery & Petrochemicals Limited - Mangalore Refinery	India	08/24/20	09/17/20	32,000 bbl/d	KA Distillate Hydrocracker	
12/27/19	Indian Oil Corporation Limited - Koyali Refinery (Gujarat)	India	10/01/20	10/26/20	24,000 bbl/d	GU Distillate Hydrocracker	

Barrels Off-line from 7/8/2020 to 1/4/2021

The Following are a list of Turnarounds that are "no longer" within the 180 day range that may have appeared in previous day 180 Report:

India

Manali Refinery

India

Chennai Petroleum Corporation Limited

UNIT NAME:	Catalytic Reformer Unit	UNIT DESC:	CCR(Continuous Catalytic Reformer)	OUTAGE ID:	415435
BBL/D:	6500	TA START:	08/17/2020	TA END:	09/15/2020
COMMENTS: Major Turnaround delayed due to Covid-19 Pandemic					
UNIT NAME:	CDU 3	UNIT DESC:	Atmospheric Distillation	OUTAGE ID:	258854
BBL/D:	80000	TA START:	08/17/2020	TA END:	09/15/2020
COMMENTS: Major Turnaround delayed due to Covid-19 Pandemic					
UNIT NAME:	Once through Hydrocracker Unit	UNIT DESC:	Distillate Hydrocracker	OUTAGE ID:	415458
BBL/D:	45000	TA START:	08/17/2020	TA END:	09/15/2020
COMMENTS: Major Turnaround delayed due to Covid-19 Pandemic					

Barrels Off-line from 7/8/2020 to 1/4/2021



Southeast Asia

Indonesia

Crude

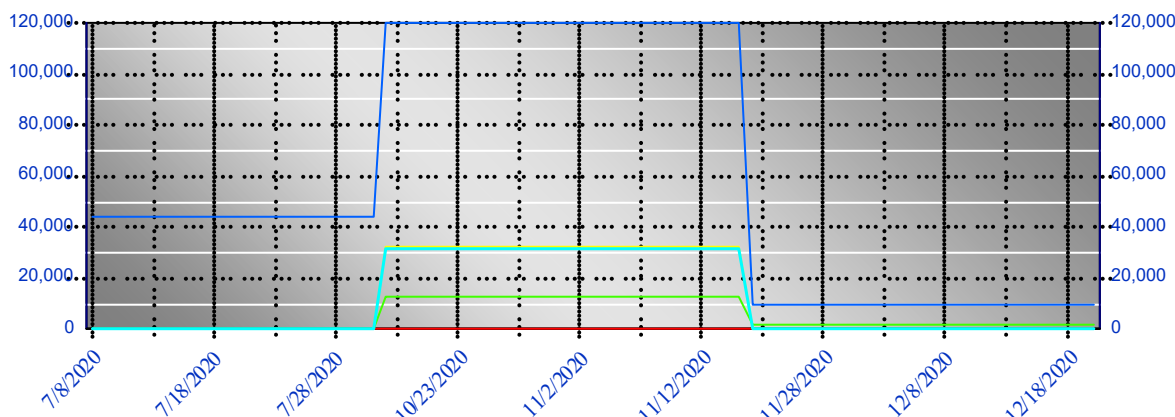
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 29,795 bbl/d

Total Off-line: 4,946,000

Date Range: 7/8/2020 - 12/20/2020

06/30/20	PT Pertamina Persero - RU VII - Kasim Refinery	Indonesia	11/22/20	12/20/20	10,000 bbl/d	IR Atmospheric Distillation
06/28/20	PT Pertamina Persero - RU II - Dumai Refinery	Indonesia	10/17/20	11/15/20	120,000 bbl/d	RI Atmospheric Distillation
06/16/20	PT Pertamina Persero - RU V - Balikpapan Refinery	Indonesia	06/01/20	07/31/20	44,000 bbl/d	KU Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 6,800 bbl/d

Total Off-line: 442,000

Date Range: 10/17/2020 - 12/20/2020

06/30/20	PT Pertamina Persero - RU VII - Kasim Refinery	Indonesia	11/22/20	12/20/20	2,000 bbl/d	IR CCR(Continuous Catalytic Reformer)
06/28/20	PT Pertamina Persero - RU II - Dumai Refinery	Indonesia	10/17/20	11/15/20	12,800 bbl/d	RI CCR(Continuous Catalytic Reformer)

Coker: Daily Off-Line Capacity: 32,500 bbl/d

Total Off-line: 975,000

Date Range: 10/17/2020 - 11/15/2020

06/29/20	PT Pertamina Persero - RU II - Dumai Refinery	Indonesia	10/17/20	11/15/20	32,500 bbl/d	RI Delayed Coker
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Hydrocrackers: Daily Off-Line Capacity: 31,500 bbl/d

Total Off-line: 945,000

Date Range: 10/17/2020 - 11/15/2020

06/28/20	PT Pertamina Persero - RU II - Dumai Refinery	Indonesia	10/17/20	11/15/20	31,500 bbl/d	RI Distillate Hydrocracker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Iran

Crude

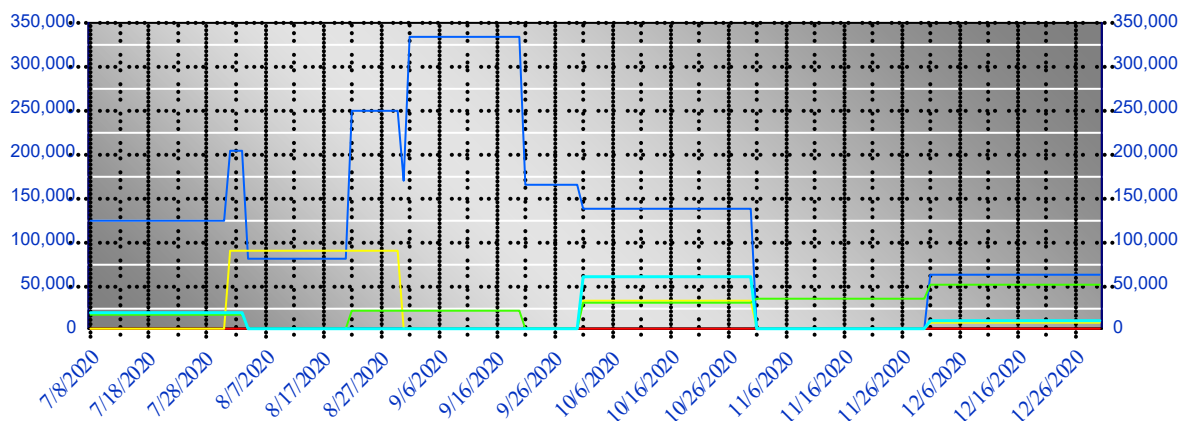
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 124,006 bbl/d

Total Off-line: 21,825,000

Date Range: 7/8/2020 - 12/30/2020

07/06/20	National Iranian Oil Refining & Distribution Company - Tehran Refinery	Iran	07/05/20	08/03/20	125,000 bbl/d	TE Atmospheric Distillation
06/15/20	National Iranian Oil Refining & Distribution Company - Bandar Abbas Refinery	Iran	09/01/20	09/30/20	165,000 bbl/d	HO Atmospheric Distillation
06/14/20	Abadan Oil Refining Company - Abadan Refinery	Iran	08/01/20	08/30/20	80,000 bbl/d	KK Atmospheric Distillation
05/06/20	Esfahan Oil Refining Company - Esfahan Refinery	Iran	12/01/20	12/30/20	22,500 bbl/d	ES Atmospheric Distillation
05/04/20	Imam Khomeini Oil Refinery Company of Shazand - Shazand Arak Refinery	Iran	08/22/20	09/20/20	170,000 bbl/d	MA Atmospheric Distillation
05/03/20	Shiraz Oil Refining Company - Shiraz Refinery	Iran	12/01/20	12/30/20	40,000 bbl/d	FA Atmospheric Distillation
11/04/19	Esfahan Oil Refining Company - Esfahan Refinery	Iran	10/01/20	10/30/20	22,500 bbl/d	ES Atmospheric Distillation
10/30/19	National Iranian Oil Refining & Distribution Company - Tabriz Refinery	Iran	10/01/20	10/30/20	115,000 bbl/d	AK Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 26,309 bbl/d

Total Off-line: 4,630,350

Date Range: 7/8/2020 - 12/30/2020

07/06/20	National Iranian Oil Refining & Distribution Company - Tehran Refinery	Iran	07/05/20	08/03/20	16,000 bbl/d	TE CCR(Continuous Catalytic Reformer)
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Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Iran

06/03/20	Persian Gulf Star Oil Company - Bandar Abbas Refinery	Iran	12/01/20	12/30/20	45,000 bbl/d	HO CCR(Continuous Catalytic Reformer)
05/06/20	National Iranian Oil Refining & Distribution Company - Bandar Abbas Refinery	Iran	11/01/20	11/30/20	36,000 bbl/d	HO CCR(Continuous Catalytic Reformer)
05/04/20	Imam Khomeini Oil Refinery Company of Shazand - Shazand Arak Refinery	Iran	08/22/20	09/20/20	21,600 bbl/d	MA CCR(Continuous Catalytic Reformer)
05/03/20	Shiraz Oil Refining Company - Shiraz Refinery	Iran	12/01/20	12/30/20	6,245 bbl/d	FA CCR(Continuous Catalytic Reformer)
10/30/19	National Iranian Oil Refining & Distribution Company - Tabriz Refinery	Iran	10/01/20	10/30/20	20,000 bbl/d	AK Semiregen/Cyclic Reformer
10/30/19	National Iranian Oil Refining & Distribution Company - Tabriz Refinery	Iran	10/01/20	10/30/20	11,100 bbl/d	AK CCR(Continuous Catalytic Reformer)
Coker: Daily Off-Line Capacity: 26,051 bbl/d		Total Off-line: 3,959,700		Date Range: 8/1/2020 - 12/30/2020		
06/14/20	Abadan Oil Refining Company - Abadan Refinery	Iran	08/01/20	08/30/20	90,000 bbl/d	KK Visbreaker
05/03/20	Shiraz Oil Refining Company - Shiraz Refinery	Iran	12/01/20	12/30/20	8,990 bbl/d	FA Visbreaker
04/12/20	National Iranian Oil Refining & Distribution Company - Tehran Refinery	Iran	10/01/20	10/30/20	17,000 bbl/d	TE Visbreaker
10/30/19	National Iranian Oil Refining & Distribution Company - Tabriz Refinery	Iran	10/01/20	10/30/20	16,000 bbl/d	AK Visbreaker
Hydrocrackers: Daily Off-Line Capacity: 14,980 bbl/d		Total Off-line: 2,636,400		Date Range: 7/8/2020 - 12/30/2020		
07/06/20	National Iranian Oil Refining & Distribution Company - Tehran Refinery	Iran	07/05/20	08/03/20	20,000 bbl/d	TE Distillate Hydrocracker
05/03/20	Shiraz Oil Refining Company - Shiraz Refinery	Iran	12/01/20	12/30/20	9,380 bbl/d	FA Distillate Hydrocracker
04/12/20	National Iranian Oil Refining & Distribution Company - Tehran Refinery	Iran	10/01/20	10/30/20	20,000 bbl/d	TE Distillate Hydrocracker
11/05/19	Esfahan Oil Refining Company - Esfahan Refinery	Iran	10/01/20	10/30/20	22,500 bbl/d	ES Distillate Hydrocracker
10/30/19	National Iranian Oil Refining & Distribution Company - Tabriz Refinery	Iran	10/01/20	10/30/20	18,000 bbl/d	AK Residual Hydrocracker

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Iraq

Crude

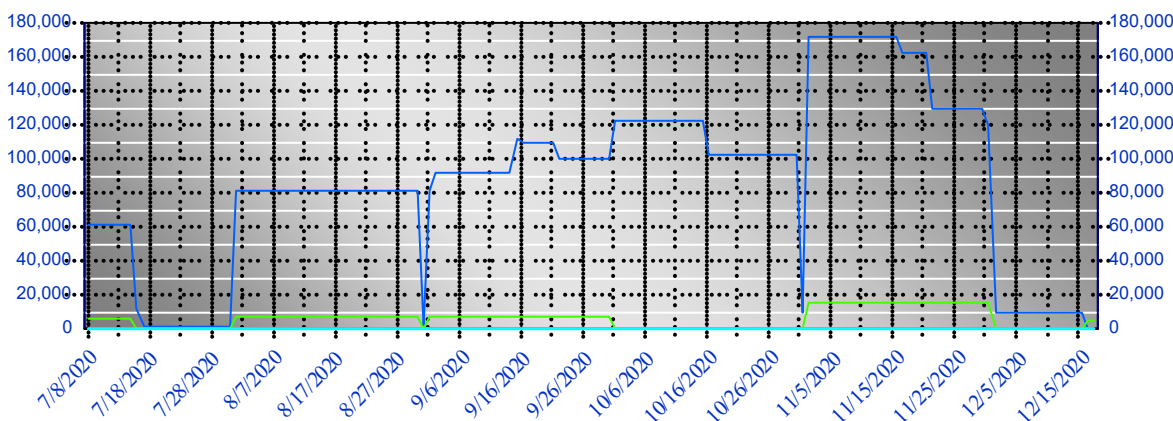
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 88,075 bbl/d

Total Off-line: 14,180,000

Date Range: 7/8/2020 - 12/15/2020

07/02/20	Midland Refineries Company - Samawah Refinery	Iraq	04/10/20	07/16/20	10,000 bbl/d	BG Atmospheric Distillation	U
06/30/20	North Refineries Company - Siniya Refinery	Iraq	11/01/20	11/15/20	10,000 bbl/d	SA Atmospheric Distillation	
06/30/20	North Refineries Company - Siniya Refinery	Iraq	11/16/20	11/30/20	10,000 bbl/d	SA Atmospheric Distillation	
06/30/20	North Refineries Company - Siniya Refinery	Iraq	12/01/20	12/15/20	10,000 bbl/d	SA Atmospheric Distillation	
06/29/20	South Refineries Company - Al Nassiriya Refinery (Dhi Qar)	Iraq	10/01/20	10/20/20	10,000 bbl/d	DH Atmospheric Distillation	
06/29/20	South Refineries Company - Al Nassiriya Refinery (Dhi Qar)	Iraq	10/21/20	11/09/20	10,000 bbl/d	DH Atmospheric Distillation	
06/29/20	South Refineries Company - Basra Refinery	Iraq	11/01/20	11/30/20	70,000 bbl/d	AB Atmospheric Distillation	
06/29/20	South Refineries Company - Al Nassiriya Refinery (Dhi Qar)	Iraq	11/10/20	11/29/20	10,000 bbl/d	DH Atmospheric Distillation	
06/23/20	South Refineries Company - Basra Refinery	Iraq	05/12/20	07/15/20	21,000 bbl/d	AB Atmospheric Distillation	U

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Iraq

06/23/20	South Refineries Company - Basra Refinery	Iraq	05/12/20	07/15/20	21,000 bbl/d	AB Atmospheric Distillation	U
06/21/20	Midland Refineries Company - Daurah Refinery	Iraq	10/01/20	10/30/20	70,000 bbl/d	BG Atmospheric Distillation	
06/14/20	Qaiwan Group - Bazian Refinery	Iraq	05/31/20	07/15/20	4,000 bbl/d	AS Atmospheric Distillation	U
06/14/20	Qaiwan Group - Bazian Refinery	Iraq	05/31/20	07/15/20	2,000 bbl/d	AS Atmospheric Distillation	U
06/14/20	Qaiwan Group - Bazian Refinery	Iraq	05/31/20	07/15/20	2,000 bbl/d	AS Atmospheric Distillation	U
06/07/20	North Refineries Company - Kirkuk Refinery One	Iraq	08/01/20	08/30/20	10,000 bbl/d	KK Atmospheric Distillation	
06/07/20	North Refineries Company - Kirkuk Refinery One	Iraq	09/01/20	09/30/20	10,000 bbl/d	KK Atmospheric Distillation	
06/07/20	North Refineries Company - Kirkuk Refinery One	Iraq	10/01/20	10/30/20	13,000 bbl/d	KK Atmospheric Distillation	
06/02/20	South Refineries Company - Maysan Refinery One	Iraq	10/01/20	10/15/20	10,000 bbl/d	MA Atmospheric Distillation	
06/02/20	South Refineries Company - Maysan Refinery One	Iraq	10/16/20	10/30/20	10,000 bbl/d	MA Atmospheric Distillation	
06/02/20	South Refineries Company - Maysan Refinery One	Iraq	11/01/20	11/15/20	10,000 bbl/d	MA Atmospheric Distillation	
04/09/20	North Refineries Company - Kasak Refinery	Iraq	09/15/20	10/15/20	10,000 bbl/d	NI Atmospheric Distillation	
03/11/20	North Refineries Company - Al Qayyarah Refinery	Iraq	06/15/19	09/15/20	2,000 bbl/d	NI Atmospheric Distillation	U
03/11/20	Midland Refineries Company - Samawah Refinery	Iraq	11/01/20	11/20/20	10,000 bbl/d	BG Atmospheric Distillation	
01/15/20	North Refineries Company - Kasak Refinery	Iraq	09/15/20	10/15/20	10,000 bbl/d	NI Atmospheric Distillation	
12/24/19	Kurd Oil Company - Dukan Refinery	Iraq	11/01/20	11/20/20	20,000 bbl/d	AS Atmospheric Distillation	
12/10/19	Qaiwan Group - Bazian Refinery	Iraq	11/01/20	11/30/20	20,000 bbl/d	AS Atmospheric Distillation	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Iraq

12/10/19	Qaiwan Group - Bazian Refinery	Iraq	11/01/20	11/30/20	10,000 bbl/d	AS Atmospheric Distillation
12/10/19	Qaiwan Group - Bazian Refinery	Iraq	11/01/20	11/30/20	10,000 bbl/d	AS Atmospheric Distillation
11/10/19	North Refineries Company - Al Qayyarah Refinery	Iraq	11/01/20	11/20/20	2,000 bbl/d	NI Atmospheric Distillation
10/09/19	South Refineries Company - Basra Refinery	Iraq	08/01/20	08/30/20	70,000 bbl/d	AB Atmospheric Distillation
04/23/19	South Refineries Company - Basra Refinery	Iraq	09/01/20	09/30/20	70,000 bbl/d	AB Atmospheric Distillation
09/24/18	Midland Refineries Company - Diwaniya Refinery	Iraq	09/02/20	09/21/20	10,000 bbl/d	AM Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 5,624 bbl/d

Total Off-line: 1,018,000

Date Range: 7/8/2020 - 1/4/2021

06/29/20	South Refineries Company - Basra Refinery	Iraq	11/01/20	11/30/20	10,000 bbl/d	AB CCR(Continuous Catalytic Reformer)
06/23/20	South Refineries Company - Basra Refinery	Iraq	05/12/20	07/15/20	2,400 bbl/d	AB CCR(Continuous Catalytic Reformer) U
06/23/20	South Refineries Company - Basra Refinery	Iraq	05/12/20	07/15/20	2,400 bbl/d	AB CCR(Continuous Catalytic Reformer) U
06/21/20	Midland Refineries Company - Daurah Refinery	Iraq	01/03/21	02/01/21	5,000 bbl/d	BG CCR(Continuous Catalytic Reformer)
06/14/20	Qaiwan Group - Bazian Refinery	Iraq	05/31/20	07/15/20	1,200 bbl/d	AS CCR(Continuous Catalytic Reformer) U
12/10/19	Qaiwan Group - Bazian Refinery	Iraq	11/01/20	11/30/20	6,000 bbl/d	AS CCR(Continuous Catalytic Reformer)
10/09/19	South Refineries Company - Basra Refinery	Iraq	08/01/20	08/30/20	8,000 bbl/d	AB CCR(Continuous Catalytic Reformer)
04/23/19	South Refineries Company - Basra Refinery	Iraq	09/01/20	09/30/20	8,000 bbl/d	AB CCR(Continuous Catalytic Reformer)

Barrels Off-line from 7/8/2020 to 1/4/2021



North Asia

Japan

Crude

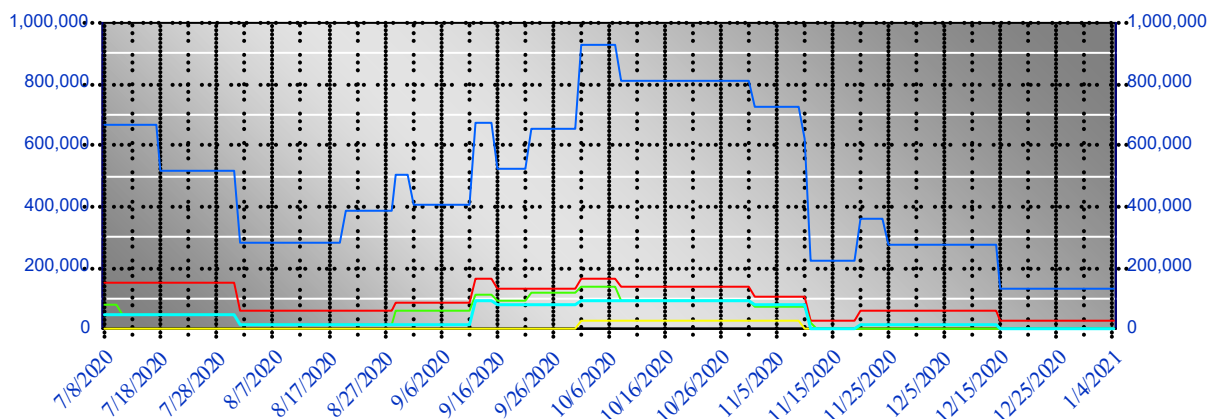
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 474,354 bbl/d

Total Off-line: 85,858,000

Date Range: 7/8/2020 - 1/4/2021

07/07/20	ENEOS Corporation - Oita Refinery	Japan	07/07/20	07/31/21	136,000 bbl/d	30	Atmospheric Distillation	U
07/05/20	ENEOS Corporation - Sendai Refinery	Japan	06/07/20	07/17/20	145,000 bbl/d	24	Atmospheric Distillation	
06/30/20	ENEOS Corporation - Wakayama Refinery	Japan	09/22/20	11/10/20	127,500 bbl/d	44	Atmospheric Distillation	
06/30/20	Cosmo Oil Company Limited - Yokkaichi Refinery	Japan	10/01/20	10/31/20	86,000 bbl/d	23	Atmospheric Distillation	
06/25/20	ENEOS Corporation - Kawasaki Refinery	Japan	03/16/20	07/31/20	65,000 bbl/d	19	Atmospheric Distillation	
06/25/20	ENEOS Corporation - Kawasaki Refinery	Japan	04/18/20	07/31/20	170,000 bbl/d	19	Atmospheric Distillation	
06/16/20	Idemitsu Kosan Company Limited - Hokkaido Refinery	Japan	06/11/20	09/15/20	150,000 bbl/d	12	Atmospheric Distillation	
05/20/20	Taiyo Oil Company Limited - Shikoku Refinery	Japan	11/20/20	12/14/20	106,000 bbl/d	05	Atmospheric Distillation	
05/20/20	Taiyo Oil Company Limited - Shikoku Refinery	Japan	11/20/20	12/14/20	32,000 bbl/d	05	Atmospheric Distillation	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

Japan

03/16/20	Cosmo Oil Company Limited - Sakai Refinery	Japan	08/20/20	08/31/20	100,000 bbl/d	33	Atmospheric Distillation
02/29/20	Seibu Oil Company Limited - Yamaguchi Refinery	Japan	08/29/20	10/07/20	120,000 bbl/d	46	Atmospheric Distillation
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	150,000 bbl/d	19	Atmospheric Distillation
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	120,000 bbl/d	19	Atmospheric Distillation
12/31/19	ENEOS Corporation - Mizushima Refinery (A and B Plant)	Japan	10/01/20	11/24/20	90,200 bbl/d	31	Atmospheric Distillation
09/27/19	Showa Yokkaichi Sekiyu Company Limited - Yokkaichi Refinery	Japan	10/01/20	11/09/20	100,000 bbl/d	23	Atmospheric Distillation
Reformers: Daily Off-Line Capacity: 69,650 bbl/d Total Off-line: 8,845,500 Date Range: 7/8/2020 - 11/11/2020							
06/30/20	ENEOS Corporation - Kawasaki Refinery	Japan	04/18/20	07/31/20	34,000 bbl/d	19	CCR(Continuous Catalytic Reformer)
06/30/20	Cosmo Oil Company Limited - Yokkaichi Refinery	Japan	10/01/20	10/31/20	13,500 bbl/d	23	CCR(Continuous Catalytic Reformer)
06/30/20	Cosmo Oil Company Limited - Yokkaichi Refinery	Japan	10/01/20	10/31/20	8,000 bbl/d	23	CCR(Continuous Catalytic Reformer)
06/25/20	ENEOS Corporation - Oita Refinery	Japan	05/12/20	07/10/20	30,000 bbl/d	30	CCR(Continuous Catalytic Reformer)
06/14/20	Idemitsu Kosan Company Limited - Hokkaido Refinery	Japan	06/15/20	09/15/20	18,000 bbl/d	12	CCR(Continuous Catalytic Reformer)
02/29/20	Seibu Oil Company Limited - Yamaguchi Refinery	Japan	08/29/20	10/07/20	25,000 bbl/d	46	CCR(Continuous Catalytic Reformer)
02/29/20	Seibu Oil Company Limited - Yamaguchi Refinery	Japan	08/29/20	10/07/20	21,000 bbl/d	46	Semiregen/Cyclic Reformer
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	30,000 bbl/d	19	CCR(Continuous Catalytic Reformer)
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	20,000 bbl/d	19	CCR(Continuous Catalytic Reformer)
12/30/19	ENEOS Corporation - Wakayama Refinery	Japan	09/22/20	11/11/20	23,000 bbl/d	44	CCR(Continuous Catalytic Reformer)

FCCU: Daily Off-Line Capacity: 95,398 bbl/d

Total Off-line: 17,267,000

Date Range: 7/8/2020 - 1/4/2021

Barrels Off-line from 7/8/2020 to 1/4/2021

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Print Date: 7/8/2020

North Asia

Japan

06/30/20	ENEOS Corporation - Kawasaki Refinery	Japan	04/18/20	07/31/20	92,000 bbl/d	19 FCCU (Fluid Catalytic Cracker)	
06/30/20	Cosmo Oil Company Limited - Yokkaichi Refinery	Japan	10/01/20	10/31/20	31,000 bbl/d	23 FCCU (Fluid Catalytic Cracker)	
06/25/20	ENEOS Corporation - Oita Refinery	Japan	07/07/20	01/07/21	28,000 bbl/d	30 FCCU (Fluid Catalytic Cracker)	U
06/14/20	Idemitsu Kosan Company Limited - Hokkaido Refinery	Japan	06/15/20	09/15/20	33,000 bbl/d	12 FCCU (Fluid Catalytic Cracker)	
05/20/20	Taiyo Oil Company Limited - Shikoku Refinery	Japan	11/20/20	12/14/20	32,000 bbl/d	05 FCCU (Fluid Catalytic Cracker)	
02/29/20	Seibu Oil Company Limited - Yamaguchi Refinery	Japan	08/29/20	10/07/20	28,000 bbl/d	46 FCCU (Fluid Catalytic Cracker)	
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	42,000 bbl/d	19 FCCU (Fluid Catalytic Cracker)	
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	38,000 bbl/d	19 FCCU (Fluid Catalytic Cracker)	
Coker: Daily Off-Line Capacity: 30,000 bbl/d Total Off-line: 1,200,000 Date Range: 10/1/2020 - 11/9/2020							
12/31/19	ENEOS Corporation - Mizushima Refinery (A and B Plant)	Japan	10/01/20	11/09/20	30,000 bbl/d	31 Delayed Coker	
Hydrocrackers: Daily Off-Line Capacity: 48,574 bbl/d Total Off-line: 7,771,840 Date Range: 7/8/2020 - 12/14/2020							
06/30/20	ENEOS Corporation - Kawasaki Refinery	Japan	04/18/20	07/31/20	34,500 bbl/d	19 Residual Hydrocracker	
06/30/20	Cosmo Oil Company Limited - Yokkaichi Refinery	Japan	10/01/20	10/31/20	14,640 bbl/d	23 Distillate Hydrocracker	
06/14/20	Idemitsu Kosan Company Limited - Hokkaido Refinery	Japan	06/15/20	09/15/20	16,500 bbl/d	12 Residual Hydrocracker	
05/20/20	Taiyo Oil Company Limited - Shikoku Refinery	Japan	11/20/20	12/14/20	19,000 bbl/d	05 Residual Hydrocracker	
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	47,000 bbl/d	19 Distillate Hydrocracker	
01/15/20	ENEOS Corporation - Negishi Refinery	Japan	09/12/20	11/10/20	34,000 bbl/d	19 Distillate Hydrocracker	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Jordan

Crude

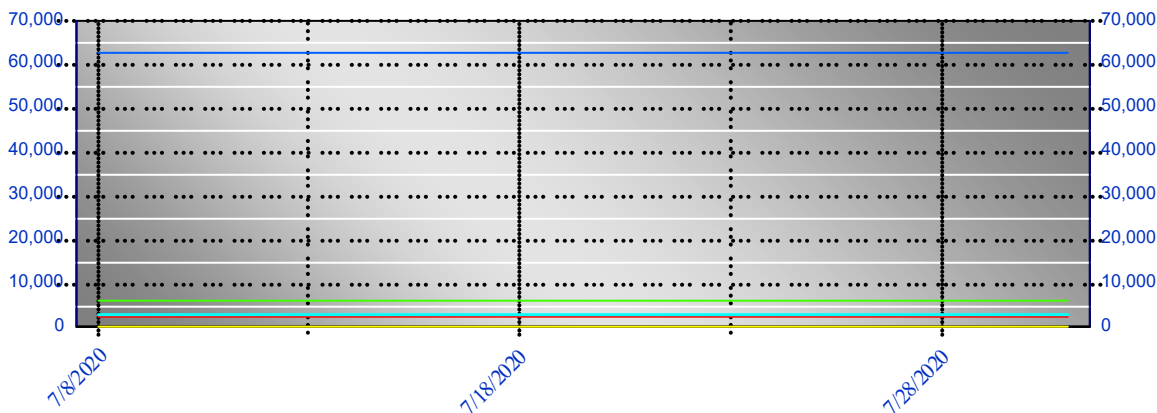
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 62,820 bbl/d

Total Off-line: 1,507,680

Date Range: 7/8/2020 - 7/31/2020

07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	44,700 bbl/d	AZ Atmospheric Distillation	U
07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	10,740 bbl/d	AZ Atmospheric Distillation	U
07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	7,380 bbl/d	AZ Atmospheric Distillation	U

Reformers: Daily Off-Line Capacity: 6,000 bbl/d

Total Off-line: 144,000

Date Range: 7/8/2020 - 7/31/2020

07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	6,000 bbl/d	AZ CCR(Continuous Catalytic Reformer)	U
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FCCU: Daily Off-Line Capacity: 2,700 bbl/d

Total Off-line: 64,800

Date Range: 7/8/2020 - 7/31/2020

07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	2,700 bbl/d	AZ FCCU (Fluid Catalytic Cracker)	U
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Hydrocrackers: Daily Off-Line Capacity: 3,120 bbl/d

Total Off-line: 74,880

Date Range: 7/8/2020 - 7/31/2020

07/01/20	Jordan Petroleum Refinery Company Limited - Zarqa Refinery	Jordan	04/29/20	07/31/20	3,120 bbl/d	AZ Distillate Hydrocracker	U
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Barrels Off-line from 7/8/2020 to 1/4/2021



Central Asia

Kazakhstan

Crude

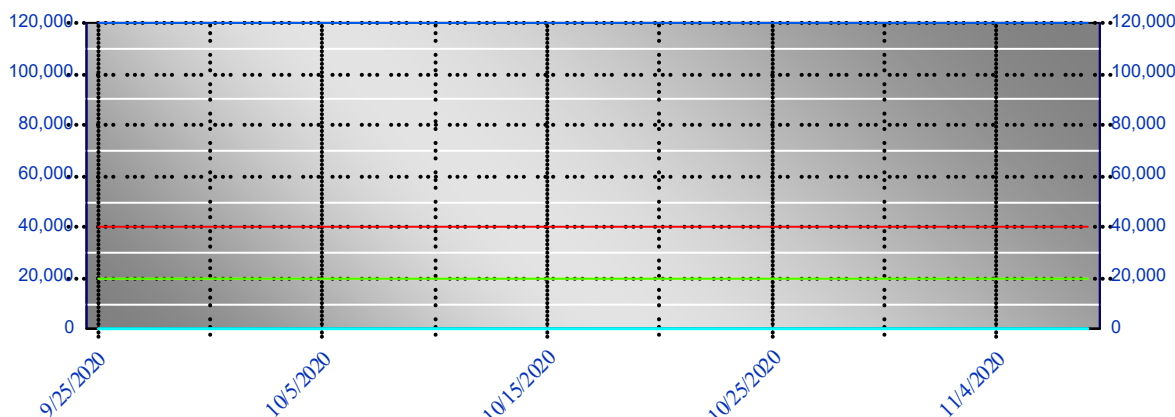
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 120,000 bbl/d

Total Off-line: 5,400,000

Date Range: 9/25/2020 - 11/8/2020

12/16/19	KazMunayGas JSC - Shymkent Oil Refinery	Kazakhstan	09/25/20	11/08/20	120,000 bbl/d	SO Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 20,000 bbl/d

Total Off-line: 900,000

Date Range: 9/25/2020 - 11/8/2020

12/16/19	KazMunayGas JSC - Shymkent Oil Refinery	Kazakhstan	09/25/20	11/08/20	20,000 bbl/d	SO CCR(Continuous Catalytic Reformer)
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FCCU: Daily Off-Line Capacity: 40,000 bbl/d

Total Off-line: 1,800,000

Date Range: 9/25/2020 - 11/8/2020

12/16/19	KazMunayGas JSC - Shymkent Oil Refinery	Kazakhstan	09/25/20	11/08/20	40,000 bbl/d	SO FCCU (Fluid Catalytic Cracker)
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Coker: Daily Off-Line Capacity: 20,000 bbl/d

Total Off-line: 900,000

Date Range: 9/25/2020 - 11/8/2020

12/16/19	KazMunayGas JSC - Shymkent Oil Refinery	Kazakhstan	09/25/20	11/08/20	20,000 bbl/d	SO Visbreaker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Southeast Asia

Malaysia

Crude

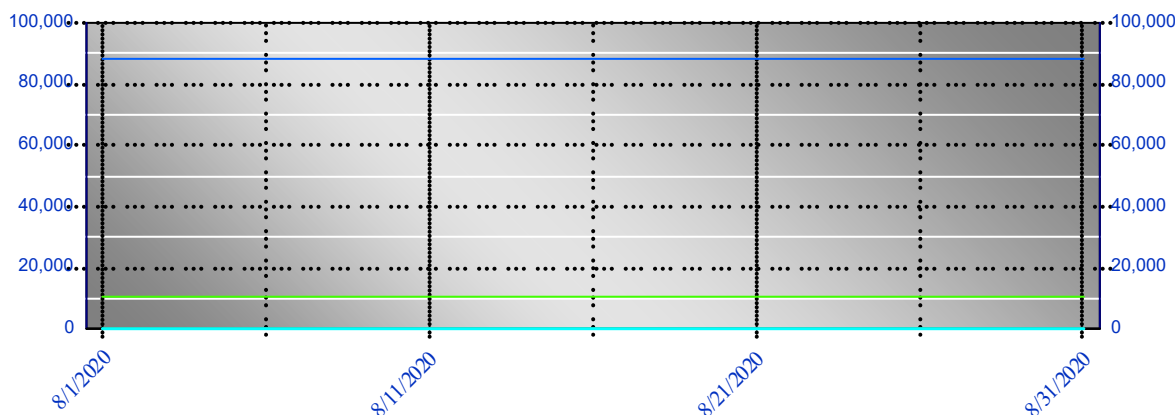
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 88,000 bbl/d

Total Off-line: 2,728,000

Date Range: 8/1/2020 - 8/31/2020

03/30/19	Petron Malaysia Refining & Marketing Berhad - Port Dickson Refinery	Malaysia	08/01/20	08/31/20	88,000 bbl/d	NE Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 10,500 bbl/d

Total Off-line: 325,500

Date Range: 8/1/2020 - 8/31/2020

03/30/19	Petron Malaysia Refining & Marketing Berhad - Port Dickson Refinery	Malaysia	08/01/20	08/31/20	10,500 bbl/d	NE Semiregen/Cyclic Reformer
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Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Southeast Asia

Myanmar (Burma)

Crude

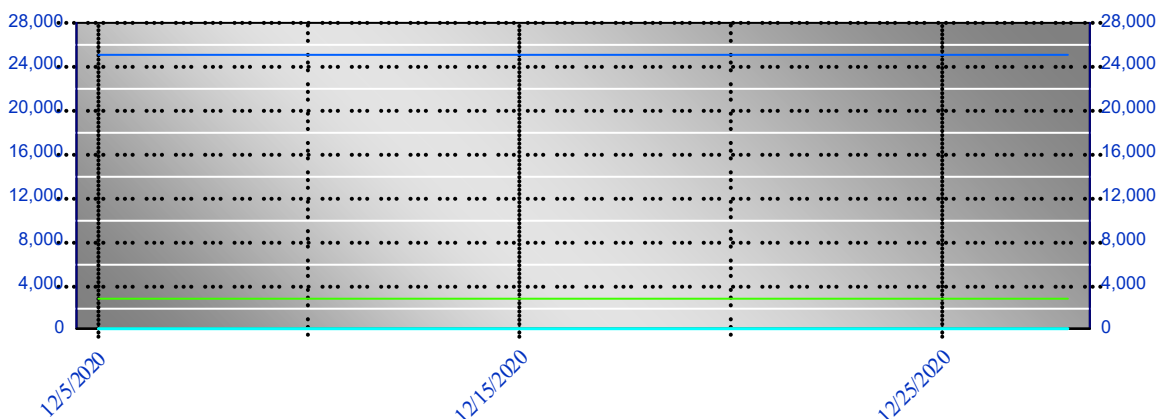
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 25,000 bbl/d

Total Off-line: 600,000

Date Range: 12/5/2020 - 12/28/2020

11/24/19	Myanmar Petrochemical Enterprise - Refinery #3 Thanbaykan Petrochemical Complex	Myanmar (Burma)	12/05/20	12/28/20	25,000 bbl/d	MA Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 2,800 bbl/d

Total Off-line: 67,200

Date Range: 12/5/2020 - 12/28/2020

11/24/19	Myanmar Petrochemical Enterprise - Refinery #3 Thanbaykan Petrochemical Complex	Myanmar (Burma)	12/05/20	12/28/20	2,800 bbl/d	MA Semiregen/Cyclic Reformer
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Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Australia

New Zealand

Crude

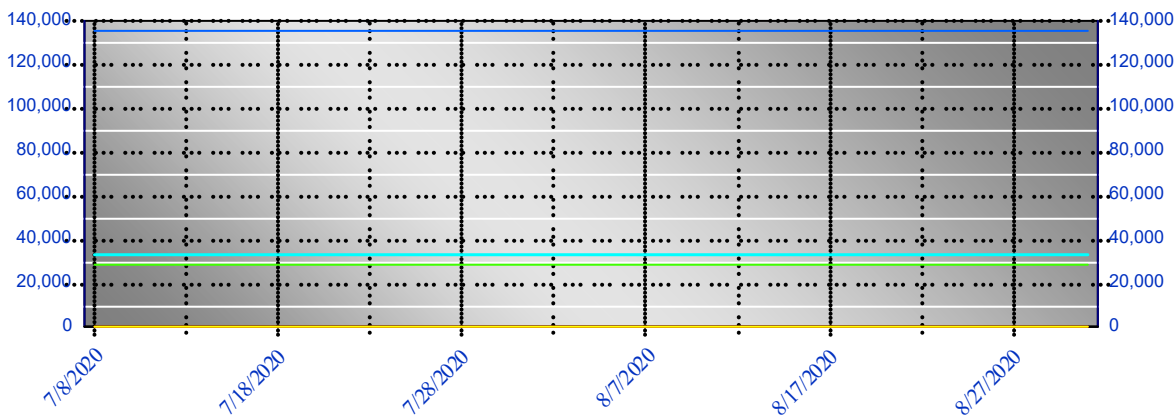
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 135,000 bbl/d

Total Off-line: 7,425,000

Date Range: 7/8/2020 - 8/31/2020

06/02/20	Refining NZ Limited - Marsden Point Refinery	New Zealand	07/01/20	08/31/20	95,000 bbl/d	WY Atmospheric Distillation	U/E
06/02/20	Refining NZ Limited - Marsden Point Refinery	New Zealand	07/01/20	08/31/20	40,000 bbl/d	WY Atmospheric Distillation	U/E

Reformers: Daily Off-Line Capacity: 29,000 bbl/d

Total Off-line: 1,595,000

Date Range: 7/8/2020 - 8/31/2020

06/02/20	Refining NZ Limited - Marsden Point Refinery	New Zealand	07/01/20	08/31/20	29,000 bbl/d	WY CCR(Continuous Catalytic Reformer)	U/E
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Hydrocrackers: Daily Off-Line Capacity: 33,000 bbl/d

Total Off-line: 1,815,000

Date Range: 7/8/2020 - 8/31/2020

06/02/20	Refining NZ Limited - Marsden Point Refinery	New Zealand	07/01/20	08/31/20	33,000 bbl/d	WY Residual Hydrocracker	U/E
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Oman

Crude

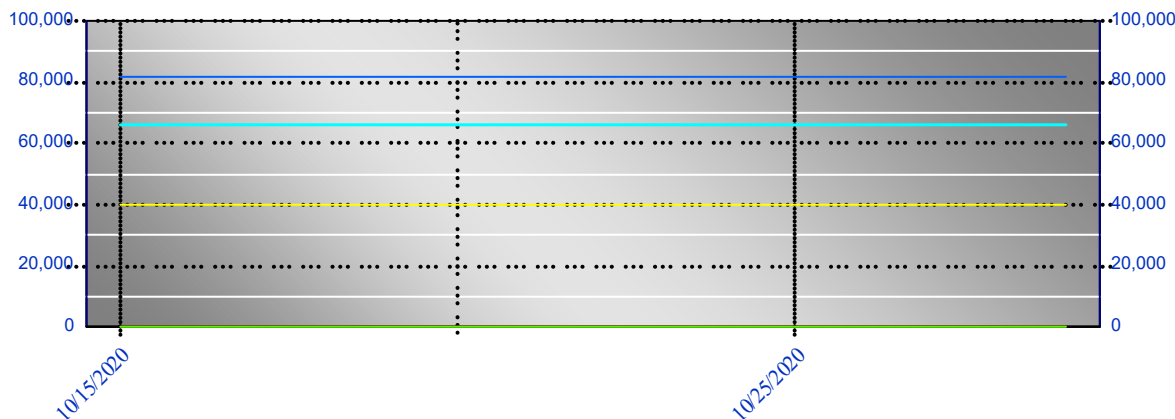
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 82,000 bbl/d

Total Off-line: 1,230,000

Date Range: 10/15/2020 - 10/29/2020

06/01/20	OQ - Sohar Refinery	Oman	10/15/20	10/29/20	82,000 bbl/d	MA Atmospheric Distillation
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Coker: Daily Off-Line Capacity: 40,000 bbl/d

Total Off-line: 600,000

Date Range: 10/15/2020 - 10/29/2020

06/01/20	OQ - Sohar Refinery	Oman	10/15/20	10/29/20	40,000 bbl/d	MA Delayed Coker
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Hydrocrackers: Daily Off-Line Capacity: 66,423 bbl/d

Total Off-line: 996,345

Date Range: 10/15/2020 - 10/29/2020

06/01/20	OQ - Sohar Refinery	Oman	10/15/20	10/29/20	66,423 bbl/d	MA Distillate Hydrocracker
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Barrels Off-line from 7/8/2020 to 1/4/2021



South Asia

Pakistan

Crude

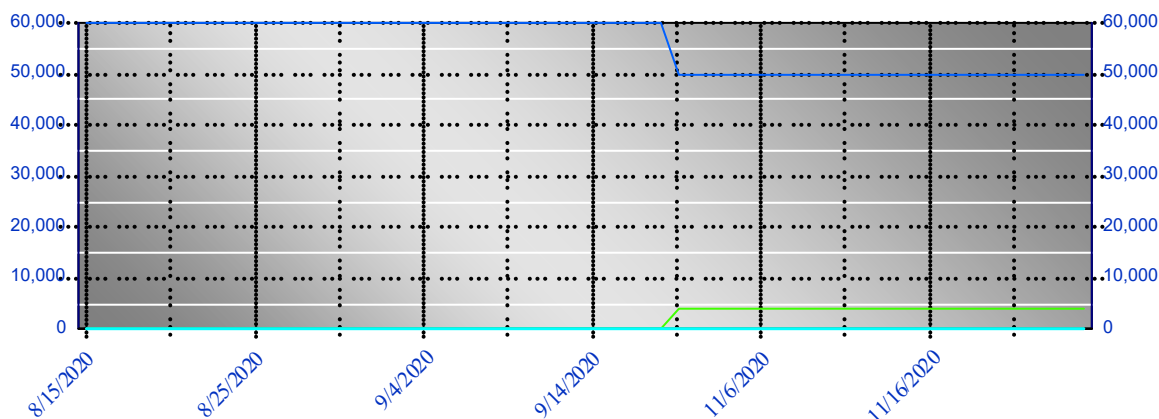
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 32,524 bbl/d

Total Off-line: 3,350,000

Date Range: 8/15/2020 - 11/25/2020

03/06/20	National Refinery Limited - Korangi Karachi Refinery	Pakistan	11/01/20	11/25/20	50,000 bbl/d	SI Atmospheric Distillation
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01/31/20	Byco Petroleum Pakistan Limited - Mouza Kund Refinery II	Pakistan	08/15/20	09/18/20	60,000 bbl/d	BA Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 971 bbl/d

Total Off-line: 100,000

Date Range: 8/15/2020 - 11/25/2020

03/06/20	National Refinery Limited - Korangi Karachi Refinery	Pakistan	11/01/20	11/25/20	4,000 bbl/d	SI CCR(Continuous Catalytic Reformer)
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01/31/20	Byco Petroleum Pakistan Limited - Mouza Kund Refinery II	Pakistan	08/15/20	09/18/20	0 bbl/d	BA Semiregen/Cyclic Reformer
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Barrels Off-line from 7/8/2020 to 1/4/2021



Southeast Asia

Philippines

Crude

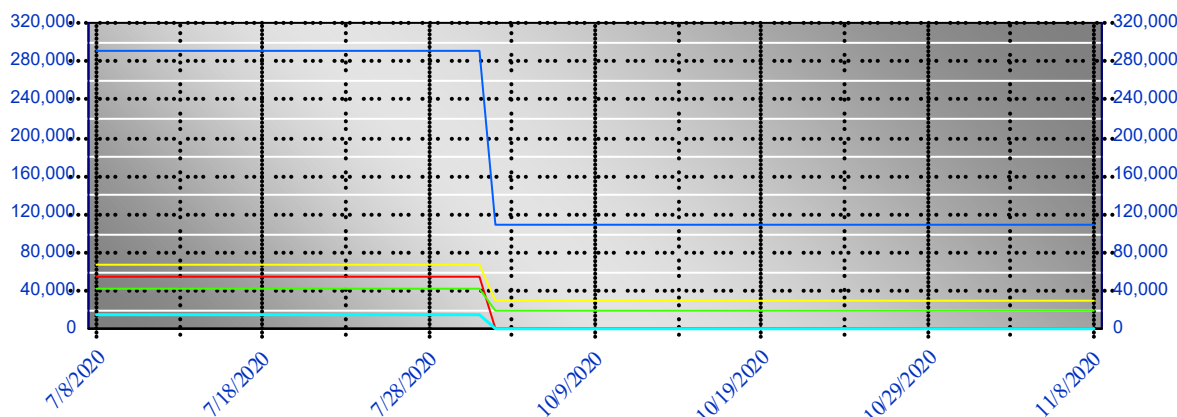
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 88,952 bbl/d

Total Off-line: 11,030,000

Date Range: 7/8/2020 - 11/8/2020

07/05/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	100,000 bbl/d	BG Atmospheric Distillation	
07/05/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	25,000 bbl/d	BG Atmospheric Distillation	
07/02/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	55,000 bbl/d	BG Atmospheric Distillation	E
06/26/20	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	05/15/20	07/31/20	110,000 bbl/d	BI Atmospheric Distillation	U
09/23/19	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	10/03/20	11/08/20	110,000 bbl/d	BI Atmospheric Distillation	

Reformers: Daily Off-Line Capacity: 14,097 bbl/d

Total Off-line: 1,748,000

Date Range: 7/8/2020 - 11/8/2020

07/02/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	22,000 bbl/d	BG CCR(Continuous Catalytic Reformer)	E
06/26/20	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	05/15/20	07/31/20	20,000 bbl/d	BI Semiregen/Cyclic Reformer	U
09/23/19	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	10/03/20	11/08/20	20,000 bbl/d	BI Semiregen/Cyclic Reformer	

FCCU: Daily Off-Line Capacity: 54,900 bbl/d

Total Off-line: 1,317,600

Date Range: 7/8/2020 - 7/31/2020

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Southeast Asia

Philippines

07/02/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	35,900 bbl/d	BG FCCU (Fluid Catalytic Cracker)	E
07/02/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	19,000 bbl/d	BG FCCU (Fluid Catalytic Cracker)	E
Coker: Daily Off-Line Capacity: 22,016 bbl/d Total Off-line: 2,730,000 Date Range: 7/8/2020 - 11/8/2020							
07/05/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	37,500 bbl/d	BG Delayed Coker	
06/26/20	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	05/15/20	07/31/20	30,000 bbl/d	BI Thermal Cracker	U
09/23/19	Pilipinas Shell Petroleum Corporation - Tabangao Refinery	Philippines	10/03/20	11/08/20	30,000 bbl/d	BI Thermal Cracker	
Hydrocrackers: Daily Off-Line Capacity: 15,700 bbl/d Total Off-line: 376,800 Date Range: 7/8/2020 - 7/31/2020							
07/02/20	Petron Corporation - Limay Bataan Refinery	Philippines	05/05/20	07/31/20	15,700 bbl/d	BG Residual Hydrocracker	E

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Qatar

Crude

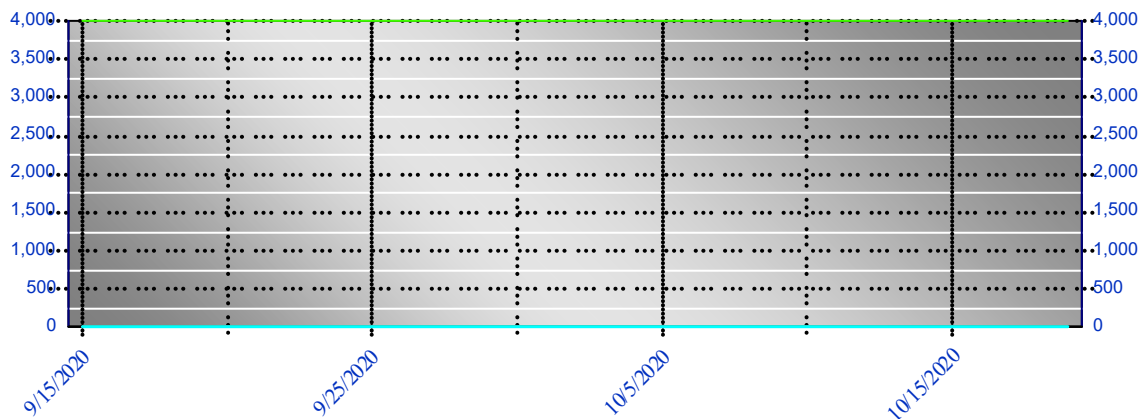
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Reformers: Daily Off-Line Capacity: 4,000 bbl/d

Total Off-line: 140,000

Date Range: 9/15/2020 - 10/19/2020

03/17/20 Qatar Petroleum - Mesaieed Refinery Qatar 09/15/20 10/19/20 4,000 bbl/d AR CCR(Continuous Catalytic Reformer)

Barrels Off-line from 7/8/2020 to 1/4/2021



North Asia

Republic of China-Taiwan

Crude

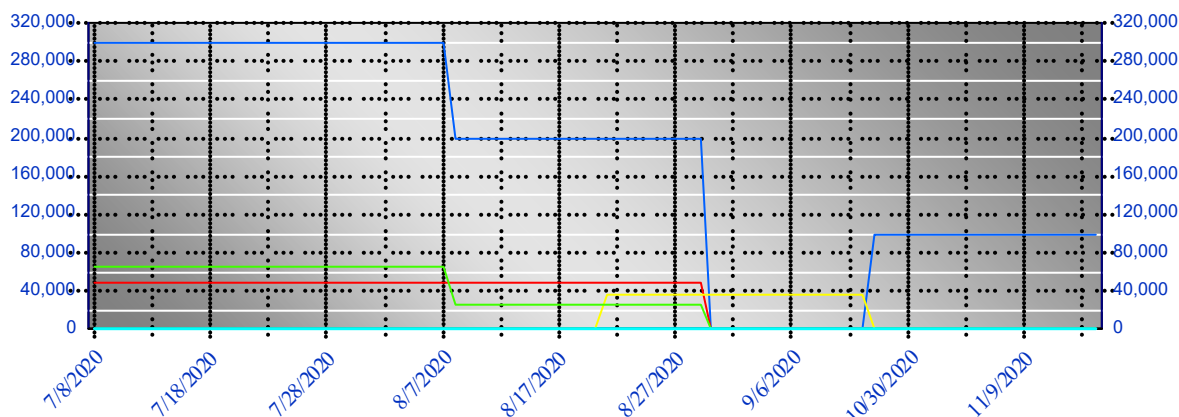
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 119,847 bbl/d

Total Off-line: 15,700,000

Date Range: 7/8/2020 - 11/15/2020

06/26/20	Chinese Petroleum Corporation (CPC) - Talin (Dalin) Refinery	Republic of China-Taiwan	06/24/20	08/07/20	100,000 bbl/d	TW Atmospheric Distillation
06/18/20	Chinese Petroleum Corporation (CPC) - Talin (Dalin) Refinery	Republic of China-Taiwan	10/27/20	11/15/20	100,000 bbl/d	TW Atmospheric Distillation
06/10/20	Chinese Petroleum Corporation (CPC) - Taoyuan Refinery	Republic of China-Taiwan	05/16/20	08/29/20	100,000 bbl/d	TW Atmospheric Distillation
06/10/20	Chinese Petroleum Corporation (CPC) - Taoyuan Refinery	Republic of China-Taiwan	05/16/20	08/29/20	100,000 bbl/d	TW Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 48,396 bbl/d

Total Off-line: 2,565,000

Date Range: 7/8/2020 - 8/29/2020

06/26/20	Chinese Petroleum Corporation (CPC) - Talin (Dalin) Refinery	Republic of China-Taiwan	06/24/20	08/07/20	40,000 bbl/d	TW CCR(Continuous Catalytic Reformer)
06/10/20	Chinese Petroleum Corporation (CPC) - Taoyuan Refinery	Republic of China-Taiwan	05/16/20	08/29/20	25,000 bbl/d	TW CCR(Continuous Catalytic Reformer)

FCCU: Daily Off-Line Capacity: 50,000 bbl/d

Total Off-line: 2,650,000

Date Range: 7/8/2020 - 8/29/2020

06/10/20	Chinese Petroleum Corporation (CPC) - Taoyuan Refinery	Republic of China-Taiwan	05/16/20	08/29/20	50,000 bbl/d	TW FCCU (Fluid Catalytic Cracker)
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Coker: Daily Off-Line Capacity: 36,000 bbl/d

Total Off-line: 828,000

Date Range: 8/21/2020 - 9/12/2020

12/11/19	Formosa Petrochemical Corporation - Mailiao Refinery	Republic of China-Taiwan	08/21/20	09/12/20	36,000 bbl/d	TW Delayed Coker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

North Asia

Republic of Korea-S.Korea

Crude

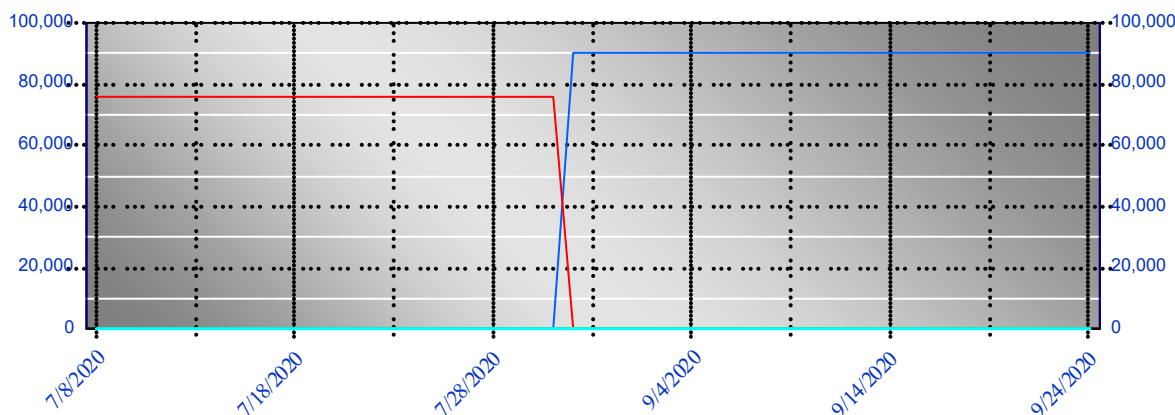
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 90,000 bbl/d

Total Off-line: 2,430,000

Date Range: 8/29/2020 - 9/24/2020

06/07/20	S-Oil Corporation - Onsan Refinery	Republic of Korea-S.Korea	08/29/20	09/24/20	90,000 bbl/d	UN Atmospheric Distillation
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FCCU: Daily Off-Line Capacity: 76,000 bbl/d

Total Off-line: 1,824,000

Date Range: 7/8/2020 - 7/31/2020

06/07/20	S-Oil Corporation - Onsan Refinery	Republic of Korea-S.Korea	06/04/20	07/31/20	76,000 bbl/d	UN FCCU (Fluid Catalytic Cracker)
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Saudi Arabia

Crude

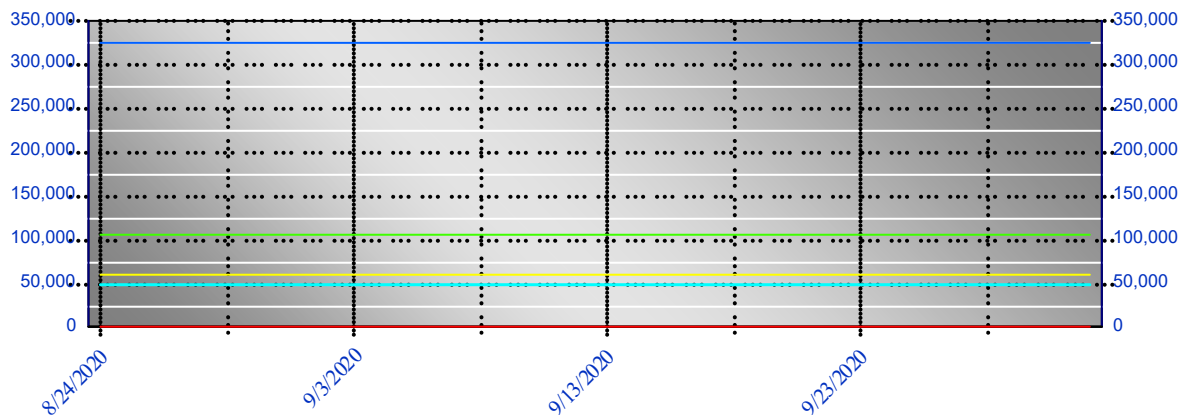
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 325,000 bbl/d

Total Off-line: 13,000,000

Date Range: 8/24/2020 - 10/2/2020

05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	325,000 bbl/d	AS Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 107,000 bbl/d

Total Off-line: 4,280,000

Date Range: 8/24/2020 - 10/2/2020

05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	57,000 bbl/d	AS CCR(Continuous Catalytic Reformer)
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05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	25,000 bbl/d	AS Semiregen/Cyclic Reformer
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05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	25,000 bbl/d	AS Semiregen/Cyclic Reformer
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Coker: Daily Off-Line Capacity: 60,000 bbl/d

Total Off-line: 2,400,000

Date Range: 8/24/2020 - 10/2/2020

05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	60,000 bbl/d	AS Visbreaker
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Hydrocrackers: Daily Off-Line Capacity: 50,000 bbl/d

Total Off-line: 2,000,000

Date Range: 8/24/2020 - 10/2/2020

05/18/20	Saudi Aramco - Ras Tanura Refinery	Saudi Arabia	08/24/20	10/02/20	50,000 bbl/d	AS Distillate Hydrocracker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Southeast Asia

Singapore

Crude

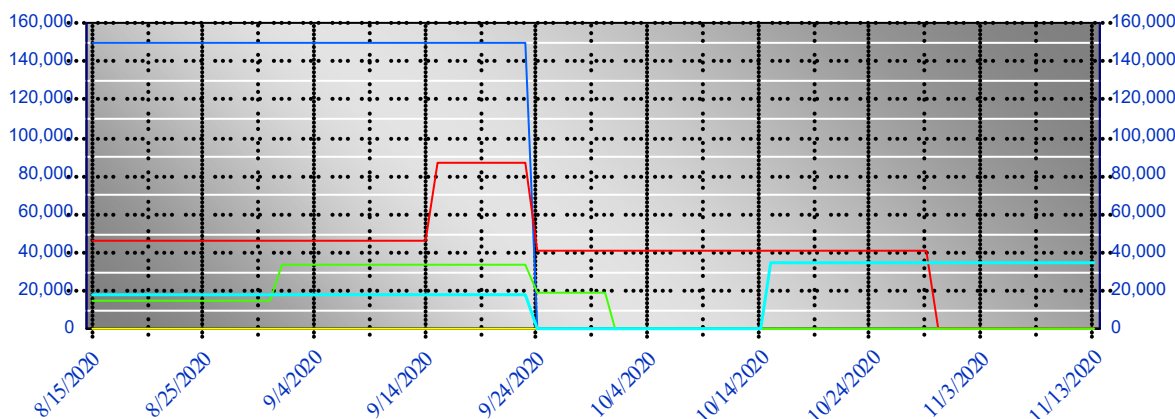
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Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 150,000 bbl/d

Total Off-line: 6,000,000

Date Range: 8/15/2020 - 9/23/2020

06/17/20	Singapore Refining Company Limited - Jurong Island Refinery	Singapore	08/15/20	09/23/20	90,000 bbl/d	SG Atmospheric Distillation
06/17/20	Singapore Refining Company Limited - Jurong Island Refinery	Singapore	08/15/20	09/23/20	60,000 bbl/d	SG Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 24,894 bbl/d

Total Off-line: 1,170,000

Date Range: 8/15/2020 - 9/30/2020

06/17/20	Singapore Refining Company Limited - Jurong Island Refinery	Singapore	08/15/20	09/23/20	15,000 bbl/d	SG CCR(Continuous Catalytic Reformer)
05/06/20	Shell Eastern Petroleum Pte Ltd - Pulau Bukom Refinery	Singapore	09/01/20	09/30/20	19,000 bbl/d	SG CCR(Continuous Catalytic Reformer)

FCCU: Daily Off-Line Capacity: 48,783 bbl/d

Total Off-line: 3,707,500

Date Range: 8/15/2020 - 10/29/2020

06/17/20	Singapore Refining Company Limited - Jurong Island Refinery	Singapore	08/15/20	09/23/20	46,000 bbl/d	SG FCCU (Fluid Catalytic Cracker)
03/06/20	Shell Eastern Petroleum Pte Ltd - Pulau Bukom Refinery	Singapore	09/15/20	10/29/20	41,500 bbl/d	SG FCCU (Fluid Catalytic Cracker)

Hydrocrackers: Daily Off-Line Capacity: 19,451 bbl/d

Total Off-line: 1,770,000

Date Range: 8/15/2020 - 11/13/2020

06/17/20	Singapore Refining Company Limited - Jurong Island Refinery	Singapore	08/15/20	09/23/20	18,000 bbl/d	SG Distillate Hydrocracker
01/29/20	Shell Eastern Petroleum Pte Ltd - Pulau Bukom Refinery	Singapore	10/15/20	11/13/20	35,000 bbl/d	SG Distillate Hydrocracker

Barrels Off-line from 7/8/2020 to 1/4/2021



South Asia

Sri Lanka

Crude

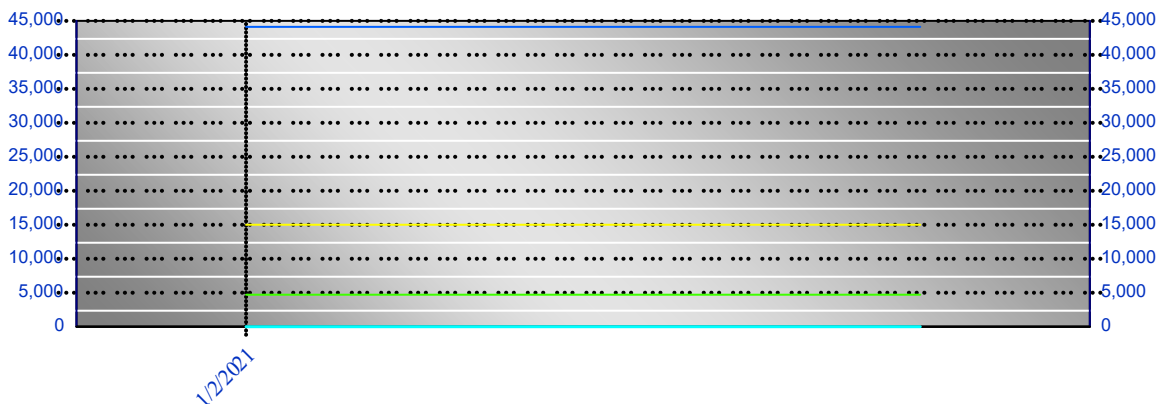
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 44,000 bbl/d

Total Off-line: 132,000

Date Range: 1/2/2021 - 1/4/2021

09/26/19	Ceylon Petroleum Corporation - Colombo Refinery	Sri Lanka	01/02/21	01/31/21	44,000 bbl/d	WE Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 4,800 bbl/d

Total Off-line: 14,400

Date Range: 1/2/2021 - 1/4/2021

10/14/19	Ceylon Petroleum Corporation - Colombo Refinery	Sri Lanka	01/02/21	01/31/21	4,800 bbl/d	WE Semiregen/Cyclic Reformer
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Coker: Daily Off-Line Capacity: 15,000 bbl/d

Total Off-line: 45,000

Date Range: 1/2/2021 - 1/4/2021

12/28/18	Ceylon Petroleum Corporation - Colombo Refinery	Sri Lanka	01/02/21	01/31/21	15,000 bbl/d	WE Visbreaker
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Syria

Crude

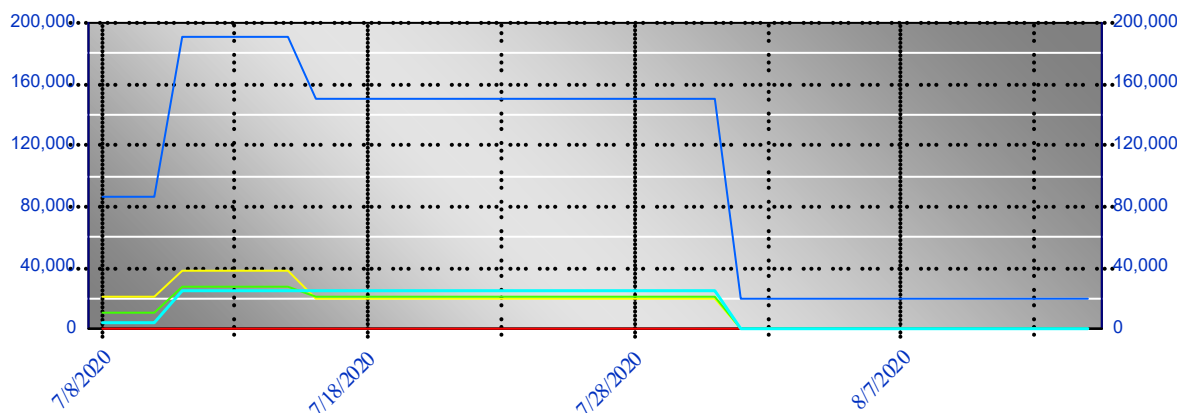
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 102,968 bbl/d

Total Off-line: 3,912,800

Date Range: 7/8/2020 - 8/14/2020

06/01/20	Homs Refinery Company - Homs Refinery	Syria	01/26/19	07/15/20	16,000 bbl/d	HI	Atmospheric Distillation	U
06/01/20	Homs Refinery Company - Homs Refinery	Syria	05/24/19	07/15/20	13,600 bbl/d	HI	Atmospheric Distillation	U
06/01/20	Homs Refinery Company - Homs Refinery	Syria	05/24/19	07/15/20	10,800 bbl/d	HI	Atmospheric Distillation	U
06/01/20	Homs Refinery Company - Homs Refinery	Syria	02/07/20	08/14/20	20,000 bbl/d	HI	Atmospheric Distillation	U
05/13/20	Banias Refinery Company - Banias Refinery	Syria	07/11/20	07/31/20	131,000 bbl/d	TA	Atmospheric Distillation	
05/12/20	Banias Refinery Company - Banias Refinery	Syria	11/07/19	07/10/20	26,200 bbl/d	TA	Atmospheric Distillation	U

Reformers: Daily Off-Line Capacity: 21,420 bbl/d

Total Off-line: 514,088

Date Range: 7/8/2020 - 7/31/2020

06/01/20	Homs Refinery Company - Homs Refinery	Syria	01/26/19	07/15/20	800 bbl/d	HI	CCR(Continuous Catalytic Reformer)	U
06/01/20	Homs Refinery Company - Homs Refinery	Syria	12/28/19	07/15/20	5,600 bbl/d	HI	CCR(Continuous Catalytic Reformer)	U
05/13/20	Banias Refinery Company - Banias Refinery	Syria	07/11/20	07/31/20	21,430 bbl/d	TA	CCR(Continuous Catalytic Reformer)	

Barrels Off-line from 7/8/2020 to 1/4/2021



Print Date: 7/8/2020

Middle East

Syria

05/12/20	Banias Refinery Company - Banias Refinery	Syria	11/20/19	07/10/20	4,286 bbl/d	TA CCR(Continuous Catalytic Reformer)	U
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Coker: Daily Off-Line Capacity: 24,000 bbl/d

Total Off-line: 576,000

Date Range: 7/8/2020 - 7/31/2020

06/01/20	Homs Refinery Company - Homs Refinery	Syria	03/16/19	07/15/20	18,000 bbl/d	HI Delayed Coker	U
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05/13/20	Banias Refinery Company - Banias Refinery	Syria	07/11/20	07/31/20	20,000 bbl/d	TA Visbreaker	
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05/12/20	Banias Refinery Company - Banias Refinery	Syria	11/20/19	07/10/20	4,000 bbl/d	TA Visbreaker	U
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Hydrocrackers: Daily Off-Line Capacity: 22,500 bbl/d

Total Off-line: 540,000

Date Range: 7/8/2020 - 7/31/2020

05/13/20	Banias Refinery Company - Banias Refinery	Syria	07/11/20	07/31/20	25,000 bbl/d	TA Distillate Hydrocracker	
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05/12/20	Banias Refinery Company - Banias Refinery	Syria	11/20/19	07/10/20	5,000 bbl/d	TA Distillate Hydrocracker	U
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Barrels Off-line from 7/8/2020 to 1/4/2021



Southeast Asia

Thailand

Crude

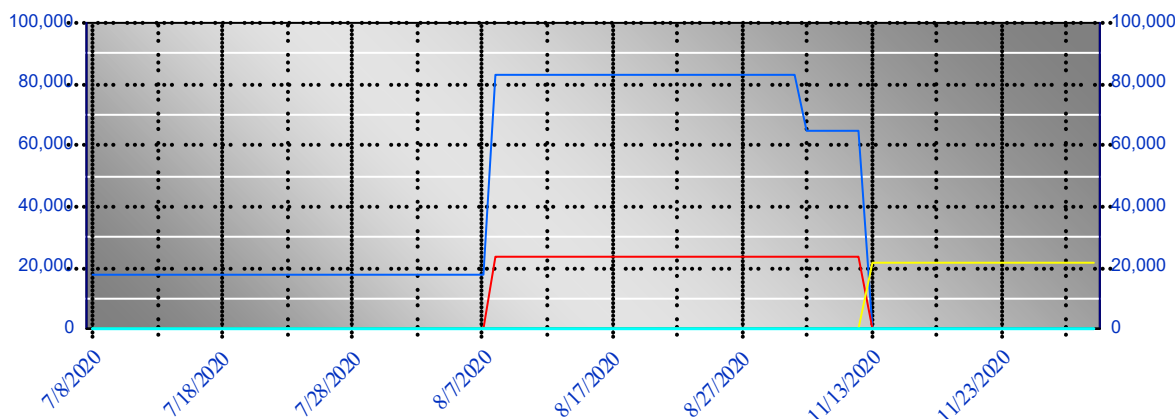
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 47,917 bbl/d

Total Off-line: 2,875,000

Date Range: 7/8/2020 - 9/5/2020

07/06/20	Bangchak Corporation Public Company Limited - Bangkok Refinery	Thailand	07/01/20	08/31/20	12,000 bbl/d	KT Atmospheric Distillation	U
07/05/20	Bangchak Corporation Public Company Limited - Bangkok Refinery	Thailand	07/01/20	08/31/20	6,000 bbl/d	KT Atmospheric Distillation	U
06/10/20	IRPC Public Company Limited - IRPC Rayong Refinery	Thailand	08/08/20	09/05/20	65,000 bbl/d	RN Atmospheric Distillation	

FCCU: Daily Off-Line Capacity: 24,000 bbl/d

Total Off-line: 696,000

Date Range: 8/8/2020 - 9/5/2020

06/10/20	IRPC Public Company Limited - IRPC Rayong Refinery	Thailand	08/08/20	09/05/20	24,000 bbl/d	RN FCCU (Fluid Catalytic Cracker)	
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Coker: Daily Off-Line Capacity: 22,000 bbl/d

Total Off-line: 396,000

Date Range: 11/13/2020 - 11/30/2020

03/31/20	PTT Global Chemical Public Company Limited - Rayong Refinery	Thailand	11/13/20	11/30/20	22,000 bbl/d	RN Visbreaker	
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Barrels Off-line from 7/8/2020 to 1/4/2021



Central Asia

Turkmenistan

Crude

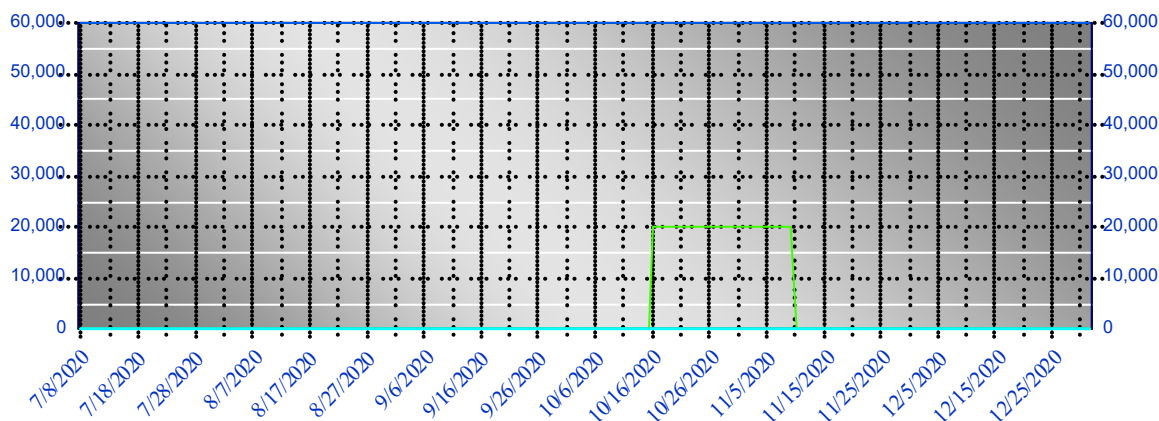
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 60,000 bbl/d

Total Off-line: 10,620,000

Date Range: 7/8/2020 - 12/31/2020

01/06/20	Turkmenbashi Complex Oil Refinery - Turkmenbashi Refinery	Turkmenistan	06/01/17	12/31/20	60,000 bbl/d	BA Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 20,000 bbl/d

Total Off-line: 500,000

Date Range: 10/16/2020 - 11/9/2020

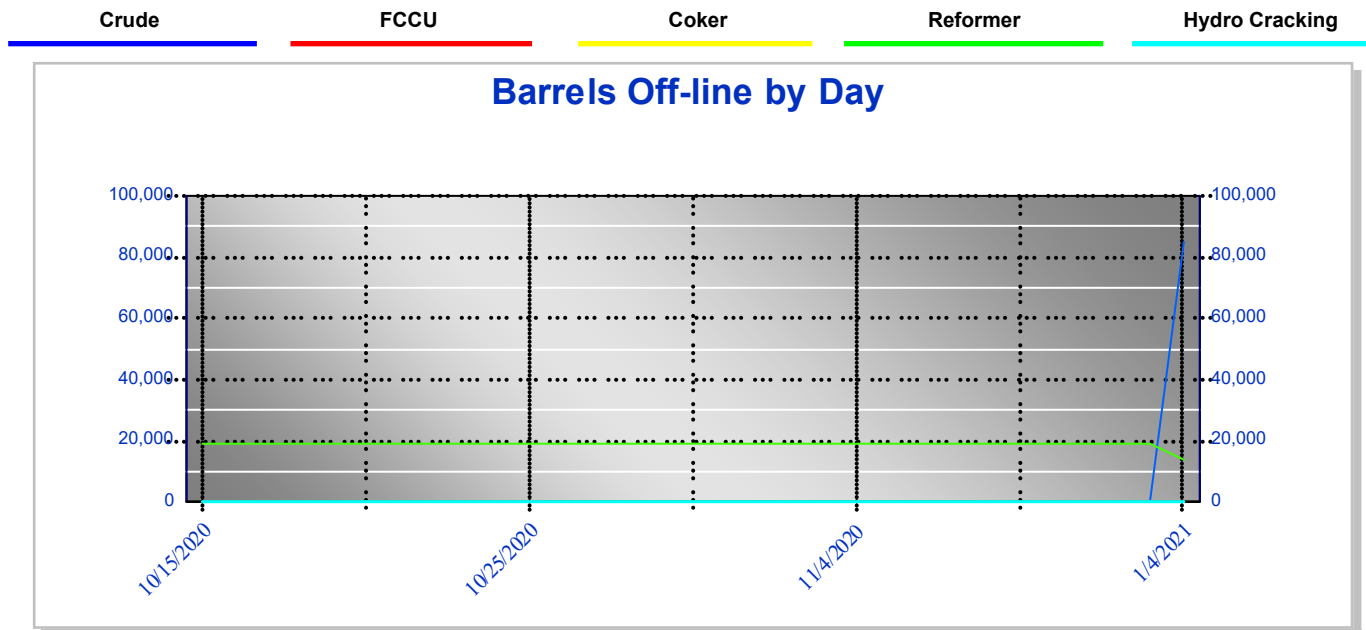
10/25/19	Turkmenbashi Complex Oil Refinery - Turkmenbashi Refinery	Turkmenistan	10/16/20	11/09/20	20,000 bbl/d	BA CCR(Continuous Catalytic Reformer)
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

United Arab Emirates



Crude Distillation: Daily Off-Line Capacity: 85,000 bbl/d

Total Off-line: 85,000

Date Range: 1/4/2021 - 1/4/2021

Date	Refinery	Country	Start Date	End Date	Capacity (bbl/d)	Unit
07/11/19	Abu Dhabi National Oil Company - Umm Al Nar Refinery	United Arab Emirates	01/04/21	02/07/21	85,000 bbl/d	AB Atmospheric Distillation

Reformers: Daily Off-Line Capacity: 7,177 bbl/d

Total Off-line: 588,500

Date Range: 10/15/2020 - 1/4/2021

Date	Refinery	Country	Start Date	End Date	Capacity (bbl/d)	Unit
03/18/20	Abu Dhabi National Oil Company - Ruwais Refinery 1 (East)	United Arab Emirates	10/15/20	11/13/20	19,150 bbl/d	AB CCR(Continuous Catalytic Reformer)
07/11/19	Abu Dhabi National Oil Company - Umm Al Nar Refinery	United Arab Emirates	01/04/21	02/07/21	14,000 bbl/d	AB CCR(Continuous Catalytic Reformer)

Barrels Off-line from 7/8/2020 to 1/4/2021



Southeast Asia

Vietnam

Crude

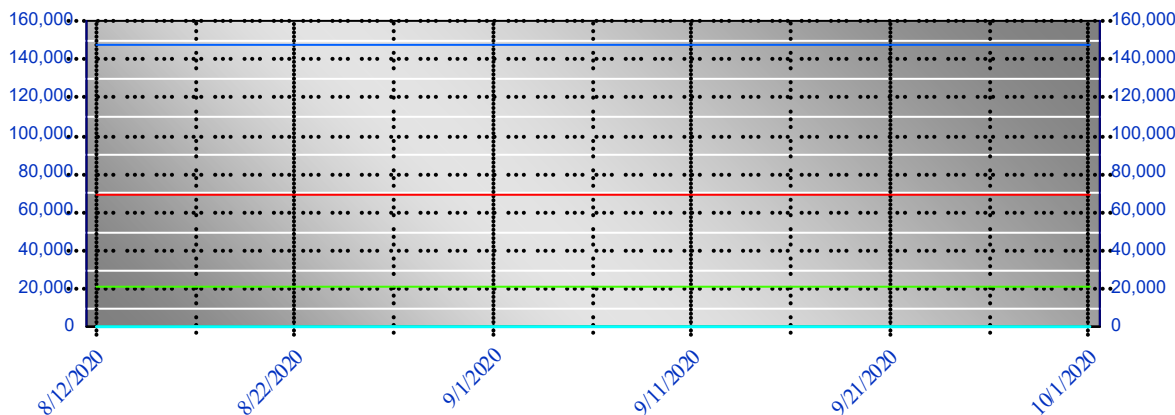
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 148,000 bbl/d

Total Off-line: 7,548,000

Date Range: 8/12/2020 - 10/1/2020

05/04/20	Binh Son Refining and Petrochemical Joint Stock Company - Dung Quat Refinery	Vietnam	08/12/20	10/01/20	148,000 bbl/d	QG Atmospheric Distillation
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Reformers: Daily Off-Line Capacity: 21,100 bbl/d

Total Off-line: 1,076,100

Date Range: 8/12/2020 - 10/1/2020

05/04/20	Binh Son Refining and Petrochemical Joint Stock Company - Dung Quat Refinery	Vietnam	08/12/20	10/01/20	21,100 bbl/d	QG CCR(Continuous Catalytic Reformer)
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FCCU: Daily Off-Line Capacity: 69,700 bbl/d

Total Off-line: 3,554,700

Date Range: 8/12/2020 - 10/1/2020

05/04/20	Binh Son Refining and Petrochemical Joint Stock Company - Dung Quat Refinery	Vietnam	08/12/20	10/01/20	69,700 bbl/d	QG FCCU (Fluid Catalytic Cracker)
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Barrels Off-line from 7/8/2020 to 1/4/2021



Middle East

Yemen

Crude

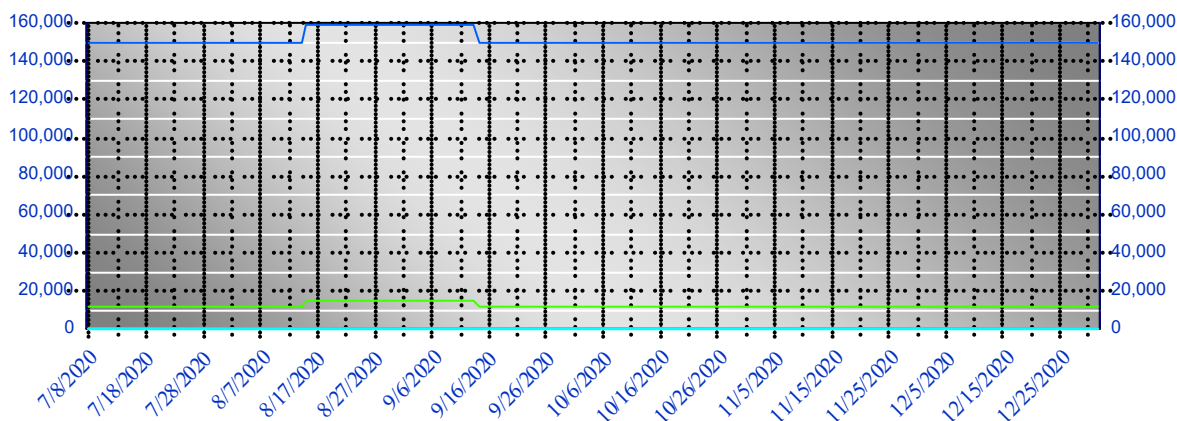
FCCU

Coker

Reformer

Hydro Cracking

Barrels Off-line by Day



Crude Distillation: Daily Off-Line Capacity: 151,525 bbl/d

Total Off-line: 26,820,000

Date Range: 7/8/2020 - 12/31/2020

06/02/20	Yemen Oil Refining Company - Marib Refinery	Yemen	08/15/20	09/13/20	9,000 bbl/d	SB Atmospheric Distillation	
02/24/20	Aden Refinery Company - Little Aden Refinery	Yemen	10/12/15	12/31/20	75,000 bbl/d	AB Atmospheric Distillation	U
02/24/20	Aden Refinery Company - Little Aden Refinery	Yemen	03/28/17	12/31/20	75,000 bbl/d	AB Atmospheric Distillation	U

Reformers: Daily Off-Line Capacity: 12,593 bbl/d

Total Off-line: 2,229,000

Date Range: 7/8/2020 - 12/31/2020

06/02/20	Yemen Oil Refining Company - Marib Refinery	Yemen	08/15/20	09/13/20	3,500 bbl/d	SB Semiregen/Cyclic Reformer	
02/24/20	Aden Refinery Company - Little Aden Refinery	Yemen	04/04/15	12/31/20	12,000 bbl/d	AB CCR(Continuous Catalytic Reformer)	U

Barrels Off-line from 7/8/2020 to 1/4/2021