

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI
OA No. 180 of 2023 (SZ)**

IN THE MATTER OF :

Tribunal on its own motion SUO MOTU

... Applicant

Vs

The District Collector and Ors.

... Respondents

INDEX TO ADDITIONAL TYPED SET OF PAPERS - II

S No.	Date	Description	Page No.
1.	-	Action taken report	1
2.	06.12.2023	Weather Report (ANNEXURE - 1)	11
3.	13.12.2023	CPCL Depth Sensor Values (ANNEXURE - 2)	26
4.	16.12.2023	Reply issued by CPCL to TNPCB (ANNEXURE - 3)	90
5.	17.12.2023	Reply issued by CPCL (ANNEXURE - 4)	97
6.	30.12.2023	Reply issued by CPCL (ANNEXURE - 5)	99
7.	-	IIT proposal for Drainage master plan (ANNEXURE - 6)	104

DATED AT CHENNAI ON THIS THE 11th DAY OF JANUARY 2024



COUNSEL FOR 7th RESPONDENT

SL NO.	DIRECTIONS OF NGT	ORDER DT.	ACTION TAKEN BY CPCL/ REMARKS, IF ANY
1	<p>Authorities to take action on war footing to prevent further spread of Oil into the Creek, leading to the Sea and to remove the same from Oil spilled area.</p>	12.12.2023	<p>CPCL has taken lead role in carrying out Oil spill removal activities, although CPCL is not responsible for oil slippage was due to flooding of Manali Industries.</p> <p>Clean up activity at Ennore creek has been executed on war footing basis in close association with TNPCB and State Authorities.</p> <p>Containment booms were arranged on emergency basis from different sources viz., Chennai port, Kamaraj port, Karaikal port, Paradip (Odisha) and through emergency local procurement. To prevent further spread of oil into the creek and sea Containment booms of around 1500 mts were installed at the following locations</p> <ul style="list-style-type: none"> <input type="checkbox"/> 300 mts boom at Mouth of river. <input type="checkbox"/> Two booms of 325 mts and 275 mts at Ennore Road Bridge. <input type="checkbox"/> 100 mts boom between Road bridge and Railway bridge. <input type="checkbox"/> 80 mts boom at Railway Bridge. <input type="checkbox"/> 250 mts boom (mouth of Buckingham Canal). <input type="checkbox"/> Two booms 50 mts and 50 mts boom at Kattukuppam. <p>6 Nos of oil skimmers were deployed for oil slick removal activities. Skimmers were arranged on emergency basis from Chennai, Mumbai and Paradip. Absorbent booms and pads were used to remove the residual oil traces from the water. Around 35,000 nos of absorbent pads and 500 mts of absorbent booms have been used. Around 128 boats with 512 manpower were deployed for above mentioned oil removal activities.</p> <p>Cleaning activities were completed on 20.12.23</p>
2	<p>CPCL to take care of the health and safety of workers by</p>	12.12.2023	<p>Health & Safety of the workers were ensured in the clean-up activities. The</p>

	supplying safety gears like gloves, masks and any other safety equipment required for the same.		<p>requisite Personal Protective Equipment viz 1300 gloves, 1300 masks, 800 gumboots, 500 Helmets, 900 Boiler Suits and 700 goggles were distributed to the local workforce at the Ennore creek area for Safety of the workers.</p> <p>To address the health need of the workers and communities, 3 mobile medical units with requisite medicines, Doctors and Paramedics teams were stationed for treatment by CPCL in Ennore Creek.</p>
3	CPCL to expedite the cleaning process and complete the entire cleaning operation before 17.12.2023. In order to complete the work expeditiously, CPCL should deploy more machinery, material and personnel in the said operation in consultation with the experts.	14.12.2023	Pls Refer reply to Point No: 1
4	CPCL to ensure that wherever booms are placed are serving their purpose and not allowing them to give way as complained by the Counsel for the Applicant in O.A.No.183 of 2023 (SZ).	14.12.2023	<p>Containment booms were arranged on emergency basis from different sources viz., Chennai port, Kamaraj port, Karaikal port, Paradip (Odisha) and through emergency local procurement. To prevent further spread of oil into the creek and sea Containment booms of around 1500 mts were installed at the following locations</p> <ul style="list-style-type: none"> <input type="checkbox"/> 300 mts boom at Mouth of river. <input type="checkbox"/> Two booms of 325 mts and 275 mts at Ennore Road Bridge. <input type="checkbox"/> 100 mts boom between Road bridge and Railway bridge. <input type="checkbox"/> 80 mts boom at Railway Bridge. <input type="checkbox"/> 250 mts boom (mouth of Buckingham Canal). <input type="checkbox"/> Two booms 50 mts and 50 mts boom at Kattukuppam. <p>The installation of booms was continuously reviewed and implemented as per site requirements. The integrity of booms was monitored on regular basis.</p>

5	CPCL to file its independent report about the status and further action taken by them in the next hearing.	14.12.2023	CPCL has submitted detailed status report on 18.12.23 & 21.12.23.
6	Applicant in OA.No.183 of 2023 has mentioned a couple of sites where oil spill has spread which needs to be attended to. CPCL is directed to verify the claim and take necessary action.	18.12.2023	Applicant in O A No 183 has mentioned that the southern bank of the estuary and creek and the beaches of Nettukuppam and Thalankuppam were affected. The above mentioned areas were cleaned completely.
7	CPCL and other authorities had expressed hope that removal of oil would be completed in 2-3 days. NGT stated to keep up the timeline and file a report on 21.12.2023.	18.12.2023	Please Refer Point No: 1
8	The cleaning process of the oil sludge is to be completed as expeditiously as possible.	21.12.2023	Cleaning of oily sludge is completed on <u>20.12.2023</u> Resources deployed on daily basis to clean the shore area using mechanized methods include - JCB (7 nos.), Gully Sucker (5 nos.), Hydras (3 nos.), Tractor trailer (2 nos.), Dumpers (15 nos.), Poclairn (5 nos.). Around 740 Tons of Solid waste debris have been removed from site and shifted to CPCL. The oil content in the solid waste is also very minimal. The major part of solid waste is sewage sludge.
9	The bio-remediation which is undertaken by the Government, the report regarding the same has to be furnished before the next hearing. If the final report is not available, it is directed to file an interim report	21.12.2023	NIO has been roped in as per the advice from TNPCB for the bio remediation activities. The Herbal Nano Bio dispersant was air lifted from Gujarat to Chennai. Finalisation of bio remediation site was completed in coordination with NIO & TNPCB officials on 08.01.24. Bio remediation commenced on 09.01.24.
10	The correspondence between the CPCL and the State Government referred supra may be considered by the Government and come up with workable solution involving the Manali Industries Association which would be useful and help in	21.12.2023	The various correspondences between Manali Industries Association (MIA) and State Government Departments shows that unauthorized habitations along the Canal had resulted in the width of the Canal which had contributed to the flooding of Manali Industrial area.

	avoiding any future disaster.		
11	In the meanwhile, the reports be furnished as to further action taken in this regard by the Pollution Control Board, State Government and CPCL.	21.12.2023	Detailed report dated 11.1.2024 is filed.

**ALLEGATIONS / INSTRUCTIONS OF TNPCB & ACTION TAKEN BY CPCL/
REMARKS, IF ANY**

SL NO.	ALLEGATIONS / DIRECTIONS OF TNPCB	REPLIES / ACTION TAKEN BY CPCL/ REMARKS, IF ANY
1	Inspecting Team has noticed that there are some stagnant storm water mixed with Oil, adjoining the storm outlet near South Gate of CPCL which slowly contributed to oil mixing in the Canal.	Oil sheen was found in the adjoining canal of Storm Water outlet and was completely removed using gully sucker.
2	CPCL authorities were immediately instructed to provide boomer arrangement at the location where the storm water is reaching the drain leading to Buckingham Canal.	Containment Boom were installed in the canal leading to Buckingham Canal.
3	Inspecting Team also found oil is also coming from upstream of CPCL from Kodungaiyur / Tondiarpet areas, IOCL, Tondiarpet Terminal and Container Terminal located along the Buckingham Canal at Korukkupet and Kodungaiyur areas.	BPCL, HPCL oil Terminals are located at the upstream of CPCL. IOCL Tondiarpet terminal outlet is also near to new Tiruvettiyur bridge. Besides, there are numerous small and big units handling oil including, waste oil recyclers, Mechanical workshops, Diesel carriage works, phenol suppliers etc apart from domestic wastes reaching Buckingham Canal/ Kosasthaiyar river. The above units were also inundated during the flood and have potential for accidental let out of oily waste.
4	Considering CPCL is the major establishment in Manali Area, it is instructed to identify the hotspots in Buckingham Canal where oil or oily matter is stagnated and take necessary steps.	CPCL has taken lead role in cleaning of Oil spill, although oil slippage was not due to negligence of CPCL. Untiring efforts were undertaken by CPCL officials in the cleaning activities on war footing basis within a short period, which only shows that the oil spill was insignificant.

		<p>CPCL mobilized specialized equipment like containment booms, oil skimmers, etc from expert agencies from Chennai Port Trust, Karaikal Port, Kamaraj Port Trust, Mumbai, Paradip Odissa, etc in a record time and completed the oil cleaning activities. CPCL has stretched beyond the boundaries and capacity for the commitment to the society and Environment.</p> <p>The hot spots were identified and oily matter was removed completely.</p>
5	<p>CPCL, other oil industries and terminals are instructed to ensure that all pipelines and tanks are intact to ensure that no leakage shall occur.</p>	<p>All the pipelines and tanks of CPCL are intact & there were no leak from CPCL.</p>
6	<p>Environment Climate Change and Forests Department constituted a Technical Team. The Committee inspected entire premises of CPCL and concluded that because of huge quantity of oil used and the inadequate storm water management and storm water storage ponds, there is clear evident that oil has leaked from CPCL into the Buckingham Canal reaching the Ennore Creek.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> CPCL is designed to withstand waterlogging with storm water systems designed to handle the highest levels of rainfall. In previous instances including cyclone Vardah, Gaja, Nivar and the 2015 floods, CPCL has demonstrated its capability to prevent release of water contaminated with oil, which is a natural calamity and force majeure situation. <input type="checkbox"/> Due to Cyclone Michaung, incessant rain started in the night of 3rd Dec and continued for around 36 hours. Due to heavy rains, some units of refinery were taken on circulation, but refinery was kept running safely to ensure uninterrupted supply of petroleum products. Following the incessant rains, excess water of around 45,000 cusec was released from Poondi and Puzhal reservoirs located near Chennai from 04.12.23, despite the request of CPCL to the concerned authorities on 1.12.2023 to regulate the release of excess water, which increased water logging and flooding situation inside the refinery (around 1m). CPCL team even used boats to enter the refinery for safe operation. <input type="checkbox"/> Level in canal also increased around 1m above normal storm water level causing reverse flow. Due to high

		<p>water levels in the refinery, there is a possibility of co-mingling of flood water with traces of oil in the refinery, while getting drained in the Canal.</p> <ul style="list-style-type: none"> □ There are around 25 petrochemical, fertilizer and other industries in Manali area which were also completely inundated due to flood water. □ All the industries in the Manali area were also affected severely by flooding. There are around 500 to 600 Small Scale Units dealing in waste oil, grease, etc. which has the potential of polluting the area and hence, the oil spill cannot be attributable to CPCL solely.
7	<p>Following directions vide proceedings dated 11.12.2023 under Sec-33A of Water Act, 1974 was issued to CPCL based on the Committee's recommendation:</p> <ul style="list-style-type: none"> □ CPCL shall identify hotspots in Buckingham Canal, Ennore Creek and adjoining area where the oil deposits / oil slick are stagnated and take necessary remedial measures on war footing basis. □ CPCL and its secondary units and terminals shall ensure that all pipelines (raw materials and products) and tanks are intact with no leakage. If CPCL is found to discharge oil containing water / polluted water against the Norms set out for Industries under the provisions of Water Act, 1974, their operations are liable to be suspended. □ CPCL shall also be liable to pay Environmental Compensation for any damages caused in 	<p>Reply given by CPCL on 16.12.23 is attached. (Annexure-3)</p>

	<p>contravention of the extant provisions under the Water Act, 1974.</p> <ul style="list-style-type: none"> <input type="checkbox"/> CPCL shall carry out a Leak Detection & Repair Study (LDAR) with the help of a reputed technical institution and furnish the same to the Board immediately. <input type="checkbox"/> CPCL shall undertake a comprehensive mapping study with a reputed technical institutions to identify oil spread areas and furnish the report with Action Plan to the Board immediately. <input type="checkbox"/> CPCL is directed to ensure that no such occurrence happens in future. 	
8	<p>The TNPCB has directed CPCL to carry out the following vide LR No.T6/TNPCB/F.12753/2023 dated 14.12.2023:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Undertake a complete estimation of oil spill in the area with the help of experts of CPCL and Coast Guard. <input type="checkbox"/> Ensure the deployment of sophisticate machineries and specialized equipment <input type="checkbox"/> Ensure that specialized sea cleaning agencies are immediately deployed with the trained and well equipped manpower. 	<p>Reply given by CPCL on 17.12.23 is attached (Annexure-4)</p>
9	<p>In the second meeting of the State Oil Spill Crisis Management Group with High Level Committee held on 13.12.2023, following instructions were issued:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The entire remedial work shall be expedited and completed as early as possible by engaging more trained manpower by CPCL. 	<p>Reply given by CPCL on 30.12.23 is attached (Annexure-5)</p>

	<ul style="list-style-type: none"> <input type="checkbox"/> CPCL shall undertake complete estimation of oil spilled area with the help of experts and coast guard and report on oil spillage with mitigation plan shall be submitted. <input type="checkbox"/> More number of PPE kits shall be procured and provided to the workers. <input type="checkbox"/> Operations shall being by 7.00 AM every day till sunset. <input type="checkbox"/> Additional sophisticated machineries and specialized equipments viz. booms, skimmers and gully suckers shall be deployed for speedy collection of oil. <input type="checkbox"/> To provide lunch and potable water to the workers involved in the oil cleaning activities. <input type="checkbox"/> Appointment of expert agencies for cleaning / painting / white washing of affected of boats and residences <input type="checkbox"/> CPCL shall bear the entire expenditure. <input type="checkbox"/> More health teams shall be deployed with Dermatologist / Pulmonologist for health check-up for affected residences. <input type="checkbox"/> Fire and Rescue Van shall be engaged for safety of the workers. 	
10	<p>In the high level committee meeting chaired by ACS – R&DM, following instructions were given:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Medical Teams with Dermatologist to be engaged by Health Department to conduct Health check-up to all residents of affected areas. <input type="checkbox"/> The District Collector in 	<ul style="list-style-type: none"> ➤ To address the health needs of the workers and communities, three mobile medical units with requisite medicines, Doctors and Paramedics teams have been stationed by CPCL in Ennore Creek and nearby villages, benefiting approximately 5507 individuals. ➤ Essential medicines for flood relief was handed over to Zone-1 Medical Officer

<p>coordination with CMWSSB has to arrange potable water supply through Lorries to the residents of the affected areas.</p> <ul style="list-style-type: none"> □ CPCL has to undertake all remedial measures to recover oil spillages by using available facilities viz. boom arrangements, gully suckers, oil skimmers and absorbing pads. □ Recovered Oil, Oily Sludges are to be scientifically disposed by CPCL. □ Oil contaminated observing Pads will be incinerated in the Treatment Storage Disposal Facilities (TSDF), Gummidipoondi, which should be ensured by CPCL. □ Compensation to the affected people for loss of livelihood has to be borne by CPCL. □ CPCL has to submit the report pertaining to flammability of the oil spillage. 	<p>(Thiruvottiyur) on 12th, 15th and 19th December 2023 and to Zone-2 Medical officer (Manali) on 14th December 2023.</p> <ul style="list-style-type: none"> ➤ Clean up activity at Ennore creek has been executed on war footing basis in close association with TNPCB and state authorities and completed on ➤ Containment booms were arranged on emergency basis from different sources viz., Chennai port, Kamaraj port, Karaikal port, Paradip (Odisha) and through emergency local procurement. To prevent further spread of oil into the creek and sea Containment booms of around 1500 mts were installed at the following locations <ul style="list-style-type: none"> ○ 300 mts boom at Mouth of river. ○ Two booms of 325 mts and 275 mts at Ennore Road Bridge. ○ 100 mts boom between Road bridge and Railway bridge. ○ 80 mts boom at Railway Bridge. ○ 250 mts boom (mouth of Buckingham Canal). ○ Two booms 50 mts and 50 mts boom at Kattukuppam. ➤ 6 nos of oil skimmers were deployed for oil slick removal activities. Skimmers were arranged on emergency basis from Chennai, Mumbai and Paradip. Absorbent booms and pads were used to sweep the residual oil traces from the water. Around 35,000 nos of absorbent pads and 500 mts of absorbent booms have been used. Around 128 boats with 512 manpower were deployed for above mentioned oil removal activities. ➤ Cleaning activities were completed on 20.12.23 ➤ Recovered oil will be processed in ETP & contaminated sand will be bio remediated. Absorbent pads / booms will be sent to Treatment , Storage and Disposal Facility (TSDF) for incineration. ➤ Flammability report has already been furnished.
--	---

11	ACS – EC&F conducted coordination meeting with CPCL and their contractors on 18.12.2023 and 20.12.2023 and reviewed the progress of the works. During the meeting instructions were given to CPCL and their contractors to expedite and complete the clean-up work immediately.	Cleaning activities were completed on 20.12.23
----	---	--

இந்திய அரசு

இந்திய வானிலை ஆய்வு துறை
மண்டல வானிலை ஆய்வு மையம்
6, கல்லூரி சாலை
சென்னை - 600006
தொலைபேசி: 044- 28271951



GOVERNMENT OF INDIA

INDIA METEOROLOGICAL DEPARTMENT
Regional Meteorological Centre
6, College Road
Chennai-600006
Phone: 044- 28271951

WEEKLY WEATHER REPORT FOR TAMILNADU, PUDUCHERRY & KARAIKAL FOR THE WEEK ENDING 06TH DECEMBER 2023 15 Agrahayana 1945 (SAKA)

Chief synoptic features and its associated weather:

Last week's well marked low pressure area over Southeast Bay of Bengal & adjoining South Andaman Sea moved west-northwestwards and concentrated into a **Depression** over Southeast and adjoining Southwest Bay of Bengal on 01st Dec /0530 Hrs IST and lay centered at 0830 Hrs IST over the same region near Latitude 9.3°N and Longitude 86.2°E, about 760km east-southeast of Puducherry, 780 km east-southeast of Chennai, 960 km southeast of Bapatla and 940 km southeast of Machilipatnam; moved west-northwestwards and intensified into a **Deep Depression** on 02nd /0530 Hrs IST and lay centered at 0830 Hrs IST over the same region near Latitude 10.6°N and Longitude 83.6°E, about 440 km east-southeast of Puducherry, 450 km east-southeast of Chennai, 580 km south-southeast of Nellore, 670 km south-southeast of Bapatla and 670 km south-southeast of Machilipatnam; intensified into a **Cyclonic Storm "MICHAUNG" (pronounced as MIGJAUM)** over Southwest Bay of Bengal on 03rd /0530 Hrs IST, moved northwestwards and lay centered on 03rd/0830 Hrs IST over the same region near Latitude 11.5°N and Longitude 82.4°E, about 290 km east-southeast of Puducherry, 290km southeast of Chennai, 420 km southeast of Nellore, 530 km south-southeast of Bapatla and 530km south-southeast of Machilipatnam; intensified into a **Severe Cyclonic Storm** and lay centered on 04th/0830 Hrs IST over the same region near Latitude 13.3°N and Longitude 81.0°E, about 90 km east-northeast of Chennai, 170 km southeast of Nellore, 200 km northeast of Puducherry, 300 km south-southeast of Bapatla and 320 km south of Machilipatnam; Moved northwards and lay centered on 05th/0830 Hrs IST over the same region near Latitude 15.2°N and Longitude 80.25°E, about 40 km northeast of Kavali, 80 km north-northeast of Nellore, 80 km south-southwest of Bapatla and 140 km south-southwest of Machilipatnam; crossed south Andhra Pradesh coast close to south of Bapatla during 1230 to 1430 Hrs IST on 5th Dec 2023 as a Severe Cyclonic Storm with maximum sustained wind speed of 90-100 kmph.

Last week's Cyclonic Circulation over north Sri Lanka & neighbourhood lay over Southwest Bay of Bengal & adjoining south Sri Lanka and extended upto 5.8 km above mean sea level on 30th Dec 2023.

Rainfall:

Northeast monsoon has been active on 30th over Tamilnadu; over North coastal Tamilnadu on 03rd Dec 2023.

Rainfall occurred over Tamilnadu at many places over coastal Tamilnadu on 30th; at a few places over on 01st, 02nd, 03rd, 04th Dec ; at isolated places on 05th & 06th Dec ; over Puducherry on 30th Nov, 03rd, 04th Dec; over Karaikal on 30th Nov, 01st, 02nd, 03rd Dec. **Very light rain occurred over Puducherry on 05th; over Karaikal on 04th. **Dry weather** prevailed over Puducherry on 01st, 02nd Dec; over Karaikal area on 05th Dec 2023.**

Rainfall distribution over sub regions of Tamilnadu:

SPATIAL	30-11-2023	01-12-2023	02-12-2023	03-12-2023	04-12-2023	05-12-2023	06-12-2023
NCTN	FWS	SCT	SCT	FWS	SCT	ISOL	ISOL
SCTN	FWS	SCT	FWS	SCT	SCT	ISOL	ISOL
NITN	SCT	SCT	ISOL	SCT	SCT	ISOL	ISOL
SITN	ISOL	SCT	ISOL	ISOL	SCT	ISOL	ISOL

Heavy to very heavy with isolated extremely heavy rainfall occurred over Tiruvallur district on 04th and 05th ; over Chennai on 04th and 05th; over Chengalpattu districts on 04th and 05th; over Kancheepuram district on 05thDec 2023.

Isolated **heavy to very heavy rain** occurred over Tiruvallur on 30th Nov and 03rdDec; over Chennai and Nagapattinam districts on 30th Nov 2023; over Kancheepuram district on 04th Dec 2023.

Isolated **heavy rainfall** occurred overChengalpattu on 30th Nov and 03rd Dec; over Kancheepuram, Mayiladuthurai,Cuddalore, Villupuram, Tiruvarur, and Coimbatore districts and Karaikal area on 30th Nov 2023; over Tenkasi,Chennai, Tiruvallur,Ranipet and Tirunelveli districts on 03rd; over Ranipet and Villupuram districts on 04th; over Kanyakumari, Ranipet and Tiruvannamalai districts on 05th; over Virudhunagar, Pudukottai, Dindigul, Sivaganga, Madurai districts on 06th Dec 2023.

Temperature Description:

Maximum Temperature (24 Hrs. Change):

Date/Category	30-11-2023	01-12-2023	02-12-2023	03-12-2023	04-12-2023	05-12-2023	06-12-2023
Markedly fall (-4.1° C or less)	—	Ramanathapuram (Tondi) district.	—	—	Cuddalore, Tiruvallur and Nilgiris districts.	—	—
Appreciable fall (-2.1° C to -4.0°)	Chennai, Cuddalore and Nagapattinam districts and Karaikal area.	Thanjavur and Ramanathapuram districts.	—	Kanyakumari district.	Chennai, Dindigul and Vellore districts.	Chennai district.	—
Appreciable rise (2.1 ° C to 4.0°)	—	—	Thanjavur, Chennai and Ramanathapuram districts	Nagapattinam district.	Erode and Ramanathapuram districts.	Dindigul, Madurai, Nagapattinam, Thanjavur, Tiruchira-ppalli, Ramanathapuram districts and Karaikal area.	Cuddalore, Salem and Thanjavur districts and Karaikal area.
Markedly rise (4.1° c or more)	—	—	Erode district.	—	—	Thanjavur district.	Chennai, Cuddalore, Tiruvallur, Vellore districts and Puducherry.
No large change (-2.0° C to 2.0°C)	Over the rest of the districts						

Maximum Temperature (Departure):

Date/ Category	30-11-2023	01-12-2023	02-12-2023	03-12-2023	04-12-2023	05-12-2023	06-12-2023
Markedly above normal (5.1 ° C or more)	—	—	—	—	—	Madurai and Ramanathapuram districts.	Madurai and Tiruchirappalli districts.
Appreciably above Normal (3.1° C to 5.0 ° C)	Karur district.	—	—	—	Madurai district.	Thanjavur, Nilgiris, Karur, Tirunelveli, Ramanathapuram and Tiruchirappalli districts.	Thanjavur, Nilgiris, Karur, Nagapattinam, Tirunelveli, Ramanathapuram, Thoothukudi districts, Puducherry and Karaikal area.
Above Normal (1.6 ° C to 3.0 ° C)	Kanyakumari, Madurai and Coimbatore districts.	Karur district.	Coimbatore, Kanyakumari, Karur, Madurai and Tiruchirappalli districts.	Coimbatore, Karur, Dindigul, Madurai, Tirunelveli, Trichy and Thoothukudi districts.	Coimbatore, Nilgiris, Kanyakumari, Karur, Tirunelveli and Ramanathapuram districts.	Coimbatore, Kanyakumari, Madurai, Nagapattinam Thoothukudi districts and Karaikal area.	Chennai, Coimbatore, Kanyakumari, Dindigul and Salem districts.
Below normal (-1.6 ° to -3.0 ° C)	Chennai, Cuddalore and Nagapattinam districts and Karaikalarea.	Thanjavur, Chennai, Nilgiris, Nagapattinam, Ramanathapuram districts and Karaikal area.	Nagapattinam district	Erode district.	Erode district.	Cuddalore, Dharmapuri and Thirupattur districts.	—
Appreciably below normal (- 3.1° C to - 5.0°C)	—	—	—	—	—	Chennai, Puducherry, Nilgiris and Vellore districts.	—
Markedly below normal (- 5.1° C or less)	—	—	—	—	—	Chennai and Tiruvallur districts.	—
Normal (-1.5° C to 1.5° C)	Over the rest of the districts.						

Minimum Temperature (24 Hrs. Change)

Date/Category	30-11-2023	01-12-2023	02-12-2023	03-12-2023	04-12-2023	05-12-2023	06-12-2023
Markedly fall (-4.1° C or less)	—	—	—	—	—	—	—
Appreciable fall (-2.1° C to -4.0°)	Ramanathapuram district.	—	—	—	—	Nagapattinam and Thanjavur districts	Dindigul and Nilgiris districts.
Appreciable rise (2.1 ° C to 4.0°)	Dindigul district.	Ramanathapuram district.	Kanyakumari district.	Kanyakumari district.	—	—	Chennai district.
Markedly rise (4.1° c or more)	Karur district	Karur district	—	—	—	—	—
No large change (-2.0° C to 2.0°C)	Over the rest of the districts						

Minimum Temperature (Departure)

Date/Category	30-11-2023	01-12-2023	02-12-2023	03-12-2023	04-12-2023	05-12-2023	06-12-2023
Markedly above normal (5.1 ° C or more)	—	—	—	—	—	—	—
Appreciably above Normal (3.1° C to 5.0 ° C)	Nilgiris and Tirupattur district.	Vellore district.	Tiruvallur and Nilgiris districts.	Coimbatore, Nilgiris, Dharmapuri, Salem, Thirupattur and Vellore districts.	Thanjavur, Coimbatore, Dharmapuri, Salem, Thirupattur, Trichy and Vellore districts.	Thanjavur, Coimbatore, Cuddalore, Nagapattinam, Salem, Thirupattur, Tiruchirappalli Ramanathapuram, Thoothukudi districts and Puducherry.	Cuddalore, Tiruvallur, Thoothukudi, Vellore districts and Puducherry.
Above Normal (1.6 ° C to 3.0 ° C)	Coimbatore, Nilgiris, Dharmapuri, Dindigul, Madurai, Salem, Tiruvallur, Thoothukudi and Vellore districts.	Coimbatore, Cuddalore, Dharmapuri, Salem, Thirupattur, Tiruvallur, Thoothukudi, Nilgiris districts and Puducherry.	Thanjavur, Chennai, Coimbatore, Nilgiris, Cuddalore, Dharmapuri, Dindigul, Madurai, Tirunelveli, Salem, Thirupattur, Tiruchirappalli, Vellore	Thanjavur, Chennai, Cuddalore, Karur, Dindigul, Madurai, Tirunelveli, Trichy, Tiruvallur, Thoothukudi districts and Puducherry.	Nilgiris, Dindigul, Madurai, Tirunelveli, Puducherry, Tiruvallur, Ramanathapuram, Thoothukudi and Coimbatore districts.	Nilgiris, Dharmapuri Karur, Dindigul, Madurai, Tirunelveli, Tiruvallur, Coimbatore Vellore districts and Karaikal area.	Thanjavur, Chennai, Coimbatore, Madurai, Nagapattinam, Tirunelveli, Salem, Thirupattur, Trichy and Ramanathapuram districts and

			districts and Puducherry.				Karaikal area.
Below normal (-1.6 ° to -3.0 ° C)	Erode district.	Ramanathapuram district.	Erode, Kanyakumari and Ramanathapuram districts.	—	—	—	Erode district.
Appreciably below normal (- 3.1° C to -5.0°C)	Ramanathapuram district.	Erode district.	—	—	—	—	
Markedly below normal (- 5.1° C or less)	—	—	—	—	—	—	—
Normal (-1.5° C to 1.5° C)	Over the rest of the districts.						

Chief amounts of Rainfall (in cm):

30-11-2023: Avadi (dist Tiruvallur) 19, Zone 06 D65 Kolathur (dist Chennai), Zone 06 T.V.K Nagar (dist Chennai), Ponneri (dist Tiruvallur) 15 each, Zone 07 Ambattur (dist Chennai), Zone 08 Malar Colony (dist Chennai), Ambathur (dist Chennai) 14 each, Thalaigayyer (dist Nagapattinam), Cholavaram (dist Tiruvallur), Zone 12 Alandhur (dist Chennai) 13 each, Ambattur (dist Chennai), Zone 13 Adyar Eco Park (dist Chennai), Anna University (dist Chennai), Zone 11 U32 Maduravoyal (dist Chennai), Puzhal ARG (dist Tiruvallur), Red Hills (dist Tiruvallur) 12 each, Anna University ARG (dist Chennai), Zone 10 Kodambakkam (dist Chennai), Zone 03 Puzhal (dist Chennai), Gummidipoondi (dist Tiruvallur), Zone Valasaravakkam (dist Chennai), YMCA Nandnam ARG (dist Chennai), Perambur (dist Chennai), Zone 12 D156 Mugalivakkam (dist Chennai), Zone 13 Adyar (dist Chennai), Zone 01 Kathivakkam (dist Chennai), NIOT_Pallikaranai ARG (dist Chennai) 11 each, Zone 09 Teynampet (dist Chennai), Teynampet (dist Chennai), Zone 14 U41 Perungudi (dist Chennai), Meenambakkam AWS (dist Chennai), Cholavaram (dist Tiruvallur), Zone 14 Perungudi (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Alandur (dist Chennai), Chennai (AP) (dist Chennai), Zone 13 U39 Adyar (dist Chennai), Zone 07 U18 D81 Vanagaram (dist Chennai) 10 each, Kolapakkam ARG (dist Kancheepuram), Kollidam (dist Mayiladuthurai), Zone 08 Anna Nagar (dist Chennai), Thirukuvalai (dist Nagapattinam), Anna Nagar (dist Chennai), MGR Nagar (dist Chennai), Ayanavaram Taluk Office (dist Chennai), Chembarapakkam_Rev (dist Kancheepuram), Sholinganallur (dist Chennai), Taramani ARG (dist Chennai), Poonamallee (dist Tiruvallur) 9 each, Tiruvallur (dist Tiruvallur), Kundrathur (dist Kancheepuram), VIT_Chennai AWS (dist Chengalpattu), Adyar (dist Chennai), Zone 03 Madhavaram (dist Chennai), Kodambakkam (dist Chennai), Velankanni (dist Nagapattinam), Chennai (N) (dist Chennai), DGP Office (dist Chennai), Karaikal (dist Karaikal), Koratur (dist Tiruvallur), Chennai(N) AWS (dist Chennai), Vepur (dist Cuddalore) 8 each, Thamarapakkam (dist Tiruvallur), Satyabama Uty ARG (dist Kancheepuram), Sirkali (dist Mayiladuthurai), RSCL-2 Nemoor (dist Villupuram), Tirur KVK AWS (dist Tiruvallur), Zone 09 Ice House (dist Chennai), Thiru-Vi-Ka Nagar (dist Chennai), Perungudi (dist Chennai), Tirupoondi (dist Nagapattinam), Thiruthuraiipoondi (dist Thiruvarur), Valparai PTO (dist Coimbatore), Alandur (dist Chengalpattu), Tambaram (dist Chengalpattu) 7 each, Madhavaram (dist Chennai), Zone 15 Sholinganallur (dist Chennai), Valasaravakkam (dist Chennai), Tarangambadi (dist Mayiladuthurai), Kancheepuram (dist Kancheepuram), Chembarabakkam_CMWSSB (dist Kancheepuram), Zone 02 D15 Manali (dist Chennai), Nagapattinam (dist Nagapattinam), Mayiladuthurai (dist Mayiladuthurai), BASL Mugaiyur (dist Villupuram), Ennore AWS (dist Chennai), Sriperumbudur (dist Kancheepuram) 6 each, Vedaranyam (dist Nagapattinam), Ulundurpet (dist

Kallakurichi), Zone 15 Uthandi (dist Chennai), Muthupet (dist Thiruvarur), Manalmedu (dist Mayiladuthurai), Uthukottai (dist Tiruvallur), Zone 05 GCC (dist Chennai), Kodiayakarai (dist Nagapattinam), CD Hospital Tondiarpet (dist Chennai), Wallajah (dist Ranipet), Chembarambakkam ARG (dist Kancheepuram), K.M.Koil (dist Cuddalore), Mandapam (dist Ramanathapuram), Tondairpet (dist Chennai), Chidambaram AWS (dist Cuddalore), Kodavasal (dist Thiruvarur), Zone 02 Manali (dist Chennai), Oothu (dist Tirunelveli), Lower Anaicut (dist Thanjavur) 5 each, Needamangalam (dist Thiruvarur), Thanjavur (dist Thanjavur), Chennai Collector Office (dist Chennai), Pandavaiyar Head (dist Thiruvarur), RSCL-3 Avalurpettai (dist Villupuram), Vandavasi (dist Tiruvannamalai), Nalumukku (dist Tirunelveli), Virinjipuram AWS (dist Vellore), Nannilam (dist Thiruvarur), Parangipettai (dist Cuddalore), Annamalai Nagar (dist Cuddalore), Zone 04 Tondiarpet (dist Chennai), Sembanarkoil PWD (dist Mayiladuthurai), Tiruchendur (dist Thoothukudi), Gudiyatham (dist Vellore), Arcot (dist Ranipet), Chidambaram (dist Cuddalore), SCS Mill Pillaiyarkuppam (dist Kallakurichi), Kaveripakkam (dist Ranipet), Vadakuthu (dist Cuddalore) 4 each, Sendurai (dist Ariyalur), Pamban (dist Ramanathapuram), Zone 05 Royapuram (dist Chennai), Jayamkondam (dist Ariyalur), Gingee (dist Villupuram), Mannargudi (dist Thiruvarur), SCS Mill Arasoor (dist Villupuram), Kinnakorai (dist The Nilgiris), Zone 01 Thiruvottiyur (dist Chennai), Sholinganallur (dist Chennai), Cuddalore Collector Office (dist Cuddalore), RSCL Vallam (dist Villupuram), Manjalaru (dist Thanjavur), Melalathur (dist Vellore), Kakkachi (dist Tirunelveli), RSCL-3 Anandhapuram (dist Villupuram), Pattukottai (dist Thanjavur), Uthiramemerur (dist Kancheepuram), Me Mathur (dist Cuddalore), Valangaiman (dist Thiruvarur), Kalasapakkam (dist Tiruvannamalai), Ranipet (dist Ranipet), Poondi (dist Tiruvallur), Manjolai (dist Tirunelveli), Lalpet (dist Cuddalore), Tindivanam (dist Villupuram), RSCL-2 Mundiampakkam (dist Villupuram), Chetpet (dist Tiruvannamalai), Agaram Seegoor (dist Perambalur), Thenparanadu (dist Thiruchirappalli), Neivasal Thenpathi (dist Thanjavur), Thiruvalangadu (dist Tiruvallur), Poondi (dist Tiruvallur), Kurinjiyadi (dist Cuddalore), Kattumayilur (dist Cuddalore) 3 each, Grand Anaicut (dist Thanjavur), Kelambakkam (dist Chengalpattu), Pullambadi (dist Thiruchirappalli), Tondi (dist Ramanathapuram), Manimutharu (dist Tirunelveli), Walajabad (dist Kancheepuram), Rameswaram (dist Ramanathapuram), Tiruvarur (dist Thiruvarur), Padalur (dist Perambalur), BASL Vengur (dist Kallakurichi), Madukkur (dist Thanjavur), Cuddalore (dist Cuddalore), Tiruvaiyaru (dist Thanjavur), Madavaram AWS (dist Chennai), Adiramapattinam (dist Thanjavur), Adiramapatnam (dist Thanjavur), Orthanad (dist Thanjavur), RSCL-2 Valavanur (dist Villupuram), Adiramapattinam AWS (dist Thanjavur), Nkl Collectorate (dist Namakkal), Sethiathope (dist Cuddalore), Thiruvaidaimaruthur (dist Thanjavur), KVK Kattukuppam AWS (dist Kancheepuram), Vilupuram (dist Villupuram), Palar Anicut (dist Ranipet), Polur (dist Tiruvannamalai), KCS Mill-1 Kadavanur (dist Kallakurichi), Thaluthalai (dist Perambalur), Geddai (dist The Nilgiris), Royapuram (dist Chennai), Vembakkam (dist Tiruvannamalai), Penucondapuram (dist Krishnagiri), Mahabalipuram (dist Chengalpattu), RSCL-2 Kedar (dist Villupuram), Thangachimadam (dist Ramanathapuram), Kumbakonam (dist Thanjavur), Manapparai (dist Thiruchirappalli), Thanjavur PTO (dist Thanjavur), RSCL-2 Kanjanur (dist Villupuram), Andimadam Taluk Office (dist Ariyalur), RSCL-3 Semmedu (dist Villupuram), Perunchani Dam (dist Kanniyakumari) 2 each, Alangudi (dist Pudukkottai), Suthamalli Dam (dist Ariyalur), Thirumanur (dist Ariyalur), Tirukoilur (dist Kallakurichi), Alakarai Estate (dist The Nilgiris), Chengam (dist Tiruvannamalai), Kuppanatham (dist Cuddalore), Thiruvottiyur (dist Chennai), Arakonam (dist Ranipet), Kannadaian Anicut (dist Tirunelveli), Virdhachalam KVK AWS (dist Cuddalore), Vallam (dist Thanjavur), Bhuvanagiri (dist Cuddalore), RSCL-2 Soorapattu (dist Villupuram), RSCL-2 Koliyanur (dist Villupuram), Arani (dist Tiruvannamalai), Panapakkam (dist Ranipet), Chengalpattu (dist Chengalpattu), Thuckalay (dist Kanniyakumari), BASL Manampoondi (dist Villupuram), Adar Estate (dist The Nilgiris), Perambalur (dist Perambalur), Labbaikudikadu (dist Perambalur), RSCL-3 Valathy (dist Villupuram), Ambur (dist

Tirupathur), Papanasam (dist Tirunelveli), Kothavacherry (dist Cuddalore), Tnau Cri Yethapur (dist Salem), Kilacheruvai (dist Cuddalore), Periyanaickenpalayam (dist Coimbatore), Puthan Dam (dist Kanniyakumari), Keelpennathur (dist Tiruvannamalai), Ramanathapuram (dist Ramanathapuram), Srimushnam (dist Cuddalore), Manamelkudi (dist Pudukkottai), Thirupporur (dist Chengalpattu), Servalar Dam (dist Tirunelveli), Kodaikannal Boat Club (dist Dindigul), Peravurani (dist Thanjavur), Vanamadevi (dist Cuddalore), Karaiyur (dist Pudukkottai), Budalur (dist Thanjavur), Coonoor PTO (dist The Nilgiris), SRC Kudithangi (dist Cuddalore), Kozhiporvilai (dist Kanniyakumari), Vettikadu (dist Thanjavur), Sholingur (dist Ranipet), Ramnadu KVK AWS (dist Ramanathapuram), Vadapudupattu (dist Tirupathur), Ammundi (dist Vellore), Valinokam (dist Ramanathapuram), Ponnai Dam (dist Vellore), Satankulam (dist Thoothukudi), Marakkanam (dist Villupuram), DSCL Eraiyur (dist Kallakurichi), Virudachalam (dist Cuddalore), Sattankulam ARG (dist Thoothukudi), Ariyalur Camp Area (dist Kallakurichi), Ayyampettai (dist Thanjavur), Veppanthattai (dist Perambalur), Pilavakkal Periyar Dam (dist Virudhunagar), Puducherry (dist Puducherry), Eraniel (dist Kanniyakumari), Minnal (dist Ranipet), Coonoor (dist The Nilgiris), Ammoor (Walajah Railway) (dist Ranipet), Kulasekarapattinam (dist Thoothukudi), SCS Mill Thiruvannainal (dist Villupuram), Vamban KVK AWS (dist Pudukkottai), Modakkurichi (dist Erode), DSCL Thirupalapandal (dist Kallakurichi), Jamunamarathur (dist Tiruvannamalai), Kurunthancode (dist Kanniyakumari) 1 each.

01-12-2023: Zone 07 Ambattur (dist Chennai), Velankanni (dist Nagapattinam), Thalaignayer (dist Nagapattinam), K.M.Koil (dist Cuddalore), Kodumudi (dist Erode), Srimushnam (dist Cuddalore) 5 each, Chennai (N) (dist Chennai), Mayiladuthurai (dist Mayiladuthurai), Chennai(N) AWS (dist Chennai), Zone 09 Teynampet (dist Chennai), Thirukuvalai (dist Nagapattinam), Tirupoondi (dist Nagapattinam), Zone 08 Malar Colony (dist Chennai), Zone 06 D65 Kolathur (dist Chennai), Zone 10 Kodambakkam (dist Chennai), Chennai Collector Office (dist Chennai) 4 each, Mahabalipuram (dist Chengalpattu), Vadipatti (dist Madurai), Zone 14 Perungudi (dist Chennai), MGR Nagar (dist Chennai), Zone 06 T.V.K Nagar (dist Chennai), Avadi (dist Tiruvallur), Lalpet (dist Cuddalore), Zone 08 Anna Nagar (dist Chennai), Perambur (dist Chennai), Zone 12 D156 Mugalivakkam (dist Chennai), Zone 12 Alandhur (dist Chennai), Tambaram (dist Chengalpattu), Mandapam (dist Ramanathapuram), Sriperumbudur (dist Kancheepuram), Thirukalukundram (dist Chengalpattu), Sembanarkoil PWD (dist Mayiladuthurai), Eraiyur (dist Perambalur), Rameswaram (dist Ramanathapuram), Zone 07 U18 D81 Vanagaram (dist Chennai), Nagapattinam (dist Nagapattinam), Chennai (AP) (dist Chennai), Alandur (dist Chennai), CD Hospital Tondiarpet (dist Chennai), Zone 11 Valasaravakkam (dist Chennai), Zone 05 GCC (dist Chennai), Annamalai Nagar (dist Cuddalore), Meenambakkam AWS (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Muthupet (dist Thiruvarur), Kolapakkam ARG (dist Kancheepuram), Ambathur (dist Chennai), Lower Anaicut (dist Thanjavur), Adirampatnam (dist Thanjavur), Zone 05 Royapuram (dist Chennai), Vepur (dist Cuddalore), Tiruvarur (dist Thiruvarur), Koratur (dist Tiruvallur), DGP Office (dist Chennai), Kozhiporvilai (dist Kanniyakumari) 3 each, Labbaikudikadu (dist Perambalur), Zone 09 Ice House (dist Chennai), Zone 04 Tondiarpet (dist Chennai), Kodiayakarai (dist Nagapattinam), Poonamallee (dist Tiruvallur), Zone 11 U32 Maduravoyal (dist Chennai), Satyabama Uty ARG (dist Kancheepuram), Thangachimadam (dist Ramanathapuram), Zone 03 Madhavaram (dist Chennai), Kundrathur (dist Kancheepuram), Zone 13 Adyar (dist Chennai), KVK Kattukuppam AWS (dist Kancheepuram), Ayanavaram Taluk Office (dist Chennai), Jayamkondam (dist Ariyalur), Vedaranyam (dist Nagapattinam), Zone 13 U39 Adyar (dist Chennai), Anna University ARG (dist Chennai), VIT_Chennai AWS (dist Chengalpattu), Zone 13 Adyar Eco Park (dist Chennai), Chidambaram AWS (dist Cuddalore), Maduranthagam (dist Chengalpattu), Agaram Seegoor (dist Perambalur), Kilacheruvai (dist Cuddalore), Denkanikottai (dist Krishnagiri), Ponnai Dam (dist Vellore), Karaikal (dist Karaikal), Thiruthuraiipoondi (dist Thiruvarur), Kollidam (dist Mayiladuthurai), Anna University (dist Chennai), Sirkali (dist Mayiladuthurai), Manjolai (dist

Tirunelveli), Chembarapakkam_Rev (dist Kancheepuram), Taramani ARG (dist Chennai), Tondi (dist Ramanathapuram), Zone 02 Manali (dist Chennai), Zone 01 Thiruvottiyur (dist Chennai), Colachel (dist Kanniyakumari), Nannilam (dist Thiruvavarur), Veeraganoor (dist Salem), Cheranmahadevi (dist Tirunelveli) 2 each, Manalmedu (dist Mayiladuthurai), Zone 03 Puzhal (dist Chennai), Kakkachi (dist Tirunelveli), Thirupporur (dist Chengalpattu), Arakonam (dist Ranipet), Zone4 U41 Perungudi (dist Chennai), Kodavasal (dist Thiruvavarur), Tarangambadi (dist Mayiladuthurai), Oothu (dist Tirunelveli), Nalumukku (dist Tirunelveli), Puzhal ARG (dist Tiruvallur), Cincona (dist Coimbatore), Adiramapattinam (dist Thanjavur), Kancheepuram (dist Kancheepuram), Devakottai (dist Sivagangai), Chembarabakkam_CMWSSB (dist Kancheepuram), Bodinaickanur (dist Theni), YMCA Nandnam ARG (dist Chennai), Adiramapattinam AWS (dist Thanjavur), Thalaivasal (dist Salem), Arani (dist Tiruvannamalai), Eraniel (dist Kanniyakumari), Sholayar (dist Coimbatore), Katpadi (dist Vellore), Manimutharu (dist Tirunelveli), Pelandurai (dist Cuddalore), Zone5 Sholinganallur (dist Chennai), Ambasamudram (dist Tirunelveli), Tnau Cri Yethapur (dist Salem), Andimadam Taluk Office (dist Ariyalur), Salem (dist Salem), Gummidipoondi (dist Tiruvallur), Manjalaru (dist Thanjavur), Sendurai (dist Ariyalur), Cuddalore (dist Cuddalore), Uthukottai (dist Tiruvallur), Thiruvudaimaruthur (dist Thanjavur), Ramnadu KVK AWS (dist Ramanathapuram), Kannadaian Anicut (dist Tirunelveli), Wallajah (dist Ranipet), Thenparanadu (dist Thiruchirappalli), Chengalpattu (dist Chengalpattu), Sivagangai PWD TB (dist Sivagangai), Aravakurichi (dist Karur), Sholinganallur (dist Chennai), Kodaikannal Boat Club (dist Dindigul), Arcot (dist Ranipet), Went Worth Estate (dist The Nilgiris), Thiruvalangadu (dist Tiruvallur), Erode PTO (dist Erode), Sholingur (dist Ranipet), KCS Mill-2 Kachirayaopalayam (dist Kallakurichi), Tozhudur (dist Cuddalore), Chidambaram (dist Cuddalore), Valangaiman (dist Thiruvavarur), Valparai PTO (dist Coimbatore), Manamelkudi (dist Pudukkottai), Theerthandathanam (dist Ramanathapuram), RSCL-3 Valathy (dist Villupuram), Sholavandan (dist Madurai), Gomugi Dam PWD (dist Kallakurichi), Sivaganga (dist Sivagangai), NIOT_Pallikaranai ARG (dist Chennai), Kelambakkam (dist Chengalpattu) 1 each.

02-12-2023 : Kannadaian Anicut (dist Tirunelveli) 8, Kodiayakarai (dist Nagapattinam) 7, Mylaudy (dist Kanniyakumari), Thirukuvalai (dist Nagapattinam), Shencottah (dist Tenkasi), Vedaranyam (dist Nagapattinam), Ambasamudram (dist Tirunelveli), Muthupet (dist Thiruvavarur), Manimutharu (dist Tirunelveli), Gundar Dam (dist Tenkasi) 5 each, Ayikudi (dist Tenkasi), Thenkasi (dist Tenkasi), Nagapattinam (dist Nagapattinam) 4 each, Nagercoil (dist Kanniyakumari), Karaikal (dist Karaikal), Oothu (dist Tirunelveli), Kuzhithurai (dist Kanniyakumari), Velankanni (dist Nagapattinam), Karuppanadhi Dam (dist Tenkasi), Servalar Dam (dist Tirunelveli), Manjolai (dist Tirunelveli), Thirupathisaram AWS (dist Kanniyakumari), Kalial (dist Kanniyakumari), Colachel (dist Kanniyakumari) 3 each, Kanniyakumari (dist Kanniyakumari), Kottaram (dist Kanniyakumari), Tirupoondi (dist Nagapattinam), Thalaigayyer (dist Nagapattinam) , BASL Mugaiyur (dist Villupuram), Adavinainnarkoil Dam (dist Tenkasi), Mullanginavillai (dist Kanniyakumari), Adayamadai (dist Kanniyakumari), Mohanur (dist Namakkal), Thirparappu (dist Kanniyakumari), Nalumukku (dist Tirunelveli), Vanamadevi (dist Cuddalore), Papanasam (dist Tirunelveli) 2 each, Bhoothapandy (dist Kanniyakumari), Kakkachi (dist Tirunelveli), Kurunthancode (dist Kanniyakumari), Eraniel (dist Kanniyakumari), Kalakadu (dist Tirunelveli), SRC Kudithangi (dist Cuddalore), RSCL Vallam (dist Villupuram), Thiruthuraipoondi (dist Thiruvavarur), Gadana Dam (dist Tenkasi), Ramanadhi Dam Section (dist Tenkasi), Tarangambadi (dist Mayiladuthurai), KVK Kattukuppam AWS (dist Kancheepuram), Sivalogam(Chittar II) (dist Kanniyakumari), Aralvaimozhi (dist Kanniyakumari), Pallipattu (dist Tiruvallur), Cheyyar (dist Tiruvannamalai), KCS Mill-1 Kadavanur (dist Kallakurichi), RSCL-3 Anandhapuram (dist Villupuram), Labbaikudikadu (dist Perambalur), Kodaikanal (dist Dindigul), Sholinganallur (dist Chennai), KCS Mill-2 Moorarpalayam (dist Kallakurichi), Kumarapalayam (dist Namakkal), Hosur (dist Krishnagiri), DSCL Rishivandhiyam

(dist Kallakurichi), Vedasandur (dist Dindigul), Tobacco Station (VDR) (dist Dindigul) 1 each.

03-12-2023: Pallipattu (dist Tiruvallur) 15, Uthukottai (dist Tiruvallur) 13, Thenkasi (dist Tenkasi) 11, Zone 12 Alandhur (dist Chennai), Ponneri (dist Tiruvallur) 10 each, Tiruttani (dist Tiruvallur), Avadi (dist Tiruvallur), Wallajah (dist Ranipet) 9 each, Meenambakkam AWS (dist Chennai), Anna University (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Alandur (dist Chennai), Chennai (AP) (dist Chennai), Zone 14 Perungudi (dist Chennai), Oothu (dist Tirunelveli), Shencottah (dist Tenkasi), Tiruvallur (dist Tiruvallur), Anna University ARG (dist Chennai), Zone 12 D156 Mugalivakkam (dist Chennai), Thamaraiakkam (dist Tiruvallur) 8 each, Zone 11 Valasaravakkam (dist Chennai), Gundar Dam (dist Tenkasi), Zone 10 Kodambakkam (dist Chennai), Zone 14 U41 Perungudi (dist Chennai), Nalumukku (dist Tirunelveli), Cholavaram (dist Tiruvallur), Tambaram (dist Chengalpattu), Zone 13 U39 Adyar (dist Chennai), Zone 09 Ice House (dist Chennai), Papanasam (dist Tirunelveli), VIT_Chennai AWS (dist Chengalpattu), MGR Nagar (dist Chennai), Zone 09 Teynampet (dist Chennai), Kakkachi (dist Tirunelveli) 7 each, Zone 13 Adyar (dist Chennai), Chennai (N) (dist Chennai), NIOT_Pallikaranai ARG (dist Chennai), Ayikudi (dist Tenkasi), Zone 11 U32 Maduravoyal (dist Chennai), Zone 06 D65 Kolathur (dist Chennai), Manjolai (dist Tirunelveli), Chennai(N) AWS (dist Chennai), Zone 07 Ambattur (dist Chennai), Koratur (dist Tiruvallur), Zone 15 Sholinganallur (dist Chennai), Zone 08 Malar Colony (dist Chennai), DGP Office (dist Chennai), Katpadi (dist Vellore), Zone 08 Anna Nagar (dist Chennai), Zone 07 U18 D81 Vanagaram (dist Chennai), YMCA Nandnam ARG (dist Chennai) 6 each, Red Hills (dist Tiruvallur), R.K.Pet ARG (dist Tiruvallur), Poonamallee (dist Tiruvallur), Tiruttani PTO (dist Tiruvallur) Taramani ARG (dist Chennai), Gummidipoondi (dist Tiruvallur), Thiruvalangadu (dist Tiruvallur), Ponnai Dam (dist Vellore), Zone 03 Madhavaram (dist Chennai), Poondi (dist Tiruvallur), Karuppanadhi Dam (dist Tenkasi), Chennai Collector Office (dist Chennai), Zone 03 Puzhal (dist Chennai), Marakkanam (dist Villupuram), R.K.Pet (dist Tiruvallur), Kannadaian Anicut (dist Tirunelveli), Virinjipuram AWS (dist Vellore), Kundrathur (dist Kancheepuram), Ayanavaram Taluk Office (dist Chennai), Vellore (dist Vellore), Tirur KVK AWS (dist Tiruvallur), Uthiramerur (dist Kancheepuram), Satyabama Uty ARG (dist Kancheepuram), Mahabalipuram (dist Chengalpattu) 5 each, Zone 05 Royapuram (dist Chennai), Zone 05 GCC (dist Chennai), Perambur (dist Chennai), Panapakkam (dist Ranipet), Adavinainnarkoil Dam (dist Tenkasi), Ambathur (dist Chennai), Arcot (dist Ranipet), Zone 06 T.V.K Nagar (dist Chennai), Chembarabakkam_CMWSSB (dist Kancheepuram), Kalavai PWD (dist Ranipet), Sholinganallur (dist Chennai), Zone 04 Tondiarpet (dist Chennai), Puzhal ARG (dist Tiruvallur), Manimutharu (dist Tirunelveli), Chembarapakkam_Rev (dist Kancheepuram), Kelambakkam (dist Chengalpattu), Arakonam (dist Ranipet), Good Will School Villivakkam ARG (dist Tiruvallur), Ammundi (dist Vellore), Ranipet (dist Ranipet) 4 each, Ambasamudram (dist Tirunelveli), Zone 13 Adyar Eco Park (dist Chennai), Sriperumbudur (dist Kancheepuram), Ammoor (Walajah Railway) (dist Ranipet), Cheyyar (dist Tiruvannamalai), Poondi (dist Tiruvallur), Zone 01 Thiruvottiyur (dist Chennai), Zone 01 Kathivakkam (dist Chennai), Ramanadhi Dam Section (dist Tenkasi), Servalar Dam (dist Tirunelveli), Thirukuvalai (dist Nagapattinam), Thirukalukundram (dist Chengalpattu), Cholavaram (dist Tiruvallur), Kaveripakkam (dist Ranipet), Chidambaram AWS (dist Cuddalore), Kancheepuram (dist Kancheepuram), Zone 15 Uthandi (dist Chennai), Mayiladuthurai (dist Mayiladuthurai), Cuddalore Collector Office (dist Cuddalore), CD Hospital Tondiarpet (dist Chennai), Annamalai Nagar (dist Cuddalore), Sholingur (dist Ranipet), Minnal (dist Ranipet), Zone 02 Manali (dist Chennai), Puducherry (dist Puducherry), Vembakkam (dist Tiruvannamalai), Kollidam (dist Mayiladuthurai), Thirupporur (dist Chengalpattu), Manalmedu (dist Mayiladuthurai), Chidambaram (dist Cuddalore), Maduranthagam (dist Chengalpattu), Ennore AWS (dist Chennai) 3 each, Palar Anicut (dist Ranipet), Cuddalore (dist Cuddalore), Parangipettai (dist Cuddalore), Vanur (dist Villupuram), Tiruvarur (dist Thiruvarur), Gadana Dam (dist Tenkasi), KVK Kattukuppam AWS (dist Kancheepuram), Bhuvanagiri

(dist Cuddalore), Zone 02 D15 Manali (dist Chennai), Thiruthuraiipoondi (dist Thiruvarur), Karaikal (dist Karaikal), Sivagiri (dist Tenkasi), Arani (dist Tiruvannamalai), Chengalpattu (dist Chengalpattu), Sembanarkoil PWD (dist Mayiladuthurai), Jamunamarathur (dist Tiruvannamalai), Cheyyur (dist Chengalpattu) 2 each, Kurinjipadi (dist Cuddalore), Pechiparai (dist Kanniyakumari), Kuzhithurai (dist Kanniyakumari), Tindivanam (dist Villupuram), Walajabad (dist Kancheepuram), Melalathur (dist Vellore), Nannilam (dist Thiruvarur), Gudiyatham (dist Vellore), Chetpet (dist Tiruvannamalai), Nambiyar Dam (dist Tirunelveli), RSCL Vallam (dist Villupuram), Velankanni (dist Nagapattinam), SRC Kudithangi (dist Cuddalore), Vadakuthu (dist Cuddalore), Tarangambadi (dist Mayiladuthurai), Ambur (dist Tirupathur), Sirkali (dist Mayiladuthurai), Lalpet (dist Cuddalore), Sethiathope (dist Cuddalore), BASL Mugaiyur (dist Villupuram), Kothavacherry (dist Cuddalore), Vandavasi (dist Tiruvannamalai), Nagapattinam (dist Nagapattinam), Vanamadevi (dist Cuddalore), Sivalogam(Chittar II) (dist Kanniyakumari), Panruti (dist Cuddalore), Sivaganga (dist Sivagangai), Vedaranyam (dist Nagapattinam), Kodiayakarai (dist Nagapattinam), RSCL-2 Koliyanur (dist Villupuram), Chittar-I (dist Kanniyakumari) 1 each.

04-12-2023 : Zone 14 Perungudi (dist Chennai) 29, Avadi (dist Tiruvallur) 28, Alandur (dist Chennai), Chennai (AP) (dist Chennai) 25 each, Zone 13 Adyar (dist Chennai), Meenambakkam AWS (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Chennai (N) (dist Chennai), Puzhal ARG (dist Tiruvallur), Cholavaram (dist Tiruvallur) 23 each, Mahabalipuram (dist Chengalpattu), MGR Nagar (dist Chennai), Zone 10 Kodambakkam (dist Chennai), CD Hospital Tondiarpet (dist Chennai) 22 each, Zone 11 Valasaravakkam (dist Chennai), Zone 15 Sholinganallur (dist Chennai), DGP Office (dist Chennai), NIOT_Pallikaranai ARG (dist Chennai), Chennai (N) AWS (dist Chennai), Anna University (dist Chennai), Ponneri (dist Tiruvallur) 21 each, Zone 03 Puzhal (dist Chennai), Perambur (dist Chennai), Zone 09 Ice House (dist Chennai), Red Hills (dist Tiruvallur) 20 each, Ayanavaram Taluk Office (dist Chennai), Taramani ARG (dist Chennai), Satyabama Uty ARG (dist Kancheepuram), Anna Nagar (dist Chennai), VIT_Chennai AWS (dist Chengalpattu) 19 each, Chennai Collector Office (dist Chennai), Sholinganallur (dist Chennai), Zone 09 Teynampet (dist Chennai), Zone 08 Malar Colony (dist Chennai), Ambattur (dist Chennai), Anna University ARG (dist Chennai), Valasaravakkam (dist Chennai), Good Will School Villivakkam ARG (dist Tiruvallur), YMCA Nandnam ARG (dist Chennai), KVK Kattukuppam AWS (dist Kancheepuram), Thamaraipakkam (dist Tiruvallur), Kodambakkam (dist Chennai) 18 each, Gummidipoondi (dist Tiruvallur), Tambaram (dist Chengalpattu), Ambathur-2 (dist Chennai), Kelambakkam (dist Chengalpattu) 17 each, Zone 06 T.V.K Nagar (dist Chennai), Zone 04 Tondiarpet (dist Chennai), Chembarapakkam_Rev (dist Kancheepuram), Teynampet (dist Chennai), Tiruvallur (dist Tiruvallur), Zone 01 Kathivakkam (dist Chennai), Thiru-Vi-Ka Nagar (dist Chennai), **Zone 03 Madhavaram (dist Chennai) 16 each**, Uthukottai (dist Tiruvallur), Zone 08 Anna Nagar (dist Chennai), Sholinganallur (dist Chennai), Tirur KVK AWS (dist Tiruvallur), Zone 06 D65 Kolathur (dist Chennai), Tondairpet (dist Chennai), Zone 14 U41 Perungudi (dist Chennai), Ennore AWS (dist Chennai) 15 each, Zone 07 Ambattur (dist Chennai), Zone 13 Adyar Eco Park (dist Chennai), Zone 05 GCC (dist Chennai), Poonamallee (dist Tiruvallur), Thirukalukundram (dist Chengalpattu), Zone 12 Alandhur (dist Chennai), Koratur (dist Tiruvallur) 14 each, Sriperumbudur (dist Kancheepuram), Thirupporur (dist Chengalpattu), **Zone 02 Manali (dist Chennai), Zone U39 Adyar (dist Chennai), Chembarabakkam_CMWSSB (dist Kancheepuram) 13 each**, Zone D156 Mugalivakkam (dist Chennai), Kundrathur (dist Kancheepuram), Chengalpattu (dist Chengalpattu), Zone 15 Uthandi (dist Chennai), Royapuram (dist Chennai), Zone 07 U18 D81 Vanagaram (dist Chennai) 12 each, Zone 05 Royapuram (dist Chennai), Zone U32 Maduravoyal (dist Chennai) 11 each, Poondi (dist Tiruvallur), Tiruttani (dist Tiruvallur) 10 each, **Thiruvottiyur (dist Chennai), Maduranthagam (dist Chengalpattu), Thiruvalangadu (dist Tiruvallur), Kancheepuram (dist Kancheepuram), Uthiramerur (dist Kancheepuram), Cheyyur (dist Chengalpattu) 9 each**, Walajabad (dist Kancheepuram), Minnal (dist

Ranipet), Arakonam (dist Ranipet), Marakkanam (dist Villupuram) 8 each, Zone 01 Thiruvottiyur (dist Chennai) 7 each, Tiruttani PTO (dist Tiruvallur) 6, Zone 02 D15 Manali (dist Chennai), Sholingur (dist Ranipet), Kaveripakkam (dist Ranipet), Vembakkam (dist Tiruvannamalai), Panapakkam (dist Ranipet) 5 each, Pallipattu (dist Tiruvallur), R.K.Pet (dist Tiruvallur), Perungudi (dist Chennai), Poondi (dist Tiruvallur), Adavinainnarkoil Dam (dist Tenkasi), Vandavasi (dist Tiruvannamalai), Alandur (dist Chengalpattu) 4 each, Vanur (dist Villupuram), Puducherry (dist Puducherry), Kalavai PWD (dist Ranipet) 3 each, Arcot (dist Ranipet), Vadapudupattu (dist Tirupathur), Cheyyar (dist Tiruvannamalai), Tindivanam (dist Villupuram), Puducherry_KVK AWS (dist Puducherry), Wallajah (dist Ranipet), Palar Anicut (dist Ranipet), Kovilpatti (dist Thoothukudi), RSCL Vallam (dist Villupuram), Katpadi (dist Vellore), Ammoor (Walajah Railway) (dist Ranipet), Ponnai Dam (dist Vellore), Arani (dist Tiruvannamalai), Ammundi (dist Vellore) 2 each, Cuddalore (dist Cuddalore), Cuddalore Collector Office (dist Cuddalore), Usilampatti (dist Madurai), RSCL-3 Valathy (dist Villupuram), Aranmanaipudur (dist Theni), Chetpet (dist Tiruvannamalai), Vellore (dist Vellore), Gudiyatham (dist Vellore), Manjolai (dist Tirunelveli), Thenparanadu (dist Thiruchirappalli), Melalathur (dist Vellore), Ambur (dist Tirupathur), RSCL-3 Avalurpettai (dist Villupuram), Kalasapakkam (dist Tiruvannamalai), RSCL-3 Anandhapuram (dist Villupuram), Danishpet (dist Salem), Alangayam (dist Tirupathur), Polur (dist Tiruvannamalai), RSCL-2 Mundiampakkam (dist Villupuram), Ettayapuram (dist Thoothukudi), Thandampettai (dist Tiruvannamalai), Jamunamarathur (dist Tiruvannamalai), Chengam (dist Tiruvannamalai), BASL Mugaiyur (dist Villupuram), SRC Kudithangi (dist Cuddalore), Dharmapuri PTO (dist Dharmapuri), Kothavacherry (dist Cuddalore), Virinjipuram AWS (dist Vellore), RSCL-3 Semmedu (dist Villupuram), Nalumukku (dist Tirunelveli), Ranipet (dist Ranipet) 1 each.

05-12-2023: Poonamallee (dist Tiruvallur) 34, Avadi (dist Tiruvallur) 28, KVK Kattukuppam AWS (dist Kancheepuram) 27, Chennai (N) (dist Chennai), Chennai(N) AWS (dist Chennai), Tambaram (dist Chengalpattu) 24 each, Mahabalipuram (dist Chengalpattu), Zone 09 Ice House (dist Chennai) 22 each, Royapuram (dist Chennai), Zone 13 Adyar (dist Chennai), Thiru-Vi-Ka Nagar (dist Chennai), Zone 05 GCC (dist Chennai), Zone 10 Kodambakkam (dist Chennai), Chembarapakkam_Rev (dist Kancheepuram) 21 each, Zone 15 Sholinganallur (dist Chennai), Taramani ARG (dist Chennai), Meenambakkam AWS (dist Chennai), Chennai (AP) (dist Chennai), Kundrathur (dist Kancheepuram), Thamaraipakkam (dist Tiruvallur), Kodambakkam (dist Chennai), Tirur KVK AWS (dist Tiruvallur) 19 each, Teynampet (dist Chennai), Valasaravakkam (dist Chennai), Tiruvallur (dist Tiruvallur), Anna University ARG (dist Chennai), Zone 11 Valasaravakkam (dist Chennai) 18 each, Uthukottai (dist Tiruvallur), NIOT_Pallikaranai ARG (dist Chennai), Ponneri (dist Tiruvallur), Sriperumbudur (dist Kancheepuram), Koratur (dist Tiruvallur) 17 each, Kelambakkam (dist Chengalpattu) 16, Cholavaram (dist Tiruvallur) 15, Thiruvallangadu (dist Tiruvallur), Poondi (dist Tiruvallur), Alandur (dist Chengalpattu), Thirupporur (dist Chengalpattu) 14 each, Red Hills (dist Tiruvallur) 13, Zone Alandhur (dist Chennai), Tiruttani (dist Tiruvallur), Gummidipoondi (dist Tiruvallur), Chembarabakkam_CMWSSB (dist Kancheepuram) 12 each, Thirukalukundram (dist Chengalpattu), Pechiparai (dist Kanniyakumari), Zone 05 Royapuram (dist Chennai) 11 each, Minnal (dist Ranipet), Zone 04 Tondiarpet (dist Chennai) 10 each, Chengalpattu (dist Chengalpattu), Zone 12 D156 Mugalivakkam (dist Chennai), Wallajah (dist Ranipet), Perunchani Dam (dist Kanniyakumari), Tiruttani PTO (dist Tiruvallur) 9 each, Zone 03 Puzhal (dist Chennai), Puthan Dam (dist Kanniyakumari), Panapakkam (dist Ranipet), Zone 09 Teynampet (dist Chennai) 8 each, R.K.Pet (dist Tiruvallur), Walajabad (dist Kancheepuram), Pallipattu (dist Tiruvallur), Vembakkam (dist Tiruvannamalai), Sholingur (dist Ranipet), Kuzhithurai (dist Kanniyakumari) 7 each, Kaveripakkam (dist Ranipet), Arakonam (dist Ranipet), Ponnai Dam (dist Vellore), Palar Anicut (dist Ranipet), Uthiramerur (dist Kancheepuram) 6 each, Ammoor (Walajah Railway) (dist Ranipet), Kancheepuram (dist Kancheepuram), Suralacode (dist Kanniyakumari), Satankulam (dist Thoothukudi), Chittar-I (dist

Kanniyakumari), Arcot (dist Ranipet), Sattankulam ARG (dist Thoothukudi) 5 each, Balamore (dist Kanniyakumari), Zone 08 Anna Nagar (dist Chennai), Maduranthagam (dist Chengalpattu), Kalavai PWD (dist Ranipet), Ammundi (dist Vellore), Zone 03 Madhavaram (dist Chennai), **Zone 02 Manali (dist Chennai), Zone 13 Adyar Eco Park (dist Chennai), Kannimar (dist Kanniyakumari), Ranipet (dist Ranipet) 4 each**, Marakkanam (dist Villupuram), Bhoothapandy (dist Kanniyakumari), Cheyyar (dist Tiruvannamalai), Katpadi (dist Vellore), Kayathar (dist Thoothukudi), Cheyyur (dist Chengalpattu), Thuckalay (dist Kanniyakumari), Vellore (dist Vellore), Periyapatti (dist Madurai) 3 each, Sivalogam(Chittar II) (dist Kanniyakumari), Kallandri (dist Madurai), Kakkachi (dist Tirunelveli), Nalumukku (dist Tirunelveli), Oothu (dist Tirunelveli), Kozhiporvilai (dist Kanniyakumari), Vandavasi (dist Tiruvannamalai), Mullanginavillai (dist Kanniyakumari) 2 each, Thirparappu (dist Kanniyakumari), Kalial (dist Kanniyakumari), Aralvaimozhi (dist Kanniyakumari), Arani (dist Tiruvannamalai), Thenparanadu (dist Thiruchirappalli), Gundar Dam (dist Tenkasi), Adayamadai (dist Kanniyakumari), Chittampatti (dist Madurai), Usilampatti (dist Madurai), Manjolai (dist Tirunelveli), Virinjipuram AWS (dist Vellore), Mukkadal Dam (dist Kanniyakumari) 1 each.

06-12-2023: Virudunagar AWS (dist Virudhunagar), Ponnamaravathi (dist Pudukkottai), Natham (dist Dindigul), Singampunari (dist Sivagangai), Sathiar (dist Madurai), Arimalam (dist Pudukkottai) 7 each, Vadipatti (dist Madurai) 5, Kudimiyamalai (dist Pudukkottai), Pulipatti (dist Madurai), Tirumayam (dist Pudukkottai), Andipatti (dist Madurai) 4 each, Aruppukottai (dist Virudhunagar), Manamelkudi (dist Pudukkottai), Vamban KVK AWS (dist Pudukkottai) 3 each, Karaiyur (dist Pudukkottai), Srimushnam (dist Cuddalore), Tondi (dist Ramanathapuram), Virudhunagar (dist Virudhunagar) 2 each, Koppampatti (dist Thiruchirappalli), Mimisal (dist Pudukkottai), Kallandri (dist Madurai), Vedaranyam (dist Nagapattinam), Sivagangai (dist Sivagangai), Perungalur (dist Pudukkottai), Vadakuthu (dist Cuddalore), Jayamkondam (dist Ariyalur), Muthupet (dist Thiruvarur), Thanjai Papanasam (dist Thanjavur), Tirupathur (dist Sivagangai), Alangudi (dist Pudukkottai) 1 each.

Week's Rainfall:

Large Excess	Chengalpattu, Chennai, Kancheepuram, Kanyakumari, Nagapattinam, Ranipet, Tenkasi, Tirunelveli, Tiruvallur, Tiruvannamalai and Vellore districts.
Excess	Madurai, Mayiladuthurai districts and Karaikal area.
Normal	Tirupattur, Tiruvarur, Villupuram districts and Puducherry.
Deficient	Ariyalur, Cuddalore, Dindigul, Kallakurichi, Krishnagiri, Namakkal, Perambalur, Pudukkottai, Ramanathapuram, Salem, Sivaganga, Thanjavur and Virudhunagar districts.
Largely Deficient	Coimbatore, Dharmapuri, Erode, Karur, Nilgiris, Theni, Tiruppur, Toothukudi and Trichy districts.
No rain	-----

For the period from 01.10.2023 to 06.12.2023:

Large Excess	Kanyakumari districts.
Excess	Chennai, Coimbatore, Erode, Kancheepuram, Madurai, Tenkasi, Theni, Tirunelveli, Tiruvallur, Virudhunagar districts and Karaikal area.
Normal	Chengalpattu, Cuddalore, Dindigul, Mayiladuthurai, , Nagapattinam, Namakkal, Nilgiris, Pudukkottai, Ramanathapuram, Ranipet, Sivaganga, Tiruppur, Tiruvarur, Toothukudi, Vellore districts and Puducherry.
Deficient	Ariyalur, Dharmapuri, Kallakurichi, Karur, Krishnagiri, Perambalur, Salem, Thanjavur, Tirupattur, Tiruvannamalai, Trichy, Villupuram districts.

Largely Deficient	-----
No rain	-----

P.Senthamarai Kannan
Scientist'E'
for the Deputy Director General of Meteorology
Regional Meteorological Centre,
College Road, Chennai-6

Dated: 06.12.2023

LEGEND:

Spatial rainfall distribution:

% Stations reporting Rainfall	Category
76-100	Widespread (WS/ most places)
51-75	Fairly Widespread (FWS/ many places)
26-50	Scattered (SCT/ few places)
1 -25	Isolated (ISOL/ one or two places)
No Rain	Dry

Rainfall intensity:

24-hr accumulated rainfall (cm/day)	Category
Upto 1	Light rain
2-6	Moderate rain
7-11	Heavy rain
12-20	Very heavy rain
≥ 21	Extremely heavy rain

North Coastal Tamil Nadu (NCTN) districts	Tiruvallur, Chennai, Chengalpattu, Villupuram, Cuddalore, Thanjavur, Tiruvarur, Mayiladuthurai, Nagapattinam, Pudukottai.
South Coastal Tamil Nadu (SCTN) districts	Ramanathapuram, Thoothukudi, Tirunelveli, Kanyakumari.
North Interior Tamil Nadu (NITN) districts	Tirupattur, Vellore, Ranipet, Kallakurichi, Tiruvannamalai, Kancheepuram, Krishnagiri, Dharmapuri, Salem, Namakkal, Karur, Erode, Nilgiris, Coimbatore, Tiruppur, Tiruchirapalli, Ariyalur, Perambalur.
South Interior Tamil Nadu (SITN) districts	Sivagangai, Virudhunagar, Theni, Dindigul, Madurai, Thenkasi.

RAINFALL STATEMENT

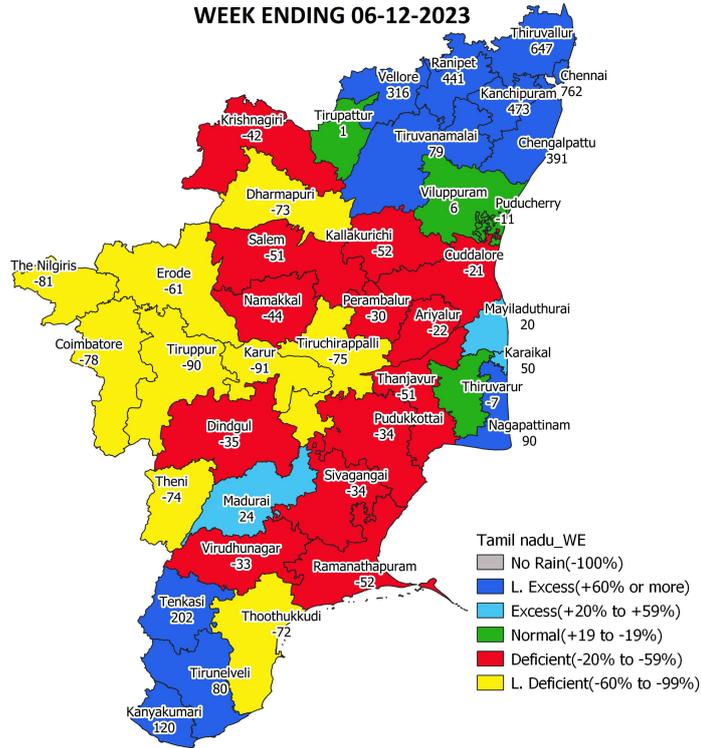
Districts	Rainfall For the week ending 06.12.2023			Seasonal rainfall for the period from 01.10.2023 to 06.12.2023		
	Actual (mm)	Normal (mm)	Departure (%)	Actual (mm)	Normal (mm)	Departure (%)
Ariyalur	36.4	46.6	-22	251.1	414.7	-39
Chengalpattu	353.1	71.9	391	728.6	611.4	19
Chennai	572.9	66.5	762	1077.0	707.5	52
Coimbatore	2.6	11.9	-78	415.8	302.9	37
Cuddalore	51.6	65.2	-21	505.3	576.7	-12
Dharmapuri	4.0	14.7	-73	181.2	287.3	-37
Dindigul	15.1	23.3	-35	338.2	396.0	-15
Erode	4.9	12.5	-61	370.0	278.6	33
Kallakurichi	16.4	34.3	-52	199.5	380.0	-48
Kanchipuram	340.0	59.3	473	683.7	506.7	35
Kanyakumari	48.5	22.1	120	886.2	487.0	82
Karaikal	148.5	98.9	50	995.9	823.5	21
Karur	1.6	17.6	-91	171.5	276.3	-38
Krishnagiri	6.4	11.0	-42	137.5	257.3	-47
Madurai	17.3	14.0	24	420.2	328.1	28
Mayiladuthurai	109.9	91.5	20	645.6	721.2	-10
Nagapattinam	169.9	89.2	90	843.4	748.2	13
Namakkal	8.2	14.7	-44	228.4	247.6	-8
Nilgiris	4.7	24.7	-81	421.1	444.3	-5
Perambalur	23.3	33.3	-30	221.8	373.7	-41
Puducherry	72.0	81.3	-11	591.8	701.3	-16
Pudukottai	19.4	29.5	-34	267.3	321.6	-17
Ramanathapuram	20.4	43.0	-52	495.1	433.5	14
Ranipet	170.0	31.4	441	347.5	348.3	0
Salem	7.8	16.0	-51	225.8	298.5	-24
Sivagangai	17.1	26.1	-34	372.0	360.3	3
Thenkasi	82.1	27.2	202	561.6	406.6	38
Thanjavur	27.0	55.1	-51	293.8	471.6	-38
Theni	3.9	14.7	-74	412.0	324.3	27
Tirunelveli	73.8	40.9	80	632.2	423.0	49
Tirupathur	15.6	15.4	1	141.0	238.0	-41
Tiruppur	1.5	14.3	-90	288.0	275.6	5
Tiruvallur	433.3	58.0	647	748.2	546.8	37
Tiruvannamalai	60.3	33.7	79	268.9	383.0	-30
Tiruvarur	71.0	76.2	-7	500.2	585.0	-14
Toothukudi	8.6	31.1	-72	320.2	378.5	-15
Tiruchirapalli	7.0	27.4	-75	185.5	324.8	-43
Vellore	103.3	24.8	316	282.7	325.1	-13
Villupuram	51.7	48.6	6	347.2	446.1	-22
Virudhunagar	12.6	18.8	-33	458.7	349.2	31
Tamilnadu	50.8	30.8	65	370.2	379.3	-2
Tamilnadu, Puducherry&Karaikal	50.9	31.0	64	371.4	380.6	-2

Largely deficient	Deficient	Normal	Excess	Large Excess
-60% to -99%	-20% to -59%	-19% to +19%	+20% to +59%	≥ 60%

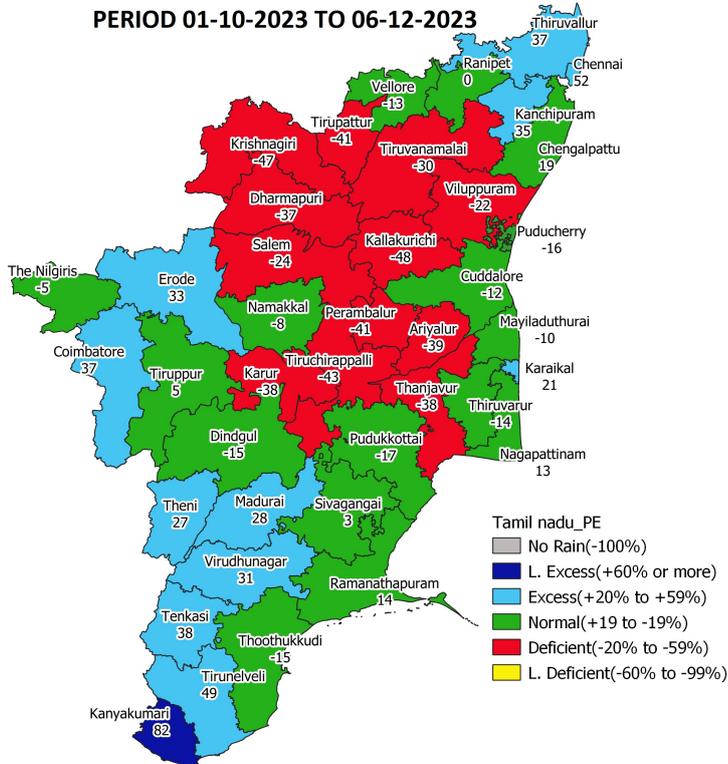
No rain: -100%

TAMILNADU DISTRICTS

WEEK ENDING 06-12-2023



PERIOD 01-10-2023 TO 06-12-2023



CPCL WEST GATE - 1

Date and Time	Depth (m)	Pressure (kPa)	Temperature (C)
02/12/23 17:00	0.00	100.735	27.694
02/12/23 17:15	0.00	100.715	27.548
02/12/23 17:30	0.00	100.769	27.791
02/12/23 17:45	0.01	100.813	28.034
02/12/23 18:00	0.01	100.844	28.18
02/12/23 18:15	0.01	100.848	28.471
02/12/23 18:30	0.01	100.813	28.713
02/12/23 18:45	0.01	100.865	28.858
02/12/23 19:00	0.02	100.918	29.051
02/12/23 19:15	0.02	100.954	29.196
02/12/23 19:30	0.02	100.951	29.1
02/12/23 19:45	0.02	100.953	29.003
02/12/23 20:00	0.02	100.96	28.713
02/12/23 20:15	0.02	100.942	27.791
02/12/23 20:30	0.03	100.998	27.256
02/12/23 20:45	0.02	100.944	27.353
02/12/23 21:00	0.03	101.015	29.824
02/12/23 21:15	0.03	101.029	29.92
02/12/23 21:30	0.03	100.998	27.402
02/12/23 21:45	0.03	101.017	26.329
02/12/23 22:00	0.04	101.116	25.987
02/12/23 22:15	0.03	101.06	25.693
02/12/23 22:30	0.03	101.063	25.791
02/12/23 22:45	0.04	101.088	25.595
02/12/23 23:00	0.03	101.001	25.644
02/12/23 23:15	0.04	101.158	25.153
02/12/23 23:30	0.04	101.107	25.006
02/12/23 23:45	0.04	101.099	24.907
03/12/23 0:00	0.04	101.118	24.858
03/12/23 0:15	0.03	101.054	24.809
03/12/23 0:30	0.02	100.926	24.907
03/12/23 0:45	0.02	100.95	25.006
03/12/23 1:00	0.03	100.99	24.957
03/12/23 1:15	0.02	100.933	24.957
03/12/23 1:30	0.00	100.756	25.153
03/12/23 1:45	0.01	100.787	25.3
03/12/23 2:00	0.00	100.776	25.3
03/12/23 2:15	0.00	100.713	25.448
03/12/23 2:30	0.00	100.751	25.497
03/12/23 2:45	-0.01	100.683	25.497
03/12/23 3:00	0.01	100.809	25.349
03/12/23 3:15	0.01	100.844	24.612
03/12/23 3:30	0.00	100.725	24.809
03/12/23 3:45	-0.01	100.655	25.104
03/12/23 4:00	-0.01	100.623	25.251
03/12/23 4:15	-0.01	100.659	25.399
03/12/23 4:30	-0.01	100.645	25.448
03/12/23 4:45	0.00	100.704	25.497
03/12/23 5:00	-0.01	100.643	25.546

03/12/23 5:15	-0.01	100.654	25.595
03/12/23 5:30	0.00	100.726	25.202
03/12/23 5:45	0.00	100.721	25.202
03/12/23 6:00	0.00	100.694	25.349
03/12/23 6:15	0.00	100.74	25.497
03/12/23 6:30	0.00	100.719	25.497
03/12/23 6:45	0.00	100.761	25.644
03/12/23 7:00	0.01	100.799	25.546
03/12/23 7:15	0.00	100.78	25.595
03/12/23 7:30	0.01	100.814	25.84
03/12/23 7:45	0.01	100.822	25.938
03/12/23 8:00	0.02	100.895	25.938
03/12/23 8:15	0.02	100.925	26.231
03/12/23 8:30	0.02	100.956	26.231
03/12/23 8:45	0.02	100.963	27.791
03/12/23 9:00	0.02	100.96	27.694
03/12/23 9:15	0.02	100.963	27.645
03/12/23 9:30	0.02	100.949	27.353
03/12/23 9:45	0.02	100.975	27.694
03/12/23 10:00	0.02	100.977	28.082
03/12/23 10:15	0.02	100.959	28.519
03/12/23 10:30	0.02	100.965	28.713
03/12/23 10:45	0.02	100.967	28.761
03/12/23 11:00	0.02	100.952	29.293
03/12/23 11:15	0.02	100.92	29.293
03/12/23 11:30	0.01	100.872	28.761
03/12/23 11:45	0.02	100.935	27.061
03/12/23 12:00	0.01	100.839	27.499
03/12/23 12:15	0.01	100.8	27.451
03/12/23 12:30	0.00	100.717	27.305
03/12/23 12:45	0.00	100.75	27.499
03/12/23 13:00	0.00	100.693	27.353
03/12/23 13:15	0.00	100.69	26.915
04/12/23 6:15	0.00	100.699	24.809
04/12/23 6:30	0.00	100.704	24.809
04/12/23 6:45	0.00	100.772	24.809
04/12/23 7:00	0.03	101.038	24.809
04/12/23 7:15	0.03	101.012	24.809
04/12/23 7:30	0.03	101.075	24.809
04/12/23 7:45	0.06	101.345	24.76
04/12/23 8:00	0.07	101.417	24.711
04/12/23 8:15	0.09	101.619	24.661
04/12/23 8:30	0.11	101.776	24.661
04/12/23 8:45	0.13	101.97	24.514
04/12/23 9:00	0.14	102.069	24.514
04/12/23 9:15	0.17	102.354	24.415
04/12/23 9:30	0.18	102.516	24.267
04/12/23 9:45	0.20	102.653	24.12
04/12/23 10:00	0.21	102.794	24.12
04/12/23 10:15	0.23	102.957	23.972

04/12/23 10:30	0.24	103.063	24.021
04/12/23 10:45	0.24	103.096	24.07
04/12/23 11:00	0.25	103.19	24.07
04/12/23 11:15	0.25	103.232	24.07
04/12/23 11:30	0.28	103.457	24.07
04/12/23 11:45	0.26	103.279	24.07
04/12/23 12:00	0.26	103.296	24.12
04/12/23 12:15	0.25	103.174	24.218
04/12/23 12:30	0.25	103.228	24.12
04/12/23 12:45	0.25	103.181	24.12
04/12/23 13:00	0.25	103.188	24.169
04/12/23 13:15	0.26	103.313	24.169
04/12/23 13:30	0.25	103.17	24.12
04/12/23 13:45	0.25	103.167	24.169
04/12/23 14:00	0.25	103.235	24.169
04/12/23 14:15	0.26	103.256	24.169
04/12/23 14:30	0.26	103.301	24.12
04/12/23 14:45	0.28	103.5	24.12
04/12/23 15:00	0.27	103.353	24.12
04/12/23 15:15	0.29	103.627	24.169
04/12/23 15:30	0.29	103.531	24.12
04/12/23 15:45	0.29	103.584	24.12
04/12/23 16:00	0.30	103.652	24.12
04/12/23 16:15	0.29	103.594	24.12
04/12/23 16:30	0.36	104.222	24.12
04/12/23 16:45	0.30	103.688	24.12
04/12/23 17:00	0.32	103.867	24.169
04/12/23 17:15	0.32	103.885	24.07
04/12/23 17:30	0.33	103.964	24.07
04/12/23 17:45	0.33	103.953	24.07
04/12/23 18:00	0.33	103.934	24.12
04/12/23 18:15	0.33	104	24.07
04/12/23 18:30	0.33	103.995	24.07
04/12/23 18:45	0.35	104.154	24.12
04/12/23 19:00	0.35	104.169	24.12
04/12/23 19:15	0.35	104.215	24.07
04/12/23 19:30	0.35	104.215	24.07
04/12/23 19:45	0.37	104.355	24.021
04/12/23 20:00	0.37	104.325	24.07
04/12/23 20:15	0.36	104.253	24.12
04/12/23 20:30	0.38	104.431	24.12
04/12/23 20:45	0.39	104.598	24.12
04/12/23 21:00	0.39	104.577	24.12
04/12/23 21:15	0.40	104.651	24.12
04/12/23 21:30	0.40	104.633	24.07
04/12/23 21:45	0.39	104.603	24.12
04/12/23 22:00	0.41	104.74	24.12
04/12/23 22:15	0.40	104.694	24.169
04/12/23 22:30	0.40	104.664	24.218
04/12/23 22:45	0.40	104.662	24.317

04/12/23 23:00	0.40	104.674	24.366
04/12/23 23:15	0.40	104.664	24.218
04/12/23 23:30	0.41	104.72	24.317
04/12/23 23:45	0.42	104.838	24.415
05/12/23 0:00	0.41	104.782	24.465
05/12/23 0:15	0.41	104.744	24.415
05/12/23 0:30	0.42	104.822	24.415
05/12/23 0:45	0.41	104.801	24.415
05/12/23 1:00	0.42	104.848	24.415
05/12/23 1:15	0.42	104.834	24.465
05/12/23 1:30	0.42	104.888	24.514
05/12/23 1:45	0.42	104.818	24.465
05/12/23 2:00	0.41	104.762	24.514
05/12/23 2:15	0.42	104.851	24.514
05/12/23 2:30	0.42	104.845	24.465
05/12/23 2:45	0.43	104.907	24.465
05/12/23 3:00	0.43	104.925	24.514
05/12/23 3:15	0.43	104.909	24.514
05/12/23 3:30	0.42	104.876	24.465
05/12/23 3:45	0.43	104.956	24.514
05/12/23 4:00	0.43	104.982	24.514
05/12/23 4:15	0.44	105.033	24.465
05/12/23 4:30	0.44	105.08	24.465
05/12/23 4:45	0.44	105.054	24.465
05/12/23 5:00	0.45	105.127	24.465
05/12/23 5:15	0.45	105.167	24.415
05/12/23 5:30	0.45	105.132	24.465
05/12/23 5:45	0.45	105.19	24.465
05/12/23 6:00	0.46	105.268	24.465
05/12/23 6:15	0.36	104.273	24.415
05/12/23 6:30	0.47	105.331	24.465
05/12/23 6:45	0.47	105.331	24.465
05/12/23 7:00	0.47	105.382	24.415
05/12/23 7:15	0.47	105.357	24.465
05/12/23 7:30	0.47	105.368	24.465
05/12/23 7:45	0.50	105.652	24.514
05/12/23 8:00	0.49	105.547	24.514
05/12/23 8:15	0.49	105.584	24.514
05/12/23 8:30	0.47	105.385	24.514
05/12/23 8:45	0.49	105.507	24.563
05/12/23 9:00	0.49	105.518	24.563
05/12/23 9:15	0.50	105.592	24.612
05/12/23 9:30	0.50	105.608	24.612
05/12/23 9:45	0.50	105.676	24.612
05/12/23 10:00	0.50	105.674	24.711
05/12/23 10:15	0.51	105.724	24.809
05/12/23 10:30	0.51	105.71	24.858
05/12/23 10:45	0.50	105.682	24.957
05/12/23 11:00	0.50	105.674	25.055
05/12/23 11:15	0.51	105.693	25.153

05/12/23 11:30	0.51	105.737	25.055
05/12/23 11:45	0.52	105.817	25.104
05/12/23 12:00	0.51	105.739	25.104
05/12/23 12:15	0.51	105.746	25.153
05/12/23 12:30	0.51	105.744	25.104
05/12/23 12:45	0.51	105.76	25.104
05/12/23 13:00	0.51	105.744	25.104
05/12/23 13:15	0.51	105.725	25.153
05/12/23 13:30	0.52	105.831	25.202
05/12/23 13:45	0.51	105.717	25.251
05/12/23 14:00	0.52	105.857	25.349
05/12/23 14:15	0.51	105.734	25.448
05/12/23 14:30	0.51	105.734	25.448
05/12/23 14:45	0.51	105.759	25.399
05/12/23 15:00	0.51	105.781	25.448
05/12/23 15:15	0.52	105.821	25.546
05/12/23 15:30	0.52	105.832	25.546
05/12/23 15:45	0.52	105.87	25.595
05/12/23 16:00	0.53	105.913	25.644
05/12/23 16:15	0.52	105.856	25.644
05/12/23 16:30	0.53	105.973	25.546
05/12/23 16:45	0.55	106.083	25.546
05/12/23 17:00	0.55	106.12	25.546
05/12/23 17:15	0.54	106.046	25.546
05/12/23 17:30	0.56	106.182	25.546
05/12/23 17:45	0.56	106.209	25.546
05/12/23 18:00	0.56	106.263	25.595
05/12/23 18:15	0.56	106.242	25.595
05/12/23 18:30	0.57	106.364	25.644
05/12/23 18:45	0.58	106.395	25.644
05/12/23 19:00	0.58	106.466	25.742
05/12/23 19:15	0.59	106.55	25.742
05/12/23 19:30	0.60	106.613	25.742
05/12/23 19:45	0.60	106.634	25.742
05/12/23 20:00	0.60	106.655	25.742
05/12/23 20:15	0.61	106.733	25.742
05/12/23 20:30	0.61	106.686	25.742
05/12/23 20:45	0.60	106.597	25.742
05/12/23 21:00	0.62	106.786	25.742
05/12/23 21:15	0.61	106.76	25.742
05/12/23 21:30	0.63	106.88	25.742
05/12/23 21:45	0.64	106.995	25.742
05/12/23 22:00	0.61	106.709	25.791
05/12/23 22:15	0.62	106.777	25.791
05/12/23 22:30	0.62	106.814	25.791
05/12/23 22:45	0.62	106.777	25.791
05/12/23 23:00	0.62	106.787	25.791
05/12/23 23:15	0.61	106.74	25.791
05/12/23 23:30	0.61	106.746	25.791
05/12/23 23:45	0.62	106.803	25.791

06/12/23 0:00	0.61	106.751	25.791
06/12/23 0:15	0.61	106.747	25.84
06/12/23 0:30	0.61	106.726	25.84
06/12/23 0:45	0.61	106.705	25.84
06/12/23 1:00	0.60	106.658	25.84
06/12/23 1:15	0.60	106.642	25.84
06/12/23 1:30	0.60	106.653	25.84
06/12/23 1:45	0.60	106.623	25.889
06/12/23 2:00	0.59	106.538	25.84
06/12/23 2:15	0.59	106.565	25.889
06/12/23 2:30	0.59	106.559	25.84
06/12/23 2:45	0.59	106.508	25.889
06/12/23 3:00	0.58	106.434	25.889
06/12/23 3:15	0.59	106.55	25.889
06/12/23 3:30	0.58	106.471	25.889
06/12/23 3:45	0.58	106.469	25.84
06/12/23 4:00	0.58	106.438	25.84
06/12/23 4:15	0.58	106.443	25.84
06/12/23 4:30	0.58	106.45	25.889
06/12/23 4:45	0.57	106.359	25.84
06/12/23 5:00	0.58	106.405	25.791
06/12/23 5:15	0.57	106.365	25.84
06/12/23 5:30	0.58	106.405	25.791
06/12/23 5:45	0.58	106.395	25.791
06/12/23 6:00	0.58	106.389	25.791
06/12/23 6:15	0.58	106.384	25.791
06/12/23 6:30	0.57	106.374	25.791
06/12/23 6:45	0.58	106.431	25.791
06/12/23 7:00	0.57	106.332	25.791
06/12/23 7:15	0.58	106.405	25.791
06/12/23 7:30	0.58	106.416	25.791
06/12/23 7:45	0.58	106.401	25.84
06/12/23 8:00	0.57	106.354	25.84
06/12/23 8:15	0.57	106.372	25.889
06/12/23 8:30	0.58	106.462	25.938
06/12/23 8:45	0.58	106.457	25.938
06/12/23 9:00	0.57	106.333	25.987
06/12/23 9:15	0.57	106.34	26.036
06/12/23 9:30	0.57	106.332	26.133
06/12/23 9:45	0.57	106.299	26.231
06/12/23 10:00	0.57	106.332	26.28
06/12/23 10:15	0.56	106.215	26.378
06/12/23 10:30	0.56	106.183	26.524
06/12/23 10:45	0.55	106.149	26.622
06/12/23 11:00	0.55	106.088	26.671
06/12/23 11:15	0.54	106.01	26.866
06/12/23 11:30	0.54	105.996	27.061
06/12/23 11:45	0.53	105.91	27.012
06/12/23 12:00	0.52	105.823	26.915
06/12/23 12:15	0.52	105.844	26.915

06/12/23 12:30	0.51	105.746	26.964
06/12/23 12:45	0.51	105.704	26.964
06/12/23 13:00	0.50	105.622	27.159
06/12/23 13:15	0.49	105.533	27.159
06/12/23 13:30	0.49	105.495	27.305
06/12/23 13:45	0.48	105.464	27.305
06/12/23 14:00	0.47	105.341	27.548
06/12/23 14:15	0.47	105.384	27.597
06/12/23 14:30	0.46	105.267	27.694
06/12/23 14:45	0.46	105.253	27.597
06/12/23 15:00	0.45	105.161	27.645
06/12/23 15:15	0.45	105.152	27.694
06/12/23 15:30	0.45	105.103	27.645
06/12/23 15:45	0.44	105.076	27.791
06/12/23 16:00	0.44	105.077	27.645
06/12/23 16:15	0.44	105.1	27.694
06/12/23 16:30	0.44	105.058	27.548
06/12/23 16:45	0.44	105.079	27.548
06/12/23 17:00	0.44	105.036	27.499
06/12/23 17:15	0.44	105.026	27.353
06/12/23 17:30	0.43	104.952	27.353
06/12/23 17:45	0.44	105.008	27.305
06/12/23 18:00	0.44	105.044	27.256
06/12/23 18:15	0.43	104.962	27.159
06/12/23 18:30	0.43	104.974	27.061
06/12/23 18:45	0.43	104.965	27.11
06/12/23 19:00	0.43	104.924	26.964
06/12/23 19:15	0.44	105.045	26.964
06/12/23 19:30	0.43	104.952	26.866
06/12/23 19:45	0.43	104.965	26.769
06/12/23 20:00	0.43	104.919	26.817
06/12/23 20:15	0.43	104.923	26.769
06/12/23 20:30	0.43	104.923	26.769
06/12/23 20:45	0.42	104.862	26.671
06/12/23 21:00	0.42	104.867	26.817
06/12/23 21:15	0.42	104.864	26.72
06/12/23 21:30	0.41	104.776	26.769
06/12/23 21:45	0.41	104.775	26.72
06/12/23 22:00	0.41	104.747	26.671
06/12/23 22:15	0.41	104.726	26.671
06/12/23 22:30	0.41	104.723	26.72
06/12/23 22:45	0.39	104.569	26.671
06/12/23 23:00	0.40	104.637	26.671
06/12/23 23:15	0.39	104.581	26.72
06/12/23 23:30	0.39	104.559	26.671
06/12/23 23:45	0.38	104.482	26.72
07/12/23 0:00	0.38	104.463	26.622
07/12/23 0:15	0.37	104.404	26.573
07/12/23 0:30	0.37	104.381	26.671
07/12/23 0:45	0.37	104.322	26.622

07/12/23 1:00	0.37	104.336	26.573
07/12/23 1:15	0.36	104.264	26.622
07/12/23 1:30	0.36	104.233	26.622
07/12/23 1:45	0.35	104.2	26.573
07/12/23 2:00	0.35	104.125	26.524
07/12/23 2:15	0.34	104.1	26.573
07/12/23 2:30	0.34	104.064	26.573
07/12/23 2:45	0.33	103.973	26.524
07/12/23 3:00	0.33	103.973	26.524
07/12/23 3:15	0.33	103.94	26.476
07/12/23 3:30	0.32	103.872	26.476
07/12/23 3:45	0.32	103.888	26.476
07/12/23 4:00	0.31	103.792	26.427
07/12/23 4:15	0.31	103.818	26.427
07/12/23 4:30	0.31	103.785	26.378
07/12/23 4:45	0.31	103.749	26.378
07/12/23 5:00	0.30	103.707	26.378
07/12/23 5:15	0.30	103.695	26.329
07/12/23 5:30	0.30	103.652	26.476
07/12/23 5:45	0.30	103.678	26.476
07/12/23 6:00	0.30	103.671	26.573
07/12/23 6:15	0.30	103.638	26.866
07/12/23 6:30	0.29	103.601	26.671
07/12/23 6:45	0.29	103.605	26.964
07/12/23 7:00	0.27	103.407	26.817
07/12/23 7:15	0.30	103.649	26.866
07/12/23 7:30	0.29	103.598	26.915
07/12/23 7:45	0.29	103.533	27.012
07/12/23 8:00	0.29	103.558	26.964
07/12/23 8:15	0.28	103.507	27.012
07/12/23 8:30	0.29	103.572	27.256
07/12/23 8:45	0.30	103.631	27.451
07/12/23 9:00	0.28	103.459	27.645
07/12/23 9:15	0.28	103.465	27.84
07/12/23 9:30	0.27	103.399	27.742
07/12/23 9:45	0.27	103.422	27.791
07/12/23 10:00	0.26	103.334	27.84
07/12/23 10:15	0.26	103.256	27.84
07/12/23 10:30	0.25	103.202	27.791
07/12/23 10:45	0.25	103.183	27.84
07/12/23 11:00	0.25	103.212	27.937
07/12/23 11:15	0.24	103.106	28.082
07/12/23 11:30	0.24	103.093	28.325
07/12/23 11:45	0.23	102.998	28.471
07/12/23 12:00	0.23	102.948	28.519
07/12/23 12:15	0.22	102.887	28.422
07/12/23 12:30	0.21	102.809	28.277
07/12/23 12:45	0.21	102.84	28.277
07/12/23 13:00	0.20	102.676	28.374
07/12/23 13:15	0.20	102.706	28.325

07/12/23 13:30	0.19	102.619	28.567
07/12/23 13:45	0.18	102.509	28.567
07/12/23 14:00	0.20	102.675	28.519
07/12/23 14:15	0.16	102.325	28.519
07/12/23 14:30	0.16	102.272	28.519
07/12/23 14:45	0.16	102.257	28.519
07/12/23 15:00	0.14	102.07	28.567
07/12/23 15:15	0.14	102.061	28.616
07/12/23 15:30	0.13	102.047	28.664
07/12/23 15:45	0.13	101.963	28.664
07/12/23 16:00	0.11	101.855	28.567
07/12/23 16:15	0.12	101.885	28.519
07/12/23 16:30	0.11	101.856	28.422
07/12/23 16:45	0.11	101.781	28.374
07/12/23 17:00	0.10	101.748	28.325
07/12/23 17:15	0.10	101.756	28.228
07/12/23 17:30	0.10	101.672	28.228
07/12/23 17:45	0.09	101.654	27.985
07/12/23 18:00	0.08	101.539	27.985
07/12/23 18:15	0.08	101.536	27.888
07/12/23 18:30	0.08	101.524	27.84
07/12/23 18:45	0.08	101.498	27.694
07/12/23 19:00	0.07	101.415	27.694
07/12/23 19:15	0.07	101.415	27.548
07/12/23 19:30	0.06	101.342	27.207
07/12/23 19:45	0.06	101.326	27.353
07/12/23 20:00	0.06	101.317	27.256
07/12/23 20:15	0.06	101.3	27.207
07/12/23 20:30	0.05	101.249	27.061
07/12/23 20:45	0.05	101.186	27.061
07/12/23 21:00	0.05	101.198	26.964
07/12/23 21:15	0.06	101.303	26.964
07/12/23 21:30	0.06	101.304	26.817
07/12/23 21:45	0.06	101.307	26.769
07/12/23 22:00	0.05	101.243	26.72
07/12/23 22:15	0.06	101.289	26.671
07/12/23 22:30	0.05	101.266	26.622
07/12/23 22:45	0.06	101.282	26.622
07/12/23 23:00	0.05	101.27	26.573
07/12/23 23:15	0.05	101.233	26.573
07/12/23 23:30	0.06	101.277	26.476
07/12/23 23:45	0.05	101.246	26.476
08/12/23 0:00	0.05	101.254	26.378
08/12/23 0:15	0.05	101.256	26.28
08/12/23 0:30	0.05	101.209	26.28
08/12/23 0:45	0.05	101.191	26.231
08/12/23 1:00	0.05	101.232	26.182
08/12/23 1:15	0.05	101.195	26.182
08/12/23 1:30	0.04	101.143	26.182
08/12/23 1:45	0.04	101.145	26.084

08/12/23 2:00	0.04	101.168	25.987
08/12/23 2:15	0.04	101.139	25.889
08/12/23 2:30	0.04	101.123	25.889
08/12/23 2:45	0.04	101.116	25.987
08/12/23 3:00	0.04	101.11	25.791
08/12/23 3:15	0.03	101.077	25.742
08/12/23 3:30	0.03	101.049	25.693
08/12/23 3:45	0.04	101.079	25.791
08/12/23 4:00	0.04	101.093	25.742
08/12/23 4:15	0.03	101.029	25.693
08/12/23 4:30	0.04	101.096	25.693
08/12/23 4:45	0.03	101.065	25.693
08/12/23 5:00	0.04	101.133	25.693
08/12/23 5:15	0.04	101.081	25.693
08/12/23 5:30	0.04	101.115	25.791
08/12/23 5:45	0.05	101.179	25.84
08/12/23 6:00	0.04	101.143	25.84
08/12/23 6:15	0.05	101.232	25.84
08/12/23 6:30	0.05	101.18	25.693
08/12/23 6:45	0.05	101.246	25.791
08/12/23 7:00	0.05	101.24	25.938
08/12/23 7:15	0.05	101.272	25.791
08/12/23 7:30	0.05	101.248	25.693
08/12/23 7:45	0.05	101.265	26.084
08/12/23 8:00	0.06	101.303	26.133
08/12/23 8:15	0.06	101.331	26.182
08/12/23 8:30	0.07	101.444	27.451
08/12/23 8:45	0.07	101.434	29.486
08/12/23 9:00	0.07	101.381	29.968
08/12/23 9:15	0.08	101.477	29.196
08/12/23 9:30	0.07	101.463	28.082
08/12/23 9:45	0.07	101.412	27.451
08/12/23 10:00	0.07	101.418	27.305
08/12/23 10:15	0.07	101.429	27.159
08/12/23 10:30	0.07	101.403	27.159
08/12/23 10:45	0.07	101.389	27.207
08/12/23 11:00	0.07	101.383	27.012
08/12/23 11:15	0.06	101.365	27.11
08/12/23 11:30	0.06	101.351	27.84
08/12/23 11:45	0.06	101.313	28.131
08/12/23 12:00	0.06	101.329	28.131
08/12/23 12:15	0.06	101.277	28.131
08/12/23 12:30	0.05	101.261	29.486
08/12/23 12:45	0.05	101.258	30.738
08/12/23 13:00	0.05	101.244	31.984
08/12/23 13:15	0.05	101.255	31.649
08/12/23 13:30	0.05	101.179	31.218
08/12/23 13:45	0.05	101.197	30.45
08/12/23 14:00	0.04	101.157	30.69
08/12/23 14:15	0.04	101.141	31.506

08/12/23 14:30	0.04	101.162	32.366
08/12/23 14:45	0.04	101.126	32.557
08/12/23 15:00	0.04	101.132	33.795
08/12/23 15:15	0.04	101.143	33.985
08/12/23 15:30	0.04	101.156	33.034
08/12/23 15:45	0.04	101.119	31.984
08/12/23 16:00	0.04	101.155	32.653
08/12/23 16:15	0.04	101.14	33.367
08/12/23 16:30	0.04	101.159	32.605
08/12/23 16:45	0.04	101.168	31.026
08/12/23 17:00	0.04	101.166	30.113
08/12/23 17:15	0.04	101.137	29.534
08/12/23 17:30	0.05	101.192	28.955
08/12/23 17:45	0.04	101.163	28.519
08/12/23 18:00	0.04	101.173	28.18
08/12/23 18:15	0.04	101.149	27.888
08/12/23 18:30	0.05	101.179	27.694
08/12/23 18:45	0.05	101.201	27.548
08/12/23 19:00	0.05	101.24	27.451
08/12/23 19:15	0.05	101.242	27.353
08/12/23 19:30	0.05	101.269	27.207
08/12/23 19:45	0.06	101.304	27.159
08/12/23 20:00	0.06	101.351	27.159
08/12/23 20:15	0.06	101.334	27.11
08/12/23 20:30	0.06	101.366	26.964
08/12/23 20:45	0.06	101.35	26.964
08/12/23 21:00	0.06	101.343	26.915
08/12/23 21:15	0.06	101.354	26.915
08/12/23 21:30	0.07	101.385	26.915
08/12/23 21:45	0.07	101.405	26.866
08/12/23 22:00	0.07	101.399	26.866
08/12/23 22:15	0.07	101.403	26.817
08/12/23 22:30	0.07	101.414	26.817
08/12/23 22:45	0.07	101.408	26.817
08/12/23 23:00	0.07	101.377	26.817
08/12/23 23:15	0.07	101.402	26.769
08/12/23 23:30	0.07	101.381	26.769
08/12/23 23:45	0.06	101.359	26.573
09/12/23 0:00	0.07	101.39	26.573
09/12/23 0:15	0.06	101.321	26.524
09/12/23 0:30	0.06	101.347	26.524
09/12/23 0:45	0.06	101.351	26.476
09/12/23 1:00	0.06	101.293	26.476
09/12/23 1:15	0.06	101.292	26.427
09/12/23 1:30	0.06	101.327	26.378
09/12/23 1:45	0.05	101.264	26.378
09/12/23 2:00	0.06	101.295	26.378
09/12/23 2:15	0.05	101.262	26.329
09/12/23 2:30	0.06	101.287	26.28
09/12/23 2:45	0.05	101.242	26.182

09/12/23 3:00	0.06	101.289	26.182
09/12/23 3:15	0.06	101.277	26.133
09/12/23 3:30	0.05	101.253	26.036
09/12/23 3:45	0.05	101.259	26.036
09/12/23 4:00	0.05	101.224	25.938
09/12/23 4:15	0.05	101.256	25.938
09/12/23 4:30	0.05	101.228	25.889
09/12/23 4:45	0.05	101.259	25.889
09/12/23 5:00	0.06	101.285	25.889
09/12/23 5:15	0.06	101.312	25.742
09/12/23 5:30	0.05	101.265	25.742
09/12/23 5:45	0.06	101.306	25.693
09/12/23 6:00	0.06	101.32	25.644
09/12/23 6:15	0.06	101.339	25.595
09/12/23 6:30	0.07	101.381	25.595
09/12/23 6:45	0.07	101.374	25.693
09/12/23 7:00	0.07	101.444	25.938
09/12/23 7:15	0.07	101.427	26.231
09/12/23 7:30	0.07	101.447	26.72
09/12/23 7:45	0.08	101.505	27.742
09/12/23 8:00	0.08	101.539	28.664
09/12/23 8:15	0.08	101.566	29.872
09/12/23 8:30	0.08	101.562	30.065
09/12/23 8:45	0.09	101.65	30.209
09/12/23 9:00	0.09	101.631	30.786
09/12/23 9:15	0.10	101.698	32.605
09/12/23 9:30	0.10	101.708	33.605
09/12/23 9:45	0.09	101.662	34.885
09/12/23 10:00	0.10	101.684	36.347
09/12/23 10:15	0.09	101.666	37.005
09/12/23 10:30	0.09	101.636	35.782
09/12/23 10:45	0.09	101.648	34.932
09/12/23 11:00	0.09	101.592	33.937
09/12/23 11:15	0.08	101.561	33.082
09/12/23 11:30	0.09	101.578	33.129
09/12/23 11:45	0.09	101.574	34.743
09/12/23 12:00	0.08	101.543	35.641
09/12/23 12:15	0.08	101.525	35.027
09/12/23 12:30	0.07	101.439	34.79
09/12/23 12:45	0.07	101.426	35.216
09/12/23 13:00	0.07	101.4	34.885
09/12/23 13:15	0.06	101.363	35.027
09/12/23 13:30	0.06	101.324	35.688
09/12/23 13:45	0.06	101.341	38.69
09/12/23 14:00	0.06	101.317	38.783
09/12/23 14:15	0.06	101.325	39.901
09/12/23 14:30	0.05	101.266	40.226
09/12/23 14:45	0.06	101.278	41.8
09/12/23 15:00	0.05	101.234	42.861
09/12/23 15:15	0.05	101.256	41.523

09/12/23 15:30	0.05	101.254	42.584
09/12/23 15:45	0.05	101.253	40.968
09/12/23 16:00	0.05	101.249	40.829
09/12/23 16:15	0.05	101.229	38.83
09/12/23 16:30	0.05	101.264	36.488
09/12/23 16:45	0.05	101.216	34.696
09/12/23 17:00	0.05	101.208	33.367
09/12/23 17:15	0.05	101.213	32.319
09/12/23 17:30	0.05	101.207	31.458
09/12/23 17:45	0.05	101.218	30.786
09/12/23 18:00	0.05	101.243	30.257
09/12/23 18:15	0.05	101.254	29.92
09/12/23 18:30	0.05	101.246	29.679
09/12/23 18:45	0.06	101.293	29.486
09/12/23 19:00	0.06	101.283	29.341
09/12/23 19:15	0.06	101.294	29.196
09/12/23 19:30	0.06	101.288	29.003
09/12/23 19:45	0.06	101.319	28.81
09/12/23 20:00	0.06	101.352	28.713
09/12/23 20:15	0.06	101.328	28.616
09/12/23 20:30	0.06	101.337	28.567
09/12/23 20:45	0.06	101.35	28.471
09/12/23 21:00	0.06	101.322	28.422
09/12/23 21:15	0.06	101.333	28.422
09/12/23 21:30	0.06	101.351	28.325
09/12/23 21:45	0.06	101.325	28.18
09/12/23 22:00	0.06	101.329	28.131
09/12/23 22:15	0.06	101.343	28.082
09/12/23 22:30	0.06	101.315	28.034
09/12/23 22:45	0.06	101.333	27.937
09/12/23 23:00	0.06	101.306	27.888
09/12/23 23:15	0.06	101.32	27.84
09/12/23 23:30	0.06	101.304	27.84
09/12/23 23:45	0.06	101.296	27.742
10/12/23 0:00	0.06	101.331	27.694
10/12/23 0:15	0.06	101.298	27.645
10/12/23 0:30	0.05	101.261	27.645
10/12/23 0:45	0.05	101.269	27.548
10/12/23 1:00	0.05	101.262	27.499
10/12/23 1:15	0.05	101.234	27.451
10/12/23 1:30	0.05	101.199	27.499
10/12/23 1:45	0.05	101.202	27.402
10/12/23 2:00	0.04	101.141	27.305
10/12/23 2:15	0.04	101.131	27.159
10/12/23 2:30	0.04	101.148	27.012
10/12/23 2:45	0.04	101.102	27.061
10/12/23 3:00	0.04	101.092	27.061
10/12/23 3:15	0.04	101.142	27.012
10/12/23 3:30	0.04	101.108	26.915
10/12/23 3:45	0.04	101.117	26.866

10/12/23 4:00	0.04	101.117	26.866
10/12/23 4:15	0.04	101.146	26.964
10/12/23 4:30	0.04	101.145	26.915
10/12/23 4:45	0.04	101.173	26.817
10/12/23 5:00	0.04	101.148	26.671
10/12/23 5:15	0.04	101.162	26.622
10/12/23 5:30	0.05	101.184	26.671
10/12/23 5:45	0.05	101.179	26.671
10/12/23 6:00	0.05	101.213	26.573
10/12/23 6:15	0.05	101.242	26.524
10/12/23 6:30	0.05	101.233	26.573
10/12/23 6:45	0.05	101.269	26.72
10/12/23 7:00	0.05	101.255	27.11
10/12/23 7:15	0.06	101.325	27.499
10/12/23 7:30	0.06	101.327	28.082
10/12/23 7:45	0.06	101.361	27.985
10/12/23 8:00	0.07	101.393	28.858
10/12/23 8:15	0.07	101.437	28.761
10/12/23 8:30	0.07	101.434	28.664
10/12/23 8:45	0.07	101.452	28.374
10/12/23 9:00	0.07	101.437	28.082
10/12/23 9:15	0.07	101.445	28.325
10/12/23 9:30	0.07	101.461	28.664
10/12/23 9:45	0.07	101.456	29.534
10/12/23 10:00	0.07	101.453	30.594
10/12/23 10:15	0.07	101.456	30.354
10/12/23 10:30	0.07	101.463	31.936
10/12/23 10:45	0.08	101.482	33.415
10/12/23 11:00	0.08	101.478	32.605
10/12/23 11:15	0.07	101.465	33.367
10/12/23 11:30	0.07	101.444	34.412
10/12/23 11:45	0.07	101.452	34.696
10/12/23 12:00	0.07	101.381	34.932
10/12/23 12:15	0.07	101.4	34.885
10/12/23 12:30	0.06	101.351	36.065
10/12/23 12:45	0.06	101.31	35.924
10/12/23 13:00	0.06	101.297	37.287
10/12/23 13:15	0.06	101.288	37.334
10/12/23 13:30	0.05	101.269	37.052
10/12/23 13:45	0.05	101.227	35.216
10/12/23 14:00	0.05	101.22	33.605
10/12/23 14:15	0.05	101.184	33.795
10/12/23 14:30	0.05	101.222	34.885
10/12/23 14:45	0.05	101.187	33.034
10/12/23 15:00	0.04	101.15	31.458
10/12/23 15:15	0.04	101.154	31.602
10/12/23 15:30	0.04	101.163	34.127
10/12/23 15:45	0.05	101.18	35.594
10/12/23 16:00	0.05	101.187	35.121
10/12/23 16:15	0.04	101.137	32.939

10/12/23 16:30	0.04	101.161	31.984
10/12/23 16:45	0.04	101.139	31.122
10/12/23 17:00	0.04	101.159	30.738
10/12/23 17:15	0.05	101.179	30.209
10/12/23 17:30	0.04	101.151	29.824
10/12/23 17:45	0.05	101.207	29.438
10/12/23 18:00	0.05	101.222	29.245
10/12/23 18:15	0.05	101.23	29.003
10/12/23 18:30	0.05	101.266	28.81
10/12/23 18:45	0.06	101.275	28.761
10/12/23 19:00	0.06	101.309	28.664
10/12/23 19:15	0.06	101.302	28.616
10/12/23 19:30	0.06	101.325	28.519
10/12/23 19:45	0.06	101.359	28.422
10/12/23 20:00	0.06	101.356	28.325
10/12/23 20:15	0.06	101.372	28.18
10/12/23 20:30	0.07	101.404	28.034
10/12/23 20:45	0.07	101.413	27.985
10/12/23 21:00	0.07	101.405	27.888
10/12/23 21:15	0.07	101.424	27.84
10/12/23 21:30	0.07	101.463	27.888
10/12/23 21:45	0.07	101.467	28.034
10/12/23 22:00	0.07	101.46	27.791
10/12/23 22:15	0.07	101.417	27.597
10/12/23 22:30	0.07	101.437	27.402
10/12/23 22:45	0.08	101.472	27.353
10/12/23 23:00	0.07	101.45	27.305
10/12/23 23:15	0.07	101.426	27.207
10/12/23 23:30	0.07	101.415	27.207
10/12/23 23:45	0.07	101.382	27.159
11/12/23 0:00	0.06	101.356	27.159
11/12/23 0:15	0.07	101.385	27.061
11/12/23 0:30	0.06	101.344	27.11
11/12/23 0:45	0.07	101.373	27.012
11/12/23 1:00	0.06	101.34	26.817
11/12/23 1:15	0.06	101.311	26.72
11/12/23 1:30	0.06	101.313	26.622
11/12/23 1:45	0.05	101.27	26.573
11/12/23 2:00	0.05	101.242	26.524
11/12/23 2:15	0.05	101.251	26.28
11/12/23 2:30	0.05	101.228	26.231
11/12/23 2:45	0.04	101.148	26.182
11/12/23 3:00	0.04	101.166	26.084
11/12/23 3:15	0.04	101.174	26.182
11/12/23 3:30	0.05	101.178	26.133
11/12/23 3:45	0.04	101.135	25.938
11/12/23 4:00	0.04	101.157	25.791
11/12/23 4:15	0.04	101.17	25.693
11/12/23 4:30	0.05	101.2	25.644
11/12/23 4:45	0.05	101.222	25.693

11/12/23 5:00	0.05	101.191	25.693
11/12/23 5:15	0.05	101.214	25.595
11/12/23 5:30	0.05	101.254	25.546
11/12/23 5:45	0.06	101.279	25.497
11/12/23 6:00	0.05	101.246	25.448
11/12/23 6:15	0.05	101.258	25.349
11/12/23 6:30	0.06	101.29	25.349
11/12/23 6:45	0.06	101.305	25.497
11/12/23 7:00	0.07	101.374	25.889
11/12/23 7:15	0.07	101.378	26.182
11/12/23 7:30	0.06	101.347	26.524
11/12/23 7:45	0.07	101.406	27.402
11/12/23 8:00	0.08	101.521	29.245
11/12/23 8:15	0.08	101.536	29.583
11/12/23 8:30	0.08	101.527	29.968
11/12/23 8:45	0.08	101.562	31.936
11/12/23 9:00	0.09	101.617	34.08
11/12/23 9:15	0.09	101.611	34.932
11/12/23 9:30	0.09	101.621	35.782
11/12/23 9:45	0.09	101.641	32.796
11/12/23 10:00	0.09	101.599	31.602
11/12/23 10:15	0.08	101.546	31.074
11/12/23 10:30	0.09	101.642	33.842
11/12/23 10:45	0.09	101.611	37.287
11/12/23 11:00	0.09	101.605	36.864
11/12/23 11:15	0.09	101.599	35.405
11/12/23 11:30	0.08	101.546	33.272
11/12/23 11:45	0.08	101.515	34.175
11/12/23 12:00	0.08	101.515	34.696
11/12/23 12:15	0.08	101.474	33.842
11/12/23 12:30	0.07	101.42	35.027
11/12/23 12:45	0.07	101.41	35.216
11/12/23 13:00	0.07	101.378	32.939
11/12/23 13:15	0.07	101.382	32.7
11/12/23 13:30	0.06	101.347	34.506
11/12/23 13:45	0.06	101.336	36.817
11/12/23 14:00	0.05	101.25	35.31
11/12/23 14:15	0.05	101.273	33.795
11/12/23 14:30	0.05	101.249	35.263
11/12/23 14:45	0.05	101.246	37.896
11/12/23 15:00	0.05	101.258	40.968
11/12/23 15:15	0.05	101.211	37.615
11/12/23 15:30	0.05	101.183	36.253
11/12/23 15:45	0.04	101.159	33.652
11/12/23 16:00	0.04	101.167	32.032
11/12/23 16:15	0.04	101.17	31.266
11/12/23 16:30	0.04	101.172	30.834
11/12/23 16:45	0.05	101.186	30.257
11/12/23 17:00	0.05	101.189	30.017
11/12/23 17:15	0.04	101.172	29.631

11/12/23 17:30	0.05	101.216	29.196
11/12/23 17:45	0.05	101.215	28.858
11/12/23 18:00	0.05	101.217	28.567
11/12/23 18:15	0.05	101.259	28.422
11/12/23 18:30	0.06	101.278	28.18
11/12/23 18:45	0.06	101.28	28.082
11/12/23 19:00	0.06	101.337	27.888
11/12/23 19:15	0.06	101.318	27.791
11/12/23 19:30	0.06	101.32	27.694
11/12/23 19:45	0.06	101.362	27.694
11/12/23 20:00	0.06	101.359	27.597
11/12/23 20:15	0.06	101.35	27.451
11/12/23 20:30	0.07	101.419	27.499
11/12/23 20:45	0.07	101.421	27.402
11/12/23 21:00	0.07	101.41	27.207
11/12/23 21:15	0.07	101.385	27.256
11/12/23 21:30	0.07	101.417	27.256
11/12/23 21:45	0.07	101.42	27.353
11/12/23 22:00	0.07	101.444	27.305
11/12/23 22:15	0.07	101.435	27.353
11/12/23 22:30	0.07	101.401	27.256
11/12/23 22:45	0.07	101.394	27.207
11/12/23 23:00	0.07	101.403	27.159
11/12/23 23:15	0.06	101.355	26.964
11/12/23 23:30	0.06	101.361	26.964
11/12/23 23:45	0.06	101.337	26.866
12/12/23 0:00	0.06	101.326	26.866
12/12/23 0:15	0.06	101.37	26.769
12/12/23 0:30	0.07	101.387	26.622
12/12/23 0:45	0.06	101.338	26.573
12/12/23 1:00	0.06	101.282	26.622
12/12/23 1:15	0.06	101.295	26.72
12/12/23 1:30	0.06	101.294	26.671
12/12/23 1:45	0.05	101.219	26.622
12/12/23 2:00	0.05	101.201	26.524
12/12/23 2:15	0.04	101.176	26.573
12/12/23 2:30	0.04	101.168	26.476
12/12/23 2:45	0.04	101.172	26.28
12/12/23 3:00	0.04	101.148	26.182
12/12/23 3:15	0.04	101.126	25.987
12/12/23 3:30	0.04	101.141	25.938
12/12/23 3:45	0.04	101.128	25.693
12/12/23 4:00	0.04	101.134	25.546
12/12/23 4:15	0.04	101.129	25.399
12/12/23 4:30	0.04	101.095	25.3
12/12/23 4:45	0.04	101.132	25.3
12/12/23 5:00	0.04	101.164	25.153
12/12/23 5:15	0.04	101.131	25.104
12/12/23 5:30	0.05	101.185	25.006
12/12/23 5:45	0.04	101.175	25.006

12/12/23 6:00	0.04	101.155	25.055
12/12/23 6:15	0.05	101.201	25.006
12/12/23 6:30	0.05	101.258	25.153
12/12/23 6:45	0.05	101.245	25.251
12/12/23 7:00	0.05	101.265	25.399
12/12/23 7:15	0.05	101.244	25.742
12/12/23 7:30	0.06	101.314	25.791
12/12/23 7:45	0.06	101.342	26.524
12/12/23 8:00	0.07	101.414	26.671
12/12/23 8:15	0.07	101.416	28.228
12/12/23 8:30	0.07	101.438	30.786
12/12/23 8:45	0.08	101.534	33.747
12/12/23 9:00	0.08	101.491	35.829
12/12/23 9:15	0.08	101.481	36.958
12/12/23 9:30	0.08	101.509	38.317
12/12/23 9:45	0.08	101.517	36.723
12/12/23 10:00	0.08	101.534	38.27
12/12/23 10:15	0.08	101.556	39.668
12/12/23 10:30	0.08	101.507	36.206
12/12/23 10:45	0.08	101.481	33.89
12/12/23 11:00	0.08	101.491	36.723
12/12/23 11:15	0.07	101.461	35.876
12/12/23 11:30	0.07	101.441	33.462
12/12/23 11:45	0.07	101.424	36.77
12/12/23 12:00	0.07	101.38	34.364
12/12/23 12:15	0.06	101.328	32.843
12/12/23 12:30	0.06	101.303	33.034
12/12/23 12:45	0.05	101.242	32.605
12/12/23 13:00	0.06	101.283	35.876
12/12/23 13:15	0.05	101.239	34.032
12/12/23 13:30	0.05	101.227	34.506
12/12/23 13:45	0.05	101.226	37.755
12/12/23 14:00	0.05	101.241	38.69
12/12/23 14:15	0.05	101.231	34.838
12/12/23 14:30	0.04	101.176	34.222
12/12/23 14:45	0.04	101.158	33.795
12/12/23 15:00	0.04	101.175	36.159
12/12/23 15:15	0.04	101.108	34.412
12/12/23 15:30	0.04	101.131	32.891
12/12/23 15:45	0.04	101.099	31.697
12/12/23 16:00	0.04	101.135	32.7
12/12/23 16:15	0.04	101.17	31.936
12/12/23 16:30	0.04	101.148	30.738
12/12/23 16:45	0.04	101.166	30.113
12/12/23 17:00	0.04	101.17	29.92
12/12/23 17:15	0.04	101.173	29.679
12/12/23 17:30	0.05	101.207	29.438
12/12/23 17:45	0.05	101.197	29.1
12/12/23 18:00	0.05	101.227	28.906
12/12/23 18:15	0.05	101.227	28.713

12/12/23 18:30	0.05	101.227	28.374
12/12/23 18:45	0.06	101.277	28.325
12/12/23 19:00	0.06	101.292	28.131
12/12/23 19:15	0.06	101.3	28.034
12/12/23 19:30	0.06	101.302	27.937
12/12/23 19:45	0.06	101.351	27.84
12/12/23 20:00	0.06	101.357	27.694
12/12/23 20:15	0.07	101.389	27.548
12/12/23 20:30	0.07	101.385	27.256
12/12/23 20:45	0.06	101.362	27.353
12/12/23 21:00	0.07	101.409	27.499
12/12/23 21:15	0.07	101.414	27.499
12/12/23 21:30	0.07	101.447	27.402
12/12/23 21:45	0.07	101.448	27.256
12/12/23 22:00	0.07	101.445	27.159
12/12/23 22:15	0.07	101.385	26.915
12/12/23 22:30	0.07	101.424	26.817
12/12/23 22:45	0.07	101.392	26.622
12/12/23 23:00	0.07	101.379	26.72
12/12/23 23:15	0.06	101.353	26.72
12/12/23 23:30	0.06	101.325	26.671
12/12/23 23:45	0.06	101.347	26.524
13/12/23 0:00	0.06	101.34	26.133
13/12/23 0:15	0.06	101.316	26.036
13/12/23 0:30	0.06	101.28	26.036
13/12/23 0:45	0.06	101.282	25.938
13/12/23 1:00	0.05	101.256	25.938
13/12/23 1:15	0.05	101.27	25.889
13/12/23 1:30	0.05	101.227	25.693
13/12/23 1:45	0.04	101.132	25.497
13/12/23 2:00	0.04	101.129	25.546
13/12/23 2:15	0.04	101.127	25.497
13/12/23 2:30	0.04	101.167	25.448
13/12/23 2:45	0.04	101.091	25.349
13/12/23 3:00	0.04	101.123	25.202
13/12/23 3:15	0.04	101.094	25.104
13/12/23 3:30	0.04	101.117	25.006
13/12/23 3:45	0.04	101.114	24.907
13/12/23 4:00	0.04	101.085	24.809
13/12/23 4:15	0.04	101.131	24.76
13/12/23 4:30	0.04	101.103	24.711
13/12/23 4:45	0.04	101.173	24.612
13/12/23 5:00	0.04	101.135	24.563
13/12/23 5:15	0.04	101.155	24.514
13/12/23 5:30	0.05	101.2	24.465
13/12/23 5:45	0.05	101.231	24.465
13/12/23 6:00	0.05	101.246	24.415
13/12/23 6:15	0.06	101.314	24.415
13/12/23 6:30	0.06	101.299	24.465
13/12/23 6:45	0.06	101.314	24.415

13/12/23 7:00	0.06	101.352	24.661
13/12/23 7:15	0.07	101.438	25.055
13/12/23 7:30	0.07	101.438	25.399
13/12/23 7:45	0.08	101.486	25.791
13/12/23 8:00	0.08	101.565	27.499
13/12/23 8:15	0.09	101.595	30.786
13/12/23 8:30	0.09	101.61	30.257
13/12/23 8:45	0.09	101.615	33.129
13/12/23 9:00	0.10	101.686	35.688
13/12/23 9:15	0.10	101.714	36.3
13/12/23 9:30	0.10	101.685	38.036
13/12/23 9:45	0.10	101.691	37.334
13/12/23 10:00	0.10	101.689	37.615
13/12/23 10:15	0.10	101.678	36.676
13/12/23 10:30	0.09	101.635	34.506
13/12/23 10:45	0.09	101.617	33.034
13/12/23 11:00	0.09	101.613	31.554
13/12/23 11:15	0.08	101.536	30.402
13/12/23 11:30	0.08	101.544	30.834
13/12/23 11:45	0.08	101.529	36.77
13/12/23 12:00	0.08	101.531	36.864
13/12/23 12:15	0.07	101.469	34.364
13/12/23 12:30	0.08	101.473	35.405
13/12/23 12:45	0.07	101.409	34.648
13/12/23 13:00	0.06	101.369	33.652
13/12/23 13:15	0.06	101.355	33.557
13/12/23 13:30	0.06	101.323	34.412
13/12/23 13:45	0.06	101.306	33.842
13/12/23 14:00	0.06	101.306	32.986
13/12/23 14:15	0.05	101.258	32.08
13/12/23 14:30	0.05	101.274	31.074
13/12/23 14:45	0.05	101.237	31.074
13/12/23 15:00	0.05	101.197	30.45
13/12/23 15:15	0.05	101.197	29.776
13/12/23 15:30	0.05	101.203	29.293
13/12/23 15:45	0.05	101.189	28.858
13/12/23 16:00	0.04	101.139	28.906
13/12/23 16:15	0.05	101.204	29.148
13/12/23 16:30	0.04	101.155	29.438
13/12/23 16:45	0.05	101.208	29.968
13/12/23 17:00	0.05	101.201	30.065
13/12/23 17:15	0.05	101.263	30.209
13/12/23 17:30	0.05	101.189	30.209
13/12/23 17:45	0.05	101.236	29.679
13/12/23 18:00	0.04	101.131	29.003
13/12/23 18:15	0.05	101.186	28.761
13/12/23 18:30	0.04	101.147	28.664
13/12/23 18:45	0.05	101.186	28.567
13/12/23 19:00	0.05	101.191	28.567
13/12/23 19:15	0.05	101.252	28.519

13/12/23 19:30	0.05	101.249	28.422
13/12/23 19:45	0.05	101.268	28.374
13/12/23 20:00	0.06	101.296	28.422
13/12/23 20:15	0.06	101.28	28.422
13/12/23 20:30	0.06	101.312	28.422

CPCL WEST GATE - 2

Date and Time	DEPTH (m)	Pressure (kPa)	Temperature (C)
02/12/23 17:00	-0.01	98.315	27.586
02/12/23 17:15	-0.01	98.32	27.538
02/12/23 17:30	0.00	98.355	27.875
02/12/23 17:45	0.00	98.37	28.067
02/12/23 18:00	0.00	98.362	28.212
02/12/23 18:15	0.00	98.371	28.404
02/12/23 18:30	-0.01	98.326	28.644
02/12/23 18:45	0.00	98.413	28.788
02/12/23 19:00	0.00	98.445	28.98
02/12/23 19:15	0.01	98.465	29.124
02/12/23 19:30	0.01	98.46	29.172
02/12/23 19:45	0.01	98.476	29.124
02/12/23 20:00	0.01	98.453	28.836
02/12/23 20:15	0.01	98.492	28.26
02/12/23 20:30	0.01	98.519	27.923
02/12/23 20:45	0.01	98.534	27.586
02/12/23 21:00	0.02	98.554	27.441
02/12/23 21:15	0.01	98.544	27.779
02/12/23 21:30	0.01	98.544	28.019
02/12/23 21:45	0.02	98.592	26.329
02/12/23 22:00	0.02	98.633	25.893
02/12/23 22:15	0.02	98.639	25.407
02/12/23 22:30	0.02	98.63	25.504
02/12/23 22:45	0.03	98.647	25.261
02/12/23 23:00	0.02	98.618	25.261
02/12/23 23:15	0.03	98.665	25.066
02/12/23 23:30	0.03	98.655	24.628
02/12/23 23:45	0.03	98.657	24.237
03/12/23 0:00	0.03	98.667	24.188
03/12/23 0:15	0.02	98.644	24.188
03/12/23 0:30	0.02	98.592	24.335
03/12/23 0:45	0.01	98.543	24.677
03/12/23 1:00	0.02	98.555	24.677
03/12/23 1:15	0.02	98.573	24.725
03/12/23 1:30	0.01	98.493	24.92
03/12/23 1:45	0.01	98.512	25.018
03/12/23 2:00	0.00	98.449	25.212
03/12/23 2:15	0.00	98.414	25.407
03/12/23 2:30	0.00	98.413	25.602
03/12/23 2:45	0.00	98.379	25.602
03/12/23 3:00	0.00	98.448	25.164
03/12/23 3:15	0.00	98.429	24.335
03/12/23 3:30	0.00	98.424	24.384
03/12/23 3:45	0.00	98.426	24.725
03/12/23 4:00	0.00	98.37	24.969
03/12/23 4:15	0.00	98.368	25.115
03/12/23 4:30	0.00	98.393	25.212
03/12/23 4:45	-0.01	98.348	25.212

03/12/23 5:00	0.00	98.412	25.31
03/12/23 5:15	0.00	98.424	25.358
03/12/23 5:30	0.00	98.411	25.018
03/12/23 5:45	0.00	98.406	24.823
03/12/23 6:00	0.00	98.445	25.066
03/12/23 6:15	0.01	98.45	25.261
03/12/23 6:30	0.00	98.431	25.164
03/12/23 6:45	0.01	98.48	25.358
03/12/23 7:00	0.01	98.485	25.31
03/12/23 7:15	0.01	98.532	25.407
03/12/23 7:30	0.01	98.518	25.553
03/12/23 7:45	0.01	98.536	25.602
03/12/23 8:00	0.02	98.571	25.65
03/12/23 8:15	0.02	98.599	25.893
03/12/23 8:30	0.02	98.621	26.135
03/12/23 8:45	0.02	98.565	27.152
03/12/23 9:00	0.02	98.6	26.717
03/12/23 9:15	0.02	98.596	26.765
03/12/23 9:30	0.02	98.578	27.007
03/12/23 9:45	0.02	98.59	27.296
03/12/23 10:00	0.02	98.558	27.634
03/12/23 10:15	0.01	98.532	28.019
03/12/23 10:30	0.01	98.54	28.116
03/12/23 10:45	0.01	98.501	28.116
03/12/23 11:00	0.01	98.461	28.404
03/12/23 11:15	0.00	98.438	28.644
03/12/23 11:30	0.00	98.404	28.356
03/12/23 11:45	0.01	98.458	26.91
03/12/23 12:00	0.00	98.423	27.103
03/12/23 12:15	0.00	98.396	26.91
03/12/23 12:30	0.00	98.406	26.571
03/12/23 12:45	0.00	98.362	26.62
03/12/23 13:00	-0.01	98.328	26.62
03/12/23 13:15	-0.01	98.336	26.184
03/12/23 13:30	-0.01	98.315	26.523
03/12/23 13:45	-0.01	98.301	26.668
03/12/23 14:00	-0.01	98.278	26.62
03/12/23 14:15	-0.02	98.228	26.426
03/12/23 14:30	-0.01	98.284	25.893
03/12/23 14:45	-0.01	98.261	25.358
03/12/23 15:00	-0.01	98.263	25.456
03/12/23 15:15	-0.02	98.202	25.747
03/12/23 15:30	-0.02	98.208	25.747
03/12/23 15:45	-0.02	98.197	25.747
03/12/23 16:00	-0.02	98.219	25.504
03/12/23 16:15	-0.02	98.242	25.261
03/12/23 16:30	-0.02	98.225	25.261
03/12/23 16:45	-0.02	98.226	25.31
03/12/23 17:00	-0.02	98.233	25.358
03/12/23 17:15	-0.01	98.278	25.358

03/12/23 17:30	-0.02	98.243	25.31
03/12/23 17:45	-0.01	98.282	25.31
03/12/23 18:00	-0.01	98.277	25.31
03/12/23 18:15	-0.01	98.291	25.212
03/12/23 18:30	-0.01	98.288	25.31
03/12/23 18:45	-0.01	98.315	25.261
03/12/23 19:00	-0.01	98.313	25.407
03/12/23 19:15	-0.01	98.33	25.164
03/12/23 19:30	0.00	98.39	25.115
03/12/23 19:45	0.00	98.399	24.774
03/12/23 20:00	0.00	98.378	24.335
03/12/23 20:15	0.00	98.398	24.725
03/12/23 20:30	0.00	98.372	25.066
03/12/23 20:45	0.00	98.396	25.115
03/12/23 21:00	0.00	98.362	24.872
03/12/23 21:15	0.00	98.383	24.774
03/12/23 21:30	0.00	98.387	24.725
03/12/23 21:45	0.00	98.385	24.628
03/12/23 22:00	0.00	98.353	24.725
03/12/23 22:15	0.00	98.351	24.628
04/12/23 10:30	0.01	98.475	23.895
04/12/23 10:45	0.01	98.498	23.944
04/12/23 11:00	0.02	98.628	23.944
04/12/23 11:15	0.03	98.686	24.042
04/12/23 11:30	0.03	98.719	23.993
04/12/23 11:45	0.03	98.667	23.944
04/12/23 12:00	0.04	98.82	23.993
04/12/23 12:15	0.03	98.737	24.042
04/12/23 12:30	0.03	98.698	24.091
04/12/23 12:45	0.08	99.138	24.139
04/12/23 13:00	0.03	98.666	24.139
04/12/23 13:15	0.03	98.711	24.139
04/12/23 13:30	0.03	98.706	24.188
04/12/23 13:45	0.04	98.779	24.188
04/12/23 14:00	0.05	98.852	24.188
04/12/23 14:15	0.05	98.843	24.286
04/12/23 14:30	0.05	98.86	24.286
04/12/23 14:45	0.06	98.992	24.384
04/12/23 15:00	0.07	99.043	24.188
04/12/23 15:15	0.09	99.313	24.188
04/12/23 15:30	0.08	99.157	24.237
04/12/23 15:45	0.08	99.149	24.384
04/12/23 16:00	0.09	99.248	24.286
04/12/23 16:15	0.09	99.244	24.335
04/12/23 16:30	0.11	99.456	24.286
04/12/23 16:45	0.10	99.376	24.237
04/12/23 17:00	0.11	99.442	24.188
04/12/23 17:15	0.11	99.518	24.042
04/12/23 17:30	0.12	99.564	24.091
04/12/23 17:45	0.12	99.557	24.042

04/12/23 18:00	0.12	99.626	24.091
04/12/23 18:15	0.13	99.663	23.993
04/12/23 18:30	0.14	99.746	23.944
04/12/23 18:45	0.14	99.804	24.042
04/12/23 19:00	0.14	99.802	23.944
04/12/23 19:15	0.15	99.902	23.895
04/12/23 19:30	0.15	99.895	23.846
04/12/23 19:45	0.16	99.975	23.895
04/12/23 20:00	0.17	100.082	23.895
04/12/23 20:15	0.17	100.065	23.895
04/12/23 20:30	0.19	100.225	23.993
04/12/23 20:45	0.19	100.285	23.944
04/12/23 21:00	0.19	100.291	23.944
04/12/23 21:15	0.20	100.37	23.944
04/12/23 21:30	0.21	100.43	23.895
04/12/23 21:45	0.22	100.521	23.944
04/12/23 22:00	0.21	100.464	23.895
04/12/23 22:15	0.21	100.507	24.042
04/12/23 22:30	0.22	100.524	24.042
04/12/23 22:45	0.22	100.559	24.091
04/12/23 23:00	0.22	100.537	24.139
04/12/23 23:15	0.22	100.582	24.139
04/12/23 23:30	0.22	100.583	24.188
04/12/23 23:45	0.23	100.657	24.188
05/12/23 0:00	0.23	100.645	24.188
05/12/23 0:15	0.23	100.697	24.237
05/12/23 0:30	0.23	100.701	24.188
05/12/23 0:45	0.24	100.73	24.188
05/12/23 1:00	0.24	100.753	24.237
05/12/23 1:15	0.24	100.78	24.188
05/12/23 1:30	0.25	100.814	24.188
05/12/23 1:45	0.25	100.825	24.188
05/12/23 2:00	0.25	100.816	24.286
05/12/23 2:15	0.25	100.85	24.286
05/12/23 2:30	0.25	100.901	24.286
05/12/23 2:45	0.26	100.913	24.335
05/12/23 3:00	0.26	100.924	24.335
05/12/23 3:15	0.26	100.913	24.335
05/12/23 3:30	0.26	100.959	24.384
05/12/23 3:45	0.26	100.969	24.335
05/12/23 4:00	0.26	100.969	24.335
05/12/23 4:15	0.27	101.064	24.286
05/12/23 4:30	0.27	101.048	24.335
05/12/23 4:45	0.28	101.105	24.384
05/12/23 5:00	0.28	101.154	24.286
05/12/23 5:15	0.28	101.176	24.286
05/12/23 5:30	0.29	101.217	24.335
05/12/23 5:45	0.29	101.275	24.433
05/12/23 6:00	0.30	101.296	24.384
05/12/23 6:15	0.30	101.341	24.384

05/12/23 6:30	0.30	101.354	24.433
05/12/23 6:45	0.30	101.383	24.481
05/12/23 7:00	0.31	101.473	24.481
05/12/23 7:15	0.33	101.597	24.481
05/12/23 7:30	0.32	101.535	24.481
05/12/23 7:45	0.32	101.542	24.53
05/12/23 8:00	0.32	101.577	24.579
05/12/23 8:15	0.33	101.622	24.579
05/12/23 8:30	0.33	101.606	24.628
05/12/23 8:45	0.33	101.642	24.725
05/12/23 9:00	0.33	101.653	24.725
05/12/23 9:15	0.34	101.739	24.774
05/12/23 9:30	0.34	101.775	24.872
05/12/23 9:45	0.35	101.798	24.92
05/12/23 10:00	0.35	101.856	24.969
05/12/23 10:15	0.35	101.876	25.115
05/12/23 10:30	0.35	101.832	25.164
05/12/23 10:45	0.36	101.892	25.31
05/12/23 11:00	0.35	101.862	25.456
05/12/23 11:15	0.35	101.87	25.553
05/12/23 11:30	0.36	101.884	25.699
05/12/23 11:45	0.36	101.884	25.699
05/12/23 12:00	0.36	101.902	25.747
05/12/23 12:15	0.36	101.924	25.699
05/12/23 12:30	0.36	101.952	25.699
05/12/23 12:45	0.37	101.981	25.747
05/12/23 13:00	0.36	101.965	25.796
05/12/23 13:15	0.36	101.973	25.893
05/12/23 13:30	0.37	102.002	25.941
05/12/23 13:45	0.37	102.05	26.038
05/12/23 14:00	0.36	101.974	26.184
05/12/23 14:15	0.37	102.055	26.281
05/12/23 14:30	0.37	102.017	26.329
05/12/23 14:45	0.36	101.931	26.281
05/12/23 15:00	0.38	102.084	26.329
05/12/23 15:15	0.38	102.093	26.475
05/12/23 15:30	0.38	102.096	26.571
05/12/23 15:45	0.38	102.164	26.62
05/12/23 16:00	0.39	102.2	26.475
05/12/23 16:15	0.40	102.281	26.571
05/12/23 16:30	0.40	102.282	26.62
05/12/23 16:45	0.40	102.338	26.571
05/12/23 17:00	0.41	102.387	26.523
05/12/23 17:15	0.41	102.414	26.475
05/12/23 17:30	0.41	102.464	26.426
05/12/23 17:45	0.42	102.515	26.475
05/12/23 18:00	0.42	102.514	26.426
05/12/23 18:15	0.43	102.593	26.426
05/12/23 18:30	0.43	102.614	26.378
05/12/23 18:45	0.43	102.665	26.378

05/12/23 19:00	0.44	102.747	26.281
05/12/23 19:15	0.45	102.787	26.281
05/12/23 19:30	0.45	102.82	26.281
05/12/23 19:45	0.45	102.831	26.232
05/12/23 20:00	0.46	102.893	26.232
05/12/23 20:15	0.46	102.905	26.281
05/12/23 20:30	0.46	102.914	26.184
05/12/23 20:45	0.46	102.931	26.184
05/12/23 21:00	0.47	102.965	26.184
05/12/23 21:15	0.46	102.953	26.184
05/12/23 21:30	0.46	102.959	26.184
05/12/23 21:45	0.46	102.959	26.184
05/12/23 22:00	0.46	102.947	26.135
05/12/23 22:15	0.46	102.951	26.087
05/12/23 22:30	0.46	102.945	26.087
05/12/23 22:45	0.46	102.929	26.087
05/12/23 23:00	0.46	102.961	26.038
05/12/23 23:15	0.46	102.905	26.038
05/12/23 23:30	0.46	102.87	25.99
05/12/23 23:45	0.46	102.887	25.99
06/12/23 0:00	0.45	102.859	25.99
06/12/23 0:15	0.45	102.842	25.99
06/12/23 0:30	0.45	102.825	25.99
06/12/23 0:45	0.45	102.79	25.941
06/12/23 1:00	0.44	102.756	25.941
06/12/23 1:15	0.44	102.738	25.893
06/12/23 1:30	0.44	102.711	25.941
06/12/23 1:45	0.43	102.66	25.893
06/12/23 2:00	0.43	102.615	25.893
06/12/23 2:15	0.43	102.609	25.893
06/12/23 2:30	0.43	102.575	25.893
06/12/23 2:45	0.42	102.551	25.844
06/12/23 3:00	0.42	102.525	25.893
06/12/23 3:15	0.42	102.495	25.844
06/12/23 3:30	0.42	102.501	25.844
06/12/23 3:45	0.41	102.45	25.844
06/12/23 4:00	0.41	102.421	25.796
06/12/23 4:15	0.41	102.41	25.796
06/12/23 4:30	0.41	102.382	25.796
06/12/23 4:45	0.40	102.331	25.796
06/12/23 5:00	0.40	102.314	25.796
06/12/23 5:15	0.40	102.358	25.747
06/12/23 5:30	0.40	102.32	25.796
06/12/23 5:45	0.40	102.342	25.796
06/12/23 6:00	0.40	102.302	25.747
06/12/23 6:15	0.40	102.307	25.747
06/12/23 6:30	0.39	102.245	25.747
06/12/23 6:45	0.40	102.29	25.747
06/12/23 7:00	0.39	102.234	25.747
06/12/23 7:15	0.39	102.217	25.747

06/12/23 7:30	0.39	102.24	25.747
06/12/23 7:45	0.38	102.173	25.796
06/12/23 8:00	0.39	102.218	25.796
06/12/23 8:15	0.38	102.163	25.844
06/12/23 8:30	0.38	102.142	25.893
06/12/23 8:45	0.38	102.137	25.941
06/12/23 9:00	0.38	102.092	25.941
06/12/23 9:15	0.37	102.055	26.038
06/12/23 9:30	0.37	102.046	26.135
06/12/23 9:45	0.37	102.003	26.232
06/12/23 10:00	0.36	101.966	26.329
06/12/23 10:15	0.36	101.913	26.475
06/12/23 10:30	0.35	101.859	26.571
06/12/23 10:45	0.35	101.823	26.717
06/12/23 11:00	0.34	101.717	26.765
06/12/23 11:15	0.33	101.672	27.007
06/12/23 11:30	0.33	101.591	27.152
06/12/23 11:45	0.32	101.514	27.248
06/12/23 12:00	0.31	101.432	27.345
06/12/23 12:15	0.31	101.438	27.345
06/12/23 12:30	0.29	101.253	27.393
06/12/23 12:45	0.29	101.203	27.441
06/12/23 13:00	0.28	101.137	27.489
06/12/23 13:15	0.27	101.057	27.682
06/12/23 13:30	0.26	100.988	27.875
06/12/23 13:45	0.26	100.957	28.019
06/12/23 14:00	0.25	100.871	27.923
06/12/23 14:15	0.25	100.804	28.212
06/12/23 14:30	0.24	100.751	28.404
06/12/23 14:45	0.23	100.664	28.548
06/12/23 15:00	0.23	100.643	28.596
06/12/23 15:15	0.22	100.598	28.596
06/12/23 15:30	0.22	100.552	28.548
06/12/23 15:45	0.22	100.527	28.452
06/12/23 16:00	0.21	100.493	28.452
06/12/23 16:15	0.21	100.496	28.308
06/12/23 16:30	0.22	100.52	28.356
06/12/23 16:45	0.21	100.486	28.116
06/12/23 17:00	0.21	100.472	28.212
06/12/23 17:15	0.21	100.444	27.971
06/12/23 17:30	0.21	100.478	27.971
06/12/23 17:45	0.21	100.421	27.971
06/12/23 18:00	0.21	100.47	27.634
06/12/23 18:15	0.21	100.418	27.827
06/12/23 18:30	0.20	100.344	27.779
06/12/23 18:45	0.20	100.39	27.827
06/12/23 19:00	0.20	100.332	27.73
06/12/23 19:15	0.20	100.395	27.779
06/12/23 19:30	0.20	100.394	27.73
06/12/23 19:45	0.20	100.359	27.682

06/12/23 20:00	0.20	100.365	27.682
06/12/23 20:15	0.20	100.335	27.634
06/12/23 20:30	0.20	100.358	27.634
06/12/23 20:45	0.20	100.318	27.586
06/12/23 21:00	0.19	100.294	27.538
06/12/23 21:15	0.19	100.305	27.538
06/12/23 21:30	0.18	100.214	27.489
06/12/23 21:45	0.19	100.219	27.441
06/12/23 22:00	0.18	100.146	27.441
06/12/23 22:15	0.18	100.169	27.489
06/12/23 22:30	0.18	100.128	27.393
06/12/23 22:45	0.17	100.088	27.393
06/12/23 23:00	0.17	100.032	27.393
06/12/23 23:15	0.16	99.986	27.345
06/12/23 23:30	0.16	100.003	27.345
06/12/23 23:45	0.15	99.919	27.345
07/12/23 0:00	0.15	99.861	27.296
07/12/23 0:15	0.15	99.833	27.296
07/12/23 0:30	0.14	99.788	27.296
07/12/23 0:45	0.14	99.759	27.248
07/12/23 1:00	0.14	99.73	27.2
07/12/23 1:15	0.13	99.697	27.248
07/12/23 1:30	0.13	99.679	27.2
07/12/23 1:45	0.12	99.571	27.152
07/12/23 2:00	0.12	99.554	27.152
07/12/23 2:15	0.12	99.57	27.103
07/12/23 2:30	0.11	99.486	27.103
07/12/23 2:45	0.10	99.429	27.055
07/12/23 3:00	0.10	99.394	27.007
07/12/23 3:15	0.10	99.394	27.007
07/12/23 3:30	0.09	99.325	26.958
07/12/23 3:45	0.09	99.29	26.91
07/12/23 4:00	0.09	99.256	26.862
07/12/23 4:15	0.09	99.249	26.813
07/12/23 4:30	0.08	99.18	26.765
07/12/23 4:45	0.08	99.18	26.765
07/12/23 5:00	0.08	99.15	26.668
07/12/23 5:15	0.08	99.15	26.668
07/12/23 5:30	0.08	99.155	26.62
07/12/23 5:45	0.07	99.104	26.62
07/12/23 6:00	0.07	99.115	26.62
07/12/23 6:15	0.07	99.097	26.571
07/12/23 6:30	0.07	99.081	26.571
07/12/23 6:45	0.07	99.075	26.571
07/12/23 7:00	0.07	99.058	26.571
07/12/23 7:15	0.07	99.081	26.571
07/12/23 7:30	0.07	99.056	26.475
07/12/23 7:45	0.06	99.023	26.523
07/12/23 8:00	0.06	98.997	26.62
07/12/23 8:15	0.06	99.007	26.813

07/12/23 8:30	0.07	99.052	26.813
07/12/23 8:45	0.06	98.974	27.103
07/12/23 9:00	0.05	98.896	27.393
07/12/23 9:15	0.04	98.805	27.345
07/12/23 9:30	0.05	98.893	27.248
07/12/23 9:45	0.05	98.902	27.152
07/12/23 10:00	0.05	98.866	27.055
07/12/23 10:15	0.05	98.891	27.152
07/12/23 10:30	0.05	98.848	27.248
07/12/23 10:45	0.04	98.838	27.055
07/12/23 11:00	0.04	98.831	27.248
07/12/23 11:15	0.04	98.797	27.248
07/12/23 11:30	0.04	98.816	27.345
07/12/23 11:45	0.04	98.786	27.248
07/12/23 12:00	0.03	98.738	27.103
07/12/23 12:15	0.03	98.721	27.345
07/12/23 12:30	0.03	98.723	27.441
07/12/23 12:45	0.03	98.663	27.538
07/12/23 13:00	0.03	98.67	27.634
07/12/23 13:15	0.02	98.62	27.634
07/12/23 13:30	0.02	98.582	27.441
07/12/23 13:45	0.02	98.592	27.634
07/12/23 14:00	0.02	98.587	27.923
07/12/23 14:15	0.01	98.52	27.971
07/12/23 14:30	0.01	98.538	28.019
07/12/23 14:45	0.01	98.527	28.019
07/12/23 15:00	0.01	98.517	28.116
07/12/23 15:15	0.01	98.513	28.164
07/12/23 15:30	0.01	98.507	28.452
07/12/23 15:45	0.01	98.475	28.26
07/12/23 16:00	0.01	98.497	27.923
07/12/23 16:15	0.01	98.525	27.682
07/12/23 16:30	0.01	98.537	27.441
07/12/23 16:45	0.02	98.563	27.345
07/12/23 17:00	0.02	98.611	27.2
07/12/23 17:15	0.02	98.64	27.007
07/12/23 17:30	0.03	98.655	26.91
07/12/23 17:45	0.03	98.661	26.91
07/12/23 18:00	0.03	98.688	26.862
07/12/23 18:15	0.03	98.686	26.765
07/12/23 18:30	0.03	98.718	26.717
07/12/23 18:45	0.03	98.728	26.668
07/12/23 19:00	0.04	98.772	26.62
07/12/23 19:15	0.04	98.777	26.571
07/12/23 19:30	0.04	98.792	26.475
07/12/23 19:45	0.04	98.809	26.475
07/12/23 20:00	0.04	98.831	26.475
07/12/23 20:15	0.04	98.838	26.523
07/12/23 20:30	0.05	98.862	26.62
07/12/23 20:45	0.05	98.863	26.668

07/12/23 21:00	0.05	98.876	26.717
07/12/23 21:15	0.05	98.92	26.668
07/12/23 21:30	0.05	98.931	26.668
07/12/23 21:45	0.05	98.914	26.668
07/12/23 22:00	0.05	98.902	26.62
07/12/23 22:15	0.05	98.929	26.571
07/12/23 22:30	0.05	98.868	26.62
07/12/23 22:45	0.05	98.867	26.571
07/12/23 23:00	0.05	98.895	26.571
07/12/23 23:15	0.05	98.893	26.475
07/12/23 23:30	0.05	98.892	26.426
07/12/23 23:45	0.05	98.881	26.426
08/12/23 0:00	0.05	98.856	26.329
08/12/23 0:15	0.05	98.866	26.281
08/12/23 0:30	0.05	98.843	26.232
08/12/23 0:45	0.04	98.797	26.184
08/12/23 1:00	0.04	98.808	26.184
08/12/23 1:15	0.04	98.808	26.184
08/12/23 1:30	0.04	98.797	26.184
08/12/23 1:45	0.04	98.755	26.087
08/12/23 2:00	0.04	98.787	25.99
08/12/23 2:15	0.04	98.785	25.941
08/12/23 2:30	0.04	98.79	25.893
08/12/23 2:45	0.04	98.763	25.941
08/12/23 3:00	0.03	98.742	25.504
08/12/23 3:15	0.04	98.797	25.212
08/12/23 3:30	0.04	98.751	25.164
08/12/23 3:45	0.04	98.777	25.31
08/12/23 4:00	0.03	98.725	25.261
08/12/23 4:15	0.04	98.753	25.261
08/12/23 4:30	0.04	98.752	25.212
08/12/23 4:45	0.03	98.741	25.212
08/12/23 5:00	0.04	98.747	25.212
08/12/23 5:15	0.04	98.783	25.31
08/12/23 5:30	0.04	98.827	25.31
08/12/23 5:45	0.04	98.833	25.31
08/12/23 6:00	0.04	98.825	25.456
08/12/23 6:15	0.05	98.87	25.456
08/12/23 6:30	0.05	98.899	25.261
08/12/23 6:45	0.05	98.879	25.358
08/12/23 7:00	0.06	98.952	25.358
08/12/23 7:15	0.06	98.944	25.261
08/12/23 7:30	0.06	98.961	25.261
08/12/23 7:45	0.06	98.999	25.456
08/12/23 8:00	0.06	99.015	25.407
08/12/23 8:15	0.06	99.022	25.456
08/12/23 8:30	0.07	99.051	25.747
08/12/23 8:45	0.07	99.053	25.844
08/12/23 9:00	0.07	99.048	25.844
08/12/23 9:15	0.07	99.052	25.796

08/12/23 9:30	0.07	99.069	25.796
08/12/23 9:45	0.07	99.042	25.844
08/12/23 10:00	0.07	99.067	25.941
08/12/23 10:15	0.06	99.021	25.893
08/12/23 10:30	0.06	99.027	25.941
08/12/23 10:45	0.07	99.038	25.941
08/12/23 11:00	0.06	99.006	25.747
08/12/23 11:15	0.06	99.014	25.844
08/12/23 11:30	0.06	98.966	26.232
08/12/23 11:45	0.05	98.928	26.281
08/12/23 12:00	0.05	98.893	26.475
08/12/23 12:15	0.05	98.883	26.523
08/12/23 12:30	0.04	98.833	27.103
08/12/23 12:45	0.04	98.816	27.586
08/12/23 13:00	0.04	98.763	28.019
08/12/23 13:15	0.03	98.739	28.5
08/12/23 13:30	0.03	98.668	28.596
08/12/23 13:45	0.03	98.674	28.356
08/12/23 14:00	0.03	98.666	28.212
08/12/23 14:15	0.02	98.623	28.308
08/12/23 14:30	0.02	98.624	28.356
08/12/23 14:45	0.02	98.622	28.26
08/12/23 15:00	0.02	98.628	28.308
08/12/23 15:15	0.02	98.627	28.26
08/12/23 15:30	0.02	98.617	28.019
08/12/23 15:45	0.02	98.61	27.971
08/12/23 16:00	0.02	98.621	27.971
08/12/23 16:15	0.02	98.613	27.827
08/12/23 16:30	0.02	98.623	27.779
08/12/23 16:45	0.03	98.672	27.441
08/12/23 17:00	0.03	98.701	27.2
08/12/23 17:15	0.03	98.696	27.007
08/12/23 17:30	0.03	98.731	26.765
08/12/23 17:45	0.03	98.715	26.571
08/12/23 18:00	0.04	98.762	26.426
08/12/23 18:15	0.04	98.767	26.378
08/12/23 18:30	0.04	98.788	26.329
08/12/23 18:45	0.04	98.833	26.329
08/12/23 19:00	0.05	98.859	26.232
08/12/23 19:15	0.05	98.872	26.281
08/12/23 19:30	0.05	98.907	26.329
08/12/23 19:45	0.06	98.94	26.329
08/12/23 20:00	0.06	98.974	26.329
08/12/23 20:15	0.06	98.984	26.281
08/12/23 20:30	0.06	98.95	26.281
08/12/23 20:45	0.06	98.997	26.329
08/12/23 21:00	0.06	98.991	26.329
08/12/23 21:15	0.06	99.037	26.378
08/12/23 21:30	0.06	99.031	26.378
08/12/23 21:45	0.06	99.013	26.329

08/12/23 22:00	0.07	99.045	26.232
08/12/23 22:15	0.06	99.024	26.281
08/12/23 22:30	0.07	99.057	26.281
08/12/23 22:45	0.06	99.006	26.232
08/12/23 23:00	0.07	99.047	26.087
08/12/23 23:15	0.06	99.011	25.99
08/12/23 23:30	0.07	99.038	25.941
08/12/23 23:45	0.06	99.009	25.893
09/12/23 0:00	0.06	99.03	25.796
09/12/23 0:15	0.07	99.038	25.65
09/12/23 0:30	0.06	98.991	25.602
09/12/23 0:45	0.06	99.002	25.553
09/12/23 1:00	0.06	98.999	25.456
09/12/23 1:15	0.06	98.978	25.504
09/12/23 1:30	0.06	98.979	25.553
09/12/23 1:45	0.06	98.951	25.553
09/12/23 2:00	0.06	98.968	25.553
09/12/23 2:15	0.05	98.922	25.504
09/12/23 2:30	0.06	98.949	25.456
09/12/23 2:45	0.05	98.933	25.504
09/12/23 3:00	0.06	98.94	25.553
09/12/23 3:15	0.05	98.939	25.504
09/12/23 3:30	0.05	98.915	25.456
09/12/23 3:45	0.06	98.953	25.407
09/12/23 4:00	0.06	98.951	25.31
09/12/23 4:15	0.06	98.973	25.261
09/12/23 4:30	0.06	98.968	25.31
09/12/23 4:45	0.06	98.969	25.358
09/12/23 5:00	0.06	98.996	25.31
09/12/23 5:15	0.06	99.004	25.164
09/12/23 5:30	0.06	99.02	25.115
09/12/23 5:45	0.06	99.037	25.115
09/12/23 6:00	0.07	99.058	25.066
09/12/23 6:15	0.07	99.08	25.066
09/12/23 6:30	0.07	99.107	25.018
09/12/23 6:45	0.07	99.114	25.066
09/12/23 7:00	0.08	99.156	25.164
09/12/23 7:15	0.08	99.184	25.407
09/12/23 7:30	0.08	99.179	25.699
09/12/23 7:45	0.08	99.17	26.038
09/12/23 8:00	0.08	99.161	26.378
09/12/23 8:15	0.08	99.165	26.813
09/12/23 8:30	0.08	99.169	27.296
09/12/23 8:45	0.08	99.17	27.586
09/12/23 9:00	0.08	99.201	27.971
09/12/23 9:15	0.07	99.128	28.26
09/12/23 9:30	0.08	99.196	28.548
09/12/23 9:45	0.07	99.117	28.836
09/12/23 10:00	0.07	99.135	28.884
09/12/23 10:15	0.07	99.095	29.124

09/12/23 10:30	0.07	99.094	29.076
09/12/23 10:45	0.07	99.104	29.028
09/12/23 11:00	0.07	99.097	28.932
09/12/23 11:15	0.07	99.089	28.836
09/12/23 11:30	0.07	99.067	29.172
09/12/23 11:45	0.06	99.007	29.507
09/12/23 12:00	0.06	98.948	29.698
09/12/23 12:15	0.05	98.92	29.698
09/12/23 12:30	0.05	98.874	29.937
09/12/23 12:45	0.05	98.849	29.794
09/12/23 13:00	0.04	98.836	29.698
09/12/23 13:15	0.04	98.817	29.602
09/12/23 13:30	0.04	98.777	29.841
09/12/23 13:45	0.04	98.762	29.937
09/12/23 14:00	0.04	98.745	29.937
09/12/23 14:15	0.03	98.688	29.889
09/12/23 14:30	0.03	98.718	29.698
09/12/23 14:45	0.03	98.736	29.507
09/12/23 15:00	0.03	98.68	29.507
09/12/23 15:15	0.03	98.663	29.507
09/12/23 15:30	0.03	98.676	29.602
09/12/23 15:45	0.03	98.703	29.219
09/12/23 16:00	0.03	98.678	29.124
09/12/23 16:15	0.03	98.688	29.028
09/12/23 16:30	0.04	98.744	28.74
09/12/23 16:45	0.03	98.734	28.548
09/12/23 17:00	0.04	98.773	28.26
09/12/23 17:15	0.04	98.751	27.971
09/12/23 17:30	0.04	98.773	27.682
09/12/23 17:45	0.04	98.808	27.489
09/12/23 18:00	0.04	98.804	27.296
09/12/23 18:15	0.05	98.851	27.152
09/12/23 18:30	0.05	98.85	27.103
09/12/23 18:45	0.05	98.877	27.055
09/12/23 19:00	0.05	98.906	27.055
09/12/23 19:15	0.05	98.91	27.007
09/12/23 19:30	0.05	98.892	26.958
09/12/23 19:45	0.05	98.92	26.958
09/12/23 20:00	0.06	98.953	26.91
09/12/23 20:15	0.06	98.971	26.958
09/12/23 20:30	0.06	98.942	26.91
09/12/23 20:45	0.06	98.97	26.91
09/12/23 21:00	0.06	98.99	26.813
09/12/23 21:15	0.06	98.99	26.813
09/12/23 21:30	0.06	98.979	26.813
09/12/23 21:45	0.06	98.966	26.717
09/12/23 22:00	0.06	98.983	26.717
09/12/23 22:15	0.06	98.987	26.668
09/12/23 22:30	0.06	98.947	26.62
09/12/23 22:45	0.06	98.974	26.571

09/12/23 23:00	0.06	98.946	26.571
09/12/23 23:15	0.06	98.99	26.523
09/12/23 23:30	0.06	98.966	26.475
09/12/23 23:45	0.06	98.955	26.475
10/12/23 0:00	0.06	98.987	26.426
10/12/23 0:15	0.06	98.942	26.426
10/12/23 0:30	0.06	98.959	26.426
10/12/23 0:45	0.05	98.902	26.378
10/12/23 1:00	0.05	98.901	26.329
10/12/23 1:15	0.05	98.905	26.281
10/12/23 1:30	0.05	98.897	26.135
10/12/23 1:45	0.05	98.853	25.941
10/12/23 2:00	0.05	98.872	25.796
10/12/23 2:15	0.05	98.842	25.699
10/12/23 2:30	0.05	98.857	25.602
10/12/23 2:45	0.04	98.79	25.65
10/12/23 3:00	0.04	98.807	25.65
10/12/23 3:15	0.04	98.811	25.553
10/12/23 3:30	0.04	98.825	25.456
10/12/23 3:45	0.04	98.817	25.358
10/12/23 4:00	0.04	98.818	25.407
10/12/23 4:15	0.05	98.859	25.456
10/12/23 4:30	0.05	98.842	25.456
10/12/23 4:45	0.05	98.852	25.407
10/12/23 5:00	0.05	98.863	25.407
10/12/23 5:15	0.05	98.881	25.456
10/12/23 5:30	0.05	98.915	25.456
10/12/23 5:45	0.05	98.92	25.407
10/12/23 6:00	0.06	98.942	25.407
10/12/23 6:15	0.05	98.913	25.358
10/12/23 6:30	0.05	98.931	25.407
10/12/23 6:45	0.06	99.001	25.504
10/12/23 7:00	0.06	98.973	25.796
10/12/23 7:15	0.06	98.997	26.087
10/12/23 7:30	0.06	99.007	26.281
10/12/23 7:45	0.06	99.018	26.281
10/12/23 8:00	0.07	99.052	26.571
10/12/23 8:15	0.06	99.031	26.62
10/12/23 8:30	0.07	99.07	26.62
10/12/23 8:45	0.07	99.105	26.426
10/12/23 9:00	0.07	99.055	26.426
10/12/23 9:15	0.07	99.11	26.62
10/12/23 9:30	0.07	99.098	26.862
10/12/23 9:45	0.07	99.048	27.393
10/12/23 10:00	0.06	98.998	27.971
10/12/23 10:15	0.07	99.039	28.308
10/12/23 10:30	0.06	99.023	28.356
10/12/23 10:45	0.06	98.992	28.5
10/12/23 11:00	0.06	98.961	28.644
10/12/23 11:15	0.05	98.933	29.219

10/12/23 11:30	0.05	98.887	29.746
10/12/23 11:45	0.05	98.881	29.985
10/12/23 12:00	0.05	98.878	28.98
10/12/23 12:15	0.04	98.811	29.554
10/12/23 12:30	0.03	98.734	29.985
10/12/23 12:45	0.03	98.74	29.698
10/12/23 13:00	0.03	98.714	29.794
10/12/23 13:15	0.03	98.703	30.128
10/12/23 13:30	0.03	98.654	30.223
10/12/23 13:45	0.03	98.658	29.794
10/12/23 14:00	0.03	98.679	29.172
10/12/23 14:15	0.03	98.648	29.315
10/12/23 14:30	0.02	98.634	29.459
10/12/23 14:45	0.03	98.648	29.028
10/12/23 15:00	0.02	98.642	28.692
10/12/23 15:15	0.02	98.628	28.596
10/12/23 15:30	0.03	98.646	28.884
10/12/23 15:45	0.02	98.609	29.028
10/12/23 16:00	0.02	98.639	28.836
10/12/23 16:15	0.03	98.671	28.452
10/12/23 16:30	0.03	98.712	28.26
10/12/23 16:45	0.03	98.701	28.019
10/12/23 17:00	0.03	98.713	27.779
10/12/23 17:15	0.03	98.737	27.586
10/12/23 17:30	0.04	98.767	27.393
10/12/23 17:45	0.04	98.769	27.248
10/12/23 18:00	0.04	98.823	27.152
10/12/23 18:15	0.04	98.837	27.007
10/12/23 18:30	0.05	98.858	26.958
10/12/23 18:45	0.05	98.863	26.91
10/12/23 19:00	0.05	98.925	26.91
10/12/23 19:15	0.06	98.963	26.862
10/12/23 19:30	0.05	98.934	26.813
10/12/23 19:45	0.06	98.972	26.765
10/12/23 20:00	0.06	98.977	26.717
10/12/23 20:15	0.06	99.011	26.717
10/12/23 20:30	0.07	99.042	26.62
10/12/23 20:45	0.07	99.057	26.523
10/12/23 21:00	0.07	99.078	26.475
10/12/23 21:15	0.07	99.051	26.523
10/12/23 21:30	0.07	99.086	26.571
10/12/23 21:45	0.07	99.089	26.426
10/12/23 22:00	0.07	99.109	26.329
10/12/23 22:15	0.07	99.106	26.184
10/12/23 22:30	0.07	99.093	26.135
10/12/23 22:45	0.08	99.15	26.135
10/12/23 23:00	0.07	99.102	26.038
10/12/23 23:15	0.07	99.13	25.99
10/12/23 23:30	0.07	99.1	25.941
10/12/23 23:45	0.07	99.083	25.941

11/12/23 0:00	0.06	99.028	25.99
11/12/23 0:15	0.07	99.051	25.99
11/12/23 0:30	0.06	99.023	25.99
11/12/23 0:45	0.07	99.059	25.844
11/12/23 1:00	0.07	99.04	25.747
11/12/23 1:15	0.06	99.005	25.699
11/12/23 1:30	0.06	99.031	25.602
11/12/23 1:45	0.06	98.956	25.504
11/12/23 2:00	0.06	98.964	25.358
11/12/23 2:15	0.05	98.934	25.31
11/12/23 2:30	0.06	98.956	25.261
11/12/23 2:45	0.05	98.93	25.115
11/12/23 3:00	0.05	98.902	25.115
11/12/23 3:15	0.05	98.922	25.018
11/12/23 3:30	0.05	98.931	24.92
11/12/23 3:45	0.05	98.891	24.872
11/12/23 4:00	0.05	98.912	24.823
11/12/23 4:15	0.06	98.954	24.677
11/12/23 4:30	0.05	98.912	24.579
11/12/23 4:45	0.06	98.963	24.579
11/12/23 5:00	0.06	98.956	24.53
11/12/23 5:15	0.06	99.032	24.433
11/12/23 5:30	0.06	99.033	24.481
11/12/23 5:45	0.06	99.004	24.433
11/12/23 6:00	0.06	99.032	24.433
11/12/23 6:15	0.07	99.06	24.433
11/12/23 6:30	0.07	99.093	24.384
11/12/23 6:45	0.07	99.11	24.384
11/12/23 7:00	0.07	99.12	24.579
11/12/23 7:15	0.07	99.124	24.774
11/12/23 7:30	0.08	99.15	24.92
11/12/23 7:45	0.07	99.119	25.261
11/12/23 8:00	0.08	99.17	25.796
11/12/23 8:15	0.08	99.152	26.475
11/12/23 8:30	0.07	99.122	27.2
11/12/23 8:45	0.07	99.089	28.836
11/12/23 9:00	0.06	99.029	30.08
11/12/23 9:15	0.07	99.057	29.507
11/12/23 9:30	0.07	99.059	29.889
11/12/23 9:45	0.07	99.081	28.452
11/12/23 10:00	0.07	99.12	28.404
11/12/23 10:15	0.07	99.062	28.596
11/12/23 10:30	0.07	99.087	29.028
11/12/23 10:45	0.07	99.051	29.172
11/12/23 11:00	0.07	99.057	28.932
11/12/23 11:15	0.06	99.015	29.076
11/12/23 11:30	0.06	99	28.884
11/12/23 11:45	0.06	98.957	29.267
11/12/23 12:00	0.05	98.937	29.411
11/12/23 12:15	0.05	98.926	29.411

11/12/23 12:30	0.05	98.867	29.554
11/12/23 12:45	0.05	98.852	29.937
11/12/23 13:00	0.05	98.87	28.596
11/12/23 13:15	0.04	98.815	28.356
11/12/23 13:30	0.04	98.768	28.836
11/12/23 13:45	0.04	98.754	29.267
11/12/23 14:00	0.04	98.751	29.076
11/12/23 14:15	0.04	98.763	28.836
11/12/23 14:30	0.03	98.726	28.98
11/12/23 14:45	0.03	98.693	29.028
11/12/23 15:00	0.03	98.674	29.459
11/12/23 15:15	0.03	98.664	28.98
11/12/23 15:30	0.03	98.683	29.076
11/12/23 15:45	0.03	98.679	28.596
11/12/23 16:00	0.03	98.705	28.212
11/12/23 16:15	0.03	98.705	27.923
11/12/23 16:30	0.03	98.717	27.73
11/12/23 16:45	0.03	98.732	27.634
11/12/23 17:00	0.04	98.777	27.634
11/12/23 17:15	0.04	98.78	27.489
11/12/23 17:30	0.04	98.808	27.248
11/12/23 17:45	0.04	98.809	27.007
11/12/23 18:00	0.04	98.838	26.813
11/12/23 18:15	0.05	98.842	26.717
11/12/23 18:30	0.05	98.85	26.571
11/12/23 18:45	0.06	98.941	26.62
11/12/23 19:00	0.06	98.943	26.475
11/12/23 19:15	0.06	98.948	26.426
11/12/23 19:30	0.06	98.986	26.378
11/12/23 19:45	0.06	98.994	26.232
11/12/23 20:00	0.07	99.038	26.184
11/12/23 20:15	0.07	99.042	26.087
11/12/23 20:30	0.07	99.044	26.184
11/12/23 20:45	0.07	99.073	26.232
11/12/23 21:00	0.07	99.064	26.087
11/12/23 21:15	0.07	99.059	26.087
11/12/23 21:30	0.07	99.073	26.232
11/12/23 21:45	0.07	99.071	26.378
11/12/23 22:00	0.07	99.071	26.378
11/12/23 22:15	0.07	99.084	26.232
11/12/23 22:30	0.07	99.07	26.329
11/12/23 22:45	0.07	99.072	26.184
11/12/23 23:00	0.07	99.062	25.99
11/12/23 23:15	0.07	99.05	25.941
11/12/23 23:30	0.06	99.022	25.941
11/12/23 23:45	0.06	99.004	25.893
12/12/23 0:00	0.06	99.024	25.796
12/12/23 0:15	0.07	99.054	25.65
12/12/23 0:30	0.06	99.013	25.553
12/12/23 0:45	0.06	99.026	25.65

12/12/23 1:00	0.06	99	25.747
12/12/23 1:15	0.06	98.972	25.747
12/12/23 1:30	0.06	98.964	25.65
12/12/23 1:45	0.06	98.952	25.602
12/12/23 2:00	0.05	98.91	25.456
12/12/23 2:15	0.05	98.893	25.456
12/12/23 2:30	0.05	98.894	25.261
12/12/23 2:45	0.05	98.892	25.164
12/12/23 3:00	0.05	98.855	25.018
12/12/23 3:15	0.05	98.9	24.774
12/12/23 3:30	0.05	98.857	24.384
12/12/23 3:45	0.05	98.87	24.237
12/12/23 4:00	0.05	98.885	24.139
12/12/23 4:15	0.05	98.911	24.042
12/12/23 4:30	0.05	98.905	24.042
12/12/23 4:45	0.05	98.914	23.944
12/12/23 5:00	0.06	98.944	23.797
12/12/23 5:15	0.05	98.911	23.797
12/12/23 5:30	0.06	98.983	23.748
12/12/23 5:45	0.06	98.987	23.699
12/12/23 6:00	0.06	98.947	23.65
12/12/23 6:15	0.06	98.986	23.65
12/12/23 6:30	0.06	99.013	23.846
12/12/23 6:45	0.06	99	23.993
12/12/23 7:00	0.06	99.014	24.139
12/12/23 7:15	0.07	99.046	24.53
12/12/23 7:30	0.07	99.069	24.579
12/12/23 7:45	0.07	99.071	25.164
12/12/23 8:00	0.07	99.079	25.018
12/12/23 8:15	0.07	99.07	26.62
12/12/23 8:30	0.06	98.996	28.692
12/12/23 8:45	0.06	98.972	28.884
12/12/23 9:00	0.05	98.932	29.459
12/12/23 9:15	0.05	98.911	30.08
12/12/23 9:30	0.05	98.892	30.271
12/12/23 9:45	0.06	98.949	29.172
12/12/23 10:00	0.06	98.958	29.315
12/12/23 10:15	0.06	98.959	29.076
12/12/23 10:30	0.06	98.953	28.788
12/12/23 10:45	0.05	98.937	28.26
12/12/23 11:00	0.05	98.906	28.692
12/12/23 11:15	0.05	98.905	29.219
12/12/23 11:30	0.05	98.912	28.98
12/12/23 11:45	0.05	98.874	29.363
12/12/23 12:00	0.05	98.85	28.98
12/12/23 12:15	0.04	98.802	29.124
12/12/23 12:30	0.04	98.837	28.884
12/12/23 12:45	0.04	98.789	28.74
12/12/23 13:00	0.03	98.737	28.98
12/12/23 13:15	0.04	98.764	29.172

12/12/23 13:30	0.03	98.661	29.363
12/12/23 13:45	0.03	98.651	29.746
12/12/23 14:00	0.02	98.607	30.414
12/12/23 14:15	0.02	98.593	29.937
12/12/23 14:30	0.02	98.64	29.459
12/12/23 14:45	0.02	98.622	29.411
12/12/23 15:00	0.02	98.57	29.65
12/12/23 15:15	0.02	98.552	29.554
12/12/23 15:30	0.02	98.598	29.315
12/12/23 15:45	0.02	98.611	28.836
12/12/23 16:00	0.02	98.607	28.932
12/12/23 16:15	0.02	98.61	28.788
12/12/23 16:30	0.03	98.672	28.26
12/12/23 16:45	0.03	98.682	27.923
12/12/23 17:00	0.03	98.705	27.682
12/12/23 17:15	0.03	98.722	27.393
12/12/23 17:30	0.04	98.767	27.152
12/12/23 17:45	0.04	98.765	27.055
12/12/23 18:00	0.04	98.818	26.91
12/12/23 18:15	0.04	98.826	26.765
12/12/23 18:30	0.05	98.886	26.668
12/12/23 18:45	0.05	98.879	26.62
12/12/23 19:00	0.06	98.95	26.523
12/12/23 19:15	0.05	98.928	26.523
12/12/23 19:30	0.06	98.957	26.329
12/12/23 19:45	0.06	98.979	26.281
12/12/23 20:00	0.06	98.988	26.184
12/12/23 20:15	0.06	99.011	25.99
12/12/23 20:30	0.06	99.015	25.893
12/12/23 20:45	0.07	99.039	25.699
12/12/23 21:00	0.07	99.068	25.747
12/12/23 21:15	0.07	99.069	25.796
12/12/23 21:30	0.07	99.044	25.941
12/12/23 21:45	0.07	99.083	25.941
12/12/23 22:00	0.07	99.099	25.893
12/12/23 22:15	0.07	99.079	25.747
12/12/23 22:30	0.07	99.085	25.261
12/12/23 22:45	0.07	99.119	25.018
12/12/23 23:00	0.07	99.07	25.115
12/12/23 23:15	0.07	99.041	25.066
12/12/23 23:30	0.07	99.047	24.823
12/12/23 23:45	0.07	99.048	24.628
13/12/23 0:00	0.06	99.033	24.481
13/12/23 0:15	0.06	99.037	24.384
13/12/23 0:30	0.06	98.996	24.335
13/12/23 0:45	0.06	99.024	24.335
13/12/23 1:00	0.06	98.995	24.286
13/12/23 1:15	0.06	98.96	24.237
13/12/23 1:30	0.05	98.925	24.188
13/12/23 1:45	0.05	98.904	24.237

13/12/23 2:00	0.05	98.938	24.237
13/12/23 2:15	0.05	98.904	24.237
13/12/23 2:30	0.06	98.952	24.139
13/12/23 2:45	0.05	98.877	24.042
13/12/23 3:00	0.05	98.904	23.993
13/12/23 3:15	0.05	98.881	23.993
13/12/23 3:30	0.05	98.88	23.944
13/12/23 3:45	0.05	98.874	23.895
13/12/23 4:00	0.05	98.876	23.748
13/12/23 4:15	0.05	98.89	23.65
13/12/23 4:30	0.05	98.895	23.601
13/12/23 4:45	0.05	98.916	23.552
13/12/23 5:00	0.05	98.925	23.454
13/12/23 5:15	0.06	98.953	23.454
13/12/23 5:30	0.06	98.97	23.454
13/12/23 5:45	0.06	98.987	23.454
13/12/23 6:00	0.07	99.046	23.356
13/12/23 6:15	0.07	99.067	23.258
13/12/23 6:30	0.07	99.085	23.307
13/12/23 6:45	0.07	99.131	23.356
13/12/23 7:00	0.08	99.15	23.454
13/12/23 7:15	0.08	99.212	23.699
13/12/23 7:30	0.08	99.174	23.993
13/12/23 7:45	0.08	99.217	24.384
13/12/23 8:00	0.08	99.205	25.602
13/12/23 8:15	0.08	99.197	26.765
13/12/23 8:30	0.09	99.249	25.796
13/12/23 8:45	0.08	99.198	27.586
13/12/23 9:00	0.08	99.204	27.345
13/12/23 9:15	0.08	99.154	28.452
13/12/23 9:30	0.07	99.107	29.459
13/12/23 9:45	0.07	99.124	28.596
13/12/23 10:00	0.08	99.152	28.067
13/12/23 10:15	0.08	99.162	28.019
13/12/23 10:30	0.08	99.154	27.875
13/12/23 10:45	0.07	99.128	27.73
13/12/23 11:00	0.08	99.166	27.393
13/12/23 11:15	0.07	99.117	27.2
13/12/23 11:30	0.07	99.077	27.73
13/12/23 11:45	0.06	99.004	28.788
13/12/23 12:00	0.05	98.93	29.315
13/12/23 12:15	0.05	98.884	28.98
13/12/23 12:30	0.05	98.891	29.363
13/12/23 12:45	0.04	98.836	29.124
13/12/23 13:00	0.04	98.818	28.788
13/12/23 13:15	0.04	98.828	29.028
13/12/23 13:30	0.04	98.796	29.363
13/12/23 13:45	0.04	98.759	29.507
13/12/23 14:00	0.03	98.66	30.843
13/12/23 14:15	0.02	98.636	30.747

13/12/23 14:30	0.02	98.644	29.985
13/12/23 14:45	0.02	98.632	30.223
13/12/23 15:00	0.02	98.632	29.363
13/12/23 15:15	0.03	98.677	29.076
13/12/23 15:30	0.03	98.678	28.548
13/12/23 15:45	0.03	98.646	28.356
13/12/23 16:00	0.02	98.592	28.452
13/12/23 16:15	0.03	98.697	28.644
13/12/23 16:30	0.03	98.705	28.788
13/12/23 16:45	0.02	98.645	29.124
13/12/23 17:00	0.03	98.699	29.315
13/12/23 17:15	0.03	98.7	29.363
13/12/23 17:30	0.03	98.671	29.315
13/12/23 17:45	0.02	98.616	29.076
13/12/23 18:00	0.02	98.626	29.028
13/12/23 18:15	0.03	98.65	28.836
13/12/23 18:30	0.03	98.671	28.74
13/12/23 18:45	0.03	98.742	28.644
13/12/23 19:00	0.04	98.758	28.596
13/12/23 19:15	0.04	98.768	28.548
13/12/23 19:30	0.04	98.778	28.5
13/12/23 19:45	0.04	98.777	28.452
13/12/23 20:00	0.04	98.822	28.452
13/12/23 20:15	0.04	98.84	28.5

BOTTLING PLANT

Date and Time	Depth (m)	Pressure (k)	Temperature (C)
02/12/23 16:00	0	100.403	27.755
02/12/23 16:15	0	100.403	27.755
02/12/23 16:30	0.003	100.439	27.506
02/12/23 16:45	0.013	100.533	27.655
02/12/23 17:00	0.018	100.585	27.655
02/12/23 17:15	0.02	100.607	27.605
02/12/23 17:30	0.026	100.659	27.955
02/12/23 17:45	0.028	100.682	28.254
02/12/23 18:00	0.026	100.66	28.304
02/12/23 18:15	0.03	100.698	28.852
02/12/23 18:30	0.021	100.616	29.101
02/12/23 18:45	0.034	100.74	29.349
02/12/23 19:00	0.036	100.761	29.548
02/12/23 19:15	0.039	100.787	29.746
02/12/23 19:30	0.039	100.792	29.697
02/12/23 19:45	0.04	100.801	29.548
02/12/23 20:00	0.04	100.803	29.001
02/12/23 20:15	0.039	100.794	28.155
02/12/23 20:30	0.042	100.821	27.455
02/12/23 20:45	0.04	100.801	27.005
02/12/23 21:00	0.041	100.814	27.055
02/12/23 21:15	0.044	100.838	27.105
02/12/23 21:30	0.044	100.839	27.155
02/12/23 21:45	0.041	100.81	27.155
02/12/23 22:00	0.046	100.856	27.155
02/12/23 22:15	0.043	100.827	27.155
02/12/23 22:30	0.046	100.859	28.554
02/12/23 22:45	0.074	101.13	27.405
02/12/23 23:00	0.068	101.074	27.205
02/12/23 23:15	0.067	101.061	26.805
02/12/23 23:30	0.068	101.075	26.403
02/12/23 23:45	0.061	101.002	26.453
03/12/23 0:00	0.069	101.088	26.754
03/12/23 0:15	0.061	101.01	26.554
03/12/23 0:30	0.061	101.004	26.554
03/12/23 0:45	0.058	100.977	26.604
03/12/23 1:00	0.057	100.966	26.654
03/12/23 1:15	0.056	100.961	26.704
03/12/23 1:30	0.049	100.887	26.704
03/12/23 1:45	0.046	100.858	26.704
03/12/23 2:00	0.051	100.905	26.754
03/12/23 2:15	0.049	100.888	26.754
03/12/23 2:30	0.04	100.795	26.704
03/12/23 2:45	0.044	100.84	26.654
03/12/23 3:00	0.046	100.855	26.554
03/12/23 3:15	0.033	100.728	26.202
03/12/23 3:30	0.046	100.857	26.353
03/12/23 3:45	0.044	100.843	26.504
03/12/23 4:00	0.033	100.734	26.504

03/12/23 4:15	0.048	100.878	26.554
03/12/23 4:30	0.049	100.885	26.604
03/12/23 4:45	0.05	100.896	26.604
03/12/23 5:00	0.046	100.863	26.654
03/12/23 5:15	0.037	100.771	26.654
03/12/23 5:30	0.045	100.844	26.303
03/12/23 5:45	0.054	100.933	26.453
03/12/23 6:00	0.054	100.939	26.754
03/12/23 6:15	0.058	100.978	26.654
03/12/23 6:30	0.061	101.001	26.704
03/12/23 6:45	0.064	101.032	26.805
03/12/23 7:00	0.062	101.014	26.754
03/12/23 7:15	0.066	101.054	26.754
03/12/23 7:30	0.067	101.06	26.754
03/12/23 7:45	0.064	101.031	26.754
03/12/23 8:00	0.071	101.101	26.805
03/12/23 8:15	0.077	101.164	26.805
03/12/23 8:30	0.076	101.149	26.905
03/12/23 8:45	0.075	101.139	27.305
03/12/23 9:00	0.077	101.166	27.205
03/12/23 9:15	0.078	101.169	27.355
03/12/23 9:30	0.081	101.197	27.305
03/12/23 9:45	0.083	101.225	27.305
03/12/23 10:00	0.079	101.186	27.355
03/12/23 10:15	0.078	101.175	27.355
03/12/23 10:30	0.07	101.096	27.455
03/12/23 10:45	0.07	101.098	27.556
03/12/23 11:00	0.07	101.095	27.705
03/12/23 11:15	0.069	101.083	27.655
03/12/23 11:30	0.069	101.082	27.605
03/12/23 11:45	0.068	101.076	27.605
03/12/23 12:00	0.062	101.016	27.755
03/12/23 12:15	0.057	100.97	27.455
03/12/23 12:30	0.062	101.013	27.605
03/12/23 12:45	0.085	101.236	27.556
03/12/23 13:00	0.063	101.026	27.655
03/12/23 13:15	0.061	101.007	27.556
03/12/23 13:30	0.059	100.982	27.755
03/12/23 13:45	0.062	101.011	27.805
03/12/23 14:00	0.067	101.068	27.755
03/12/23 14:15	0.055	100.943	27.805
03/12/23 14:30	0.056	100.956	27.605
03/12/23 14:45	0.054	100.94	27.655
03/12/23 15:00	0.052	100.914	27.805
03/12/23 15:15	0.048	100.876	27.905
03/12/23 15:30	0.052	100.92	27.506
03/12/23 15:45	0.054	100.934	27.655
03/12/23 16:00	0.031	100.71	27.305
03/12/23 16:15	0.026	100.661	27.155
03/12/23 16:30	0.029	100.696	26.905

03/12/23 16:45	0.063	101.023	27.205
03/12/23 17:00	0.025	100.654	27.105
03/12/23 17:15	0.027	100.674	26.955
03/12/23 17:30	0.02	100.608	26.805
03/12/23 17:45	0.028	100.681	27.005
03/12/23 18:00	0.022	100.627	26.855
03/12/23 18:15	0.021	100.617	26.654
03/12/23 18:30	0.027	100.668	26.654
03/12/23 18:45	0.033	100.73	26.604
03/12/23 19:00	0.033	100.732	26.704
03/12/23 19:15	0.072	101.113	26.855
03/12/23 19:30	0.06	100.994	26.905
03/12/23 19:45	0.069	101.084	26.554
03/12/23 20:00	0.074	101.129	26.805
03/12/23 20:15	0.069	101.085	26.855
03/12/23 20:30	0.055	100.943	26.955
03/12/23 20:45	0.059	100.985	27.055
03/12/23 21:00	0.084	101.235	26.955
03/12/23 21:15	0.087	101.264	26.955
03/12/23 21:30	0.095	101.34	27.005
03/12/23 21:45	0.097	101.356	26.955
03/12/23 22:00	0.095	101.343	26.905
03/12/23 22:15	0.098	101.371	26.855
03/12/23 22:30	0.097	101.36	26.905
03/12/23 22:45	0.092	101.308	26.855
03/12/23 23:00	0.097	101.354	26.855
03/12/23 23:15	0.098	101.364	26.805
03/12/23 23:30	0.105	101.432	26.754
03/12/23 23:45	0.103	101.414	26.704
04/12/23 0:00	0.106	101.449	26.754
04/12/23 0:15	0.112	101.506	26.754
04/12/23 0:30	0.104	101.431	26.704
04/12/23 0:45	0.107	101.453	26.654
04/12/23 1:00	0.109	101.48	26.604
04/12/23 1:15	0.105	101.434	26.554
04/12/23 1:30	0.101	101.392	26.504
04/12/23 1:45	0.106	101.448	26.403
04/12/23 2:00	0.106	101.447	26.353
04/12/23 2:15	0.104	101.428	26.303
04/12/23 2:30	0.106	101.445	26.253
04/12/23 2:45	0.115	101.535	26.202
04/12/23 3:00	0.116	101.544	26.102
04/12/23 3:15	0.112	101.507	25.951
04/12/23 3:30	0.114	101.521	25.8
04/12/23 3:45	0.128	101.662	25.7
04/12/23 4:00	0.13	101.678	25.649
04/12/23 4:15	0.148	101.859	25.297
04/12/23 4:30	0.146	101.84	25.196
04/12/23 4:45	0.165	102.023	25.196
04/12/23 5:00	0.173	102.104	25.246

04/12/23 5:15	0.179	102.164	25.347
04/12/23 5:30	0.187	102.235	25.448
04/12/23 5:45	0.183	102.203	25.549
04/12/23 6:00	0.179	102.164	25.599
04/12/23 6:15	0.182	102.195	25.7
04/12/23 6:30	0.191	102.281	25.7
04/12/23 6:45	0.2	102.363	25.8
04/12/23 7:00	0.203	102.397	25.8
04/12/23 7:15	0.217	102.537	25.901
04/12/23 7:30	0.23	102.663	25.901
04/12/23 7:45	0.245	102.811	25.851
04/12/23 8:00	0.255	102.903	25.851
04/12/23 8:15	0.272	103.073	25.8
04/12/23 8:30	0.294	103.284	25.75
04/12/23 8:45	0.311	103.456	25.75
04/12/23 9:00	0.323	103.576	25.7
04/12/23 9:15	0.339	103.729	25.649
04/12/23 9:30	0.351	103.85	25.649
04/12/23 9:45	0.359	103.923	25.599
04/12/23 10:00	0.38	104.128	25.549
04/12/23 10:15	0.404	104.367	25.448
04/12/23 10:30	0.419	104.516	25.448
04/12/23 10:45	0.427	104.59	25.398
04/12/23 11:00	0.44	104.716	25.398
04/12/23 11:15	0.454	104.858	25.347
04/12/23 11:30	0.451	104.822	25.297
04/12/23 11:45	0.466	104.972	25.297
04/12/23 12:00	0.47	105.011	25.246
04/12/23 12:15	0.472	105.035	25.297
04/12/23 12:30	0.479	105.099	25.347
04/12/23 12:45	0.485	105.163	25.398
04/12/23 13:00	0.496	105.269	25.498
04/12/23 13:15	0.504	105.349	25.498
04/12/23 13:30	0.506	105.361	25.498
04/12/23 13:45	0.527	105.574	25.549
04/12/23 14:00	0.541	105.711	25.498
04/12/23 14:15	0.552	105.815	25.549
04/12/23 14:30	0.567	105.966	25.599
04/12/23 14:45	0.589	106.177	25.549
04/12/23 15:00	0.605	106.339	25.599
04/12/23 15:15	0.618	106.465	25.599
04/12/23 15:30	0.647	106.742	25.649
04/12/23 15:45	0.655	106.827	25.599
04/12/23 16:00	0.674	107.011	25.599
04/12/23 16:15	0.698	107.242	25.649
04/12/23 16:30	0.715	107.409	25.649
04/12/23 16:45	0.732	107.575	25.649
04/12/23 17:00	0.754	107.799	25.649
04/12/23 17:15	0.77	107.955	25.649
04/12/23 17:30	0.783	108.081	25.649

04/12/23 17:45	0.805	108.298	25.599
04/12/23 18:00	0.822	108.465	25.599
04/12/23 18:15	0.833	108.573	25.549
04/12/23 18:30	0.849	108.723	25.549
04/12/23 18:45	0.863	108.861	25.549
04/12/23 19:00	0.873	108.957	25.498
04/12/23 19:15	0.89	109.13	25.498
04/12/23 19:30	0.903	109.255	25.448
04/12/23 19:45	0.916	109.381	25.398
04/12/23 20:00	0.935	109.57	25.398
04/12/23 20:15	0.943	109.651	25.398
04/12/23 20:30	0.967	109.88	25.347
04/12/23 20:45	0.979	109.995	25.347
04/12/23 21:00	0.992	110.126	25.297
04/12/23 21:15	1.004	110.248	25.347
04/12/23 21:30	1.018	110.378	25.246
04/12/23 21:45	1.03	110.5	25.297
04/12/23 22:00	1.04	110.597	25.246
04/12/23 22:15	1.051	110.706	25.246
04/12/23 22:30	1.052	110.718	25.246
04/12/23 22:45	1.062	110.816	25.246
04/12/23 23:00	1.07	110.891	25.246
04/12/23 23:15	1.077	110.96	25.246
04/12/23 23:30	1.081	110.999	25.196
04/12/23 23:45	1.088	111.069	25.246
05/12/23 0:00	1.097	111.154	25.196
05/12/23 0:15	1.105	111.229	25.196
05/12/23 0:30	1.112	111.303	25.146
05/12/23 0:45	1.117	111.35	25.196
05/12/23 1:00	1.12	111.385	25.196
05/12/23 1:15	1.127	111.447	25.146
05/12/23 1:30	1.13	111.481	25.146
05/12/23 1:45	1.135	111.526	25.095
05/12/23 2:00	1.138	111.561	25.095
05/12/23 2:15	1.143	111.601	25.095
05/12/23 2:30	1.147	111.64	25.045
05/12/23 2:45	1.151	111.686	25.045
05/12/23 3:00	1.155	111.725	24.994
05/12/23 3:15	1.158	111.754	24.994
05/12/23 3:30	1.169	111.858	24.994
05/12/23 3:45	1.169	111.864	24.994
05/12/23 4:00	1.175	111.921	24.994
05/12/23 4:15	1.184	112.008	24.994
05/12/23 4:30	1.188	112.048	24.994
05/12/23 4:45	1.19	112.064	24.944
05/12/23 5:00	1.199	112.156	24.944
05/12/23 5:15	1.209	112.248	24.944
05/12/23 5:30	1.208	112.243	24.944
05/12/23 5:45	1.218	112.341	24.944
05/12/23 6:00	1.222	112.377	24.994

05/12/23 6:15	1.223	112.394	24.994
05/12/23 6:30	1.237	112.526	24.994
05/12/23 6:45	1.235	112.503	24.994
05/12/23 7:00	1.246	112.619	24.994
05/12/23 7:15	1.254	112.694	24.994
05/12/23 7:30	1.261	112.757	24.994
05/12/23 7:45	1.269	112.838	24.994
05/12/23 8:00	1.277	112.92	25.045
05/12/23 8:15	1.281	112.96	25.045
05/12/23 8:30	1.291	113.058	25.045
05/12/23 8:45	1.297	113.11	25.045
05/12/23 9:00	1.302	113.162	25.045
05/12/23 9:15	1.31	113.243	25.045
05/12/23 9:30	1.328	113.422	25.045
05/12/23 9:45	1.335	113.491	25.045
05/12/23 10:00	1.342	113.56	25.045
05/12/23 10:15	1.351	113.642	25.095
05/12/23 10:30	1.363	113.757	25.095
05/12/23 10:45	1.371	113.84	25.146
05/12/23 11:00	1.377	113.897	25.146
05/12/23 11:15	1.379	113.92	25.146
05/12/23 11:30	1.383	113.955	25.146
05/12/23 11:45	1.393	114.054	25.196
05/12/23 12:00	1.402	114.147	25.196
05/12/23 12:15	1.408	114.197	25.146
05/12/23 12:30	1.414	114.256	25.196
05/12/23 12:45	1.411	114.229	25.246
05/12/23 13:00	1.421	114.333	25.246
05/12/23 13:15	1.422	114.338	25.246
05/12/23 13:30	1.425	114.373	25.246
05/12/23 13:45	1.426	114.38	25.297
05/12/23 14:00	1.434	114.455	25.297
05/12/23 14:15	1.438	114.497	25.347
05/12/23 14:30	1.434	114.452	25.398
05/12/23 14:45	1.444	114.556	25.398
05/12/23 15:00	1.446	114.575	25.448
05/12/23 15:15	1.454	114.65	25.448
05/12/23 15:30	1.456	114.674	25.498
05/12/23 15:45	1.459	114.705	25.599
05/12/23 16:00	1.463	114.745	25.549
05/12/23 16:15	1.463	114.74	25.599
05/12/23 16:30	1.468	114.788	25.649
05/12/23 16:45	1.468	114.793	25.649
05/12/23 17:00	1.472	114.828	25.649
05/12/23 17:15	1.478	114.887	25.7
05/12/23 17:30	1.477	114.883	25.75
05/12/23 17:45	1.48	114.906	25.75
05/12/23 18:00	1.48	114.906	25.75
05/12/23 18:15	1.477	114.877	25.75
05/12/23 18:30	1.484	114.946	25.75

05/12/23 18:45	1.487	114.975	25.75
05/12/23 19:00	1.489	114.995	25.851
05/12/23 19:15	1.489	114.994	25.8
05/12/23 19:30	1.494	115.041	25.851
05/12/23 19:45	1.484	114.943	25.851
05/12/23 20:00	1.49	115.001	25.851
05/12/23 20:15	1.487	114.972	25.851
05/12/23 20:30	1.479	114.895	25.8
05/12/23 20:45	1.473	114.838	25.8
05/12/23 21:00	1.477	114.879	25.851
05/12/23 21:15	1.472	114.826	25.8
05/12/23 21:30	1.466	114.768	25.8
05/12/23 21:45	1.462	114.729	25.851
05/12/23 22:00	1.45	114.612	25.8
05/12/23 22:15	1.448	114.596	25.851
05/12/23 22:30	1.446	114.572	25.8
05/12/23 22:45	1.44	114.515	25.851
05/12/23 23:00	1.432	114.435	25.851
05/12/23 23:15	1.425	114.364	25.8
05/12/23 23:30	1.418	114.295	25.8
05/12/23 23:45	1.408	114.204	25.851
06/12/23 0:00	1.404	114.163	25.851
06/12/23 0:15	1.395	114.076	25.8
06/12/23 0:30	1.388	114.002	25.851
06/12/23 0:45	1.379	113.914	25.8
06/12/23 1:00	1.367	113.8	25.851
06/12/23 1:15	1.364	113.77	25.8
06/12/23 1:30	1.354	113.673	25.851
06/12/23 1:45	1.345	113.58	25.851
06/12/23 2:00	1.334	113.475	25.8
06/12/23 2:15	1.321	113.354	25.8
06/12/23 2:30	1.318	113.32	25.8
06/12/23 2:45	1.307	113.211	25.851
06/12/23 3:00	1.299	113.136	25.851
06/12/23 3:15	1.292	113.067	25.851
06/12/23 3:30	1.282	112.969	25.851
06/12/23 3:45	1.277	112.917	25.851
06/12/23 4:00	1.267	112.825	25.851
06/12/23 4:15	1.257	112.72	25.8
06/12/23 4:30	1.249	112.646	25.851
06/12/23 4:45	1.237	112.529	25.8
06/12/23 5:00	1.23	112.46	25.8
06/12/23 5:15	1.227	112.433	25.851
06/12/23 5:30	1.224	112.397	25.8
06/12/23 5:45	1.216	112.316	25.8
06/12/23 6:00	1.21	112.257	25.75
06/12/23 6:15	1.204	112.207	25.8
06/12/23 6:30	1.197	112.13	25.75
06/12/23 6:45	1.19	112.062	25.8
06/12/23 7:00	1.182	111.987	25.8

06/12/23 7:15	1.171	111.882	25.75
06/12/23 7:30	1.167	111.839	25.851
06/12/23 7:45	1.159	111.763	25.8
06/12/23 8:00	1.153	111.705	25.8
06/12/23 8:15	1.144	111.612	25.75
06/12/23 8:30	1.131	111.486	25.8
06/12/23 8:45	1.124	111.423	25.8
06/12/23 9:00	1.117	111.354	25.8
06/12/23 9:15	1.111	111.29	25.8
06/12/23 9:30	1.099	111.176	25.851
06/12/23 9:45	1.092	111.103	25.901
06/12/23 10:00	1.076	110.947	25.901
06/12/23 10:15	1.072	110.908	25.951
06/12/23 10:30	1.062	110.812	26.052
06/12/23 10:45	1.05	110.691	26.052
06/12/23 11:00	1.037	110.572	26.102
06/12/23 11:15	1.034	110.537	26.102
06/12/23 11:30	1.023	110.429	26.152
06/12/23 11:45	1.014	110.345	26.253
06/12/23 12:00	1.005	110.257	26.202
06/12/23 12:15	0.993	110.136	26.202
06/12/23 12:30	0.981	110.022	26.253
06/12/23 12:45	0.966	109.868	26.303
06/12/23 13:00	0.96	109.811	26.303
06/12/23 13:15	0.949	109.704	26.403
06/12/23 13:30	0.937	109.584	26.453
06/12/23 13:45	0.924	109.458	26.504
06/12/23 14:00	0.922	109.442	26.554
06/12/23 14:15	0.912	109.346	26.604
06/12/23 14:30	0.905	109.278	26.654
06/12/23 14:45	0.893	109.152	26.704
06/12/23 15:00	0.887	109.101	26.754
06/12/23 15:15	0.874	108.966	26.855
06/12/23 15:30	0.868	108.914	26.855
06/12/23 15:45	0.861	108.84	26.905
06/12/23 16:00	0.856	108.791	27.005
06/12/23 16:15	0.852	108.75	27.005
06/12/23 16:30	0.851	108.746	27.055
06/12/23 16:45	0.843	108.671	27.055
06/12/23 17:00	0.846	108.696	27.155
06/12/23 17:15	0.835	108.593	27.155
06/12/23 17:30	0.828	108.521	27.305
06/12/23 17:45	0.825	108.488	27.355
06/12/23 18:00	0.822	108.466	27.405
06/12/23 18:15	0.815	108.393	27.255
06/12/23 18:30	0.81	108.343	27.305
06/12/23 18:45	0.804	108.28	27.355
06/12/23 19:00	0.799	108.233	27.305
06/12/23 19:15	0.797	108.217	27.355
06/12/23 19:30	0.791	108.161	27.405

06/12/23 19:45	0.791	108.161	27.405
06/12/23 20:00	0.786	108.109	27.405
06/12/23 20:15	0.78	108.045	27.355
06/12/23 20:30	0.771	107.959	27.405
06/12/23 20:45	0.767	107.925	27.405
06/12/23 21:00	0.754	107.793	27.405
06/12/23 21:15	0.75	107.751	27.355
06/12/23 21:30	0.743	107.683	27.405
06/12/23 21:45	0.736	107.62	27.405
06/12/23 22:00	0.727	107.532	27.305
06/12/23 22:15	0.72	107.463	27.305
06/12/23 22:30	0.707	107.337	27.355
06/12/23 22:45	0.702	107.289	27.255
06/12/23 23:00	0.692	107.186	27.255
06/12/23 23:15	0.687	107.141	27.305
06/12/23 23:30	0.674	107.013	27.255
06/12/23 23:45	0.668	106.953	27.405
07/12/23 0:00	0.659	106.864	27.255
07/12/23 0:15	0.648	106.755	27.255
07/12/23 0:30	0.638	106.658	27.305
07/12/23 0:45	0.628	106.559	27.255
07/12/23 1:00	0.625	106.531	27.255
07/12/23 1:15	0.613	106.417	27.305
07/12/23 1:30	0.604	106.322	27.155
07/12/23 1:45	0.591	106.196	27.205
07/12/23 2:00	0.584	106.127	27.205
07/12/23 2:15	0.575	106.041	27.205
07/12/23 2:30	0.569	105.983	27.155
07/12/23 2:45	0.558	105.879	27.155
07/12/23 3:00	0.55	105.797	27.055
07/12/23 3:15	0.54	105.701	27.155
07/12/23 3:30	0.531	105.606	27.005
07/12/23 3:45	0.524	105.537	27.005
07/12/23 4:00	0.517	105.475	27.055
07/12/23 4:15	0.511	105.417	27.005
07/12/23 4:30	0.504	105.348	27.005
07/12/23 4:45	0.495	105.261	26.955
07/12/23 5:00	0.488	105.185	26.905
07/12/23 5:15	0.481	105.117	26.955
07/12/23 5:30	0.476	105.069	26.855
07/12/23 5:45	0.471	105.024	26.905
07/12/23 6:00	0.464	104.951	26.955
07/12/23 6:15	0.458	104.896	26.805
07/12/23 6:30	0.454	104.858	26.905
07/12/23 6:45	0.45	104.815	26.805
07/12/23 7:00	0.444	104.759	26.855
07/12/23 7:15	0.438	104.703	26.905
07/12/23 7:30	0.435	104.668	26.905
07/12/23 7:45	0.428	104.603	26.805
07/12/23 8:00	0.418	104.508	26.905

07/12/23 8:15	0.414	104.462	26.905
07/12/23 8:30	0.408	104.403	26.855
07/12/23 8:45	0.404	104.363	26.855
07/12/23 9:00	0.398	104.307	26.905
07/12/23 9:15	0.392	104.247	26.805
07/12/23 9:30	0.382	104.153	26.955
07/12/23 9:45	0.372	104.052	26.805
07/12/23 10:00	0.366	103.991	26.905
07/12/23 10:15	0.362	103.958	26.955
07/12/23 10:30	0.351	103.845	27.055
07/12/23 10:45	0.344	103.775	27.005
07/12/23 11:00	0.338	103.719	27.055
07/12/23 11:15	0.327	103.611	27.105
07/12/23 11:30	0.321	103.555	27.155
07/12/23 11:45	0.311	103.456	27.105
07/12/23 12:00	0.306	103.403	27.305
07/12/23 12:15	0.295	103.295	27.355
07/12/23 12:30	0.287	103.221	27.405
07/12/23 12:45	0.282	103.17	27.405
07/12/23 13:00	0.273	103.083	27.355
07/12/23 13:15	0.266	103.011	27.506
07/12/23 13:30	0.259	102.941	27.455
07/12/23 13:45	0.252	102.875	27.556
07/12/23 14:00	0.244	102.8	27.556
07/12/23 14:15	0.239	102.749	27.605
07/12/23 14:30	0.233	102.692	27.605
07/12/23 14:45	0.226	102.62	27.705
07/12/23 15:00	0.223	102.591	27.705
07/12/23 15:15	0.213	102.499	28.005
07/12/23 15:30	0.208	102.448	28.055
07/12/23 15:45	0.203	102.395	27.955
07/12/23 16:00	0.203	102.395	27.955
07/12/23 16:15	0.198	102.352	28.105
07/12/23 16:30	0.196	102.327	28.005
07/12/23 16:45	0.189	102.258	28.005
07/12/23 17:00	0.185	102.219	28.055
07/12/23 17:15	0.188	102.248	28.055
07/12/23 17:30	0.184	102.207	28.005
07/12/23 17:45	0.18	102.169	28.155
07/12/23 18:00	0.173	102.1	28.105
07/12/23 18:15	0.172	102.095	28.155
07/12/23 18:30	0.169	102.065	28.105
07/12/23 18:45	0.172	102.096	27.905
07/12/23 19:00	0.169	102.06	27.805
07/12/23 19:15	0.166	102.034	27.955
07/12/23 19:30	0.162	101.999	27.605
07/12/23 19:45	0.158	101.959	27.955
07/12/23 20:00	0.159	101.963	27.855
07/12/23 20:15	0.157	101.946	27.855
07/12/23 20:30	0.153	101.911	27.805

07/12/23 20:45	0.154	101.913	27.905
07/12/23 21:00	0.151	101.889	27.855
07/12/23 21:15	0.147	101.846	27.705
07/12/23 21:30	0.147	101.852	27.705
07/12/23 21:45	0.143	101.805	27.655
07/12/23 22:00	0.142	101.804	27.605
07/12/23 22:15	0.133	101.71	27.506
07/12/23 22:30	0.129	101.671	27.556
07/12/23 22:45	0.131	101.687	27.506
07/12/23 23:00	0.126	101.645	27.405
07/12/23 23:15	0.117	101.557	27.305
07/12/23 23:30	0.116	101.54	27.305
07/12/23 23:45	0.115	101.534	27.305
08/12/23 0:00	0.109	101.471	27.305
08/12/23 0:15	0.104	101.425	27.255
08/12/23 0:30	0.1	101.388	27.155
08/12/23 0:45	0.095	101.341	27.055
08/12/23 1:00	0.086	101.25	27.105
08/12/23 1:15	0.08	101.191	27.005
08/12/23 1:30	0.072	101.108	26.905
08/12/23 1:45	0.068	101.07	26.704
08/12/23 2:00	0.057	100.97	26.554
08/12/23 2:15	0.061	101.002	26.453
08/12/23 2:30	0.055	100.944	26.403
08/12/23 2:45	0.046	100.857	26.353
08/12/23 3:00	0.042	100.815	26.253
08/12/23 3:15	0.038	100.778	26.152
08/12/23 3:30	0.049	100.888	26.202
08/12/23 3:45	0.06	100.991	26.202
08/12/23 4:00	0.053	100.928	26.202
08/12/23 4:15	0.058	100.974	26.202
08/12/23 4:30	0.046	100.863	26.102
08/12/23 4:45	0.062	101.012	26.102
08/12/23 5:00	0.05	100.896	26.052
08/12/23 5:15	0.065	101.046	26.102
08/12/23 5:30	0.055	100.949	26.102
08/12/23 5:45	0.059	100.99	26.152
08/12/23 6:00	0.058	100.972	26.102
08/12/23 6:15	0.071	101.102	26.001
08/12/23 6:30	0.067	101.065	25.901
08/12/23 6:45	0.071	101.099	25.901
08/12/23 7:00	0.066	101.05	26.001
08/12/23 7:15	0.061	101.004	26.001
08/12/23 7:30	0.079	101.181	25.951
08/12/23 7:45	0.078	101.172	26.102
08/12/23 8:00	0.081	101.206	26.052
08/12/23 8:15	0.081	101.199	26.303
08/12/23 8:30	0.082	101.21	27.405
08/12/23 8:45	0.078	101.175	28.653
08/12/23 9:00	0.079	101.185	28.902

08/12/23 9:15	0.078	101.172	28.454
08/12/23 9:30	0.08	101.195	28.802
08/12/23 9:45	0.08	101.192	28.603
08/12/23 10:00	0.077	101.157	27.655
08/12/23 10:15	0.086	101.251	27.455
08/12/23 10:30	0.085	101.243	27.355
08/12/23 10:45	0.085	101.241	27.255
08/12/23 11:00	0.083	101.217	27.205
08/12/23 11:15	0.08	101.191	27.305
08/12/23 11:30	0.078	101.168	28.205
08/12/23 11:45	0.077	101.165	28.354
08/12/23 12:00	0.07	101.092	28.155
08/12/23 12:15	0.072	101.116	27.905
08/12/23 12:30	0.069	101.087	28.504
08/12/23 12:45	0.069	101.082	28.554
08/12/23 13:00	0.065	101.049	28.603
08/12/23 13:15	0.062	101.016	28.354
08/12/23 13:30	0.064	101.033	28.055
08/12/23 13:45	0.06	100.995	28.155
08/12/23 14:00	0.056	100.956	28.254
08/12/23 14:15	0.056	100.957	28.304
08/12/23 14:30	0.055	100.95	28.205
08/12/23 14:45	0.052	100.915	27.855
08/12/23 15:00	0.055	100.943	27.805
08/12/23 15:15	0.053	100.931	27.506
08/12/23 15:30	0.055	100.943	27.506
08/12/23 15:45	0.055	100.949	27.255
08/12/23 16:00	0.052	100.918	27.105
08/12/23 16:15	0.056	100.952	26.805
08/12/23 16:30	0.054	100.935	26.805
08/12/23 16:45	0.055	100.95	26.403
08/12/23 17:00	0.06	100.999	26.303
08/12/23 17:15	0.065	101.048	26.202
08/12/23 17:30	0.06	100.993	26.001
08/12/23 17:45	0.055	100.947	25.75
08/12/23 18:00	0.051	100.911	25.649
08/12/23 18:15	0.066	101.054	25.649
08/12/23 18:30	0.063	101.029	25.549
08/12/23 18:45	0.066	101.058	25.549
08/12/23 19:00	0.076	101.154	25.498
08/12/23 19:15	0.063	101.028	25.498
08/12/23 19:30	0.074	101.137	25.498
08/12/23 19:45	0.089	101.284	25.448
08/12/23 20:00	0.08	101.191	25.347
08/12/23 20:15	0.088	101.267	25.448
08/12/23 20:30	0.078	101.177	25.498
08/12/23 20:45	0.083	101.221	25.448
08/12/23 21:00	0.094	101.331	25.498
08/12/23 21:15	0.076	101.154	25.498
08/12/23 21:30	0.077	101.16	25.498

08/12/23 21:45	0.087	101.256	25.448
08/12/23 22:00	0.096	101.348	25.498
08/12/23 22:15	0.088	101.273	25.448
08/12/23 22:30	0.085	101.239	25.448
08/12/23 22:45	0.086	101.25	25.448
08/12/23 23:00	0.079	101.186	25.398
08/12/23 23:15	0.091	101.296	25.448
08/12/23 23:30	0.089	101.279	25.448
08/12/23 23:45	0.074	101.137	25.498
09/12/23 0:00	0.083	101.223	25.498
09/12/23 0:15	0.071	101.108	25.498
09/12/23 0:30	0.08	101.194	25.498
09/12/23 0:45	0.074	101.129	25.398
09/12/23 1:00	0.081	101.203	25.398
09/12/23 1:15	0.083	101.221	25.448
09/12/23 1:30	0.066	101.051	25.498
09/12/23 1:45	0.066	101.057	25.498
09/12/23 2:00	0.084	101.234	25.498
09/12/23 2:15	0.066	101.051	25.498
09/12/23 2:30	0.064	101.033	25.448
09/12/23 2:45	0.061	101.005	25.498
09/12/23 3:00	0.079	101.178	25.549
09/12/23 3:15	0.081	101.199	25.448
09/12/23 3:30	0.082	101.21	25.448
09/12/23 3:45	0.065	101.048	25.347
09/12/23 4:00	0.076	101.154	25.246
09/12/23 4:15	0.079	101.177	25.246
09/12/23 4:30	0.072	101.108	25.246
09/12/23 4:45	0.084	101.235	25.297
09/12/23 5:00	0.067	101.067	25.196
09/12/23 5:15	0.071	101.1	25.146
09/12/23 5:30	0.079	101.185	25.095
09/12/23 5:45	0.068	101.07	25.045
09/12/23 6:00	0.091	101.297	24.994
09/12/23 6:15	0.073	101.119	24.944
09/12/23 6:30	0.09	101.292	24.994
09/12/23 6:45	0.083	101.218	25.045
09/12/23 7:00	0.094	101.326	25.246
09/12/23 7:15	0.096	101.346	25.649
09/12/23 7:30	0.087	101.258	25.8
09/12/23 7:45	0.095	101.338	26.102
09/12/23 8:00	0.103	101.414	26.453
09/12/23 8:15	0.096	101.344	26.654
09/12/23 8:30	0.104	101.422	26.855
09/12/23 8:45	0.101	101.398	27.055
09/12/23 9:00	0.103	101.422	27.105
09/12/23 9:15	0.106	101.442	27.855
09/12/23 9:30	0.102	101.409	28.254
09/12/23 9:45	0.104	101.425	28.205
09/12/23 10:00	0.104	101.425	29.151

09/12/23 10:15	0.105	101.439	29.3
09/12/23 10:30	0.105	101.435	29.101
09/12/23 10:45	0.1	101.384	28.753
09/12/23 11:00	0.104	101.428	28.653
09/12/23 11:15	0.101	101.396	28.802
09/12/23 11:30	0.098	101.372	29.449
09/12/23 11:45	0.095	101.342	29.697
09/12/23 12:00	0.085	101.245	29.399
09/12/23 12:15	0.086	101.253	29.548
09/12/23 12:30	0.082	101.211	29.051
09/12/23 12:45	0.08	101.194	29.051
09/12/23 13:00	0.079	101.183	29.101
09/12/23 13:15	0.074	101.13	29.001
09/12/23 13:30	0.072	101.114	29.101
09/12/23 13:45	0.072	101.114	29.101
09/12/23 14:00	0.068	101.077	28.952
09/12/23 14:15	0.068	101.075	28.802
09/12/23 14:30	0.066	101.057	28.753
09/12/23 14:45	0.069	101.08	28.753
09/12/23 15:00	0.062	101.018	28.802
09/12/23 15:15	0.066	101.056	28.703
09/12/23 15:30	0.061	101.007	28.504
09/12/23 15:45	0.064	101.035	28.504
09/12/23 16:00	0.06	100.993	28.404
09/12/23 16:15	0.063	101.021	28.005
09/12/23 16:30	0.06	100.996	28.205
09/12/23 16:45	0.064	101.038	28.005
09/12/23 17:00	0.062	101.013	27.605
09/12/23 17:15	0.065	101.043	27.655
09/12/23 17:30	0.065	101.044	27.405
09/12/23 17:45	0.066	101.055	27.105
09/12/23 18:00	0.067	101.067	26.855
09/12/23 18:15	0.072	101.11	26.704
09/12/23 18:30	0.072	101.114	26.604
09/12/23 18:45	0.071	101.101	26.554
09/12/23 19:00	0.075	101.146	26.504
09/12/23 19:15	0.074	101.134	26.453
09/12/23 19:30	0.076	101.156	26.403
09/12/23 19:45	0.078	101.173	26.403
09/12/23 20:00	0.077	101.165	26.303
09/12/23 20:15	0.08	101.189	26.353
09/12/23 20:30	0.079	101.182	26.303
09/12/23 20:45	0.08	101.188	26.303
09/12/23 21:00	0.08	101.187	26.253
09/12/23 21:15	0.076	101.157	26.202
09/12/23 21:30	0.077	101.162	26.152
09/12/23 21:45	0.077	101.16	26.052
09/12/23 22:00	0.08	101.193	26.001
09/12/23 22:15	0.078	101.17	26.001
09/12/23 22:30	0.075	101.142	26.001

09/12/23 22:45	0.079	101.18	25.901
09/12/23 23:00	0.077	101.163	25.951
09/12/23 23:15	0.081	101.197	25.901
09/12/23 23:30	0.079	101.178	25.851
09/12/23 23:45	0.075	101.143	25.8
10/12/23 0:00	0.086	101.254	25.649
10/12/23 0:15	0.068	101.076	25.599
10/12/23 0:30	0.07	101.093	25.599
10/12/23 0:45	0.071	101.103	25.549
10/12/23 1:00	0.071	101.102	25.498
10/12/23 1:15	0.062	101.011	25.498
10/12/23 1:30	0.059	100.982	25.498
10/12/23 1:45	0.058	100.975	25.448
10/12/23 2:00	0.056	100.957	25.398
10/12/23 2:15	0.071	101.105	25.347
10/12/23 2:30	0.056	100.957	25.398
10/12/23 2:45	0.062	101.013	25.599
10/12/23 3:00	0.068	101.07	25.599
10/12/23 3:15	0.064	101.033	25.448
10/12/23 3:30	0.071	101.105	25.347
10/12/23 3:45	0.054	100.939	25.347
10/12/23 4:00	0.059	100.982	25.498
10/12/23 4:15	0.065	101.042	25.599
10/12/23 4:30	0.065	101.047	25.599
10/12/23 4:45	0.07	101.098	25.549
10/12/23 5:00	0.066	101.051	25.498
10/12/23 5:15	0.056	100.96	25.549
10/12/23 5:30	0.072	101.111	25.649
10/12/23 5:45	0.057	100.966	25.549
10/12/23 6:00	0.07	101.092	25.549
10/12/23 6:15	0.069	101.08	25.549
10/12/23 6:30	0.074	101.135	25.7
10/12/23 6:45	0.086	101.251	25.75
10/12/23 7:00	0.074	101.134	25.901
10/12/23 7:15	0.074	101.131	26.052
10/12/23 7:30	0.08	101.194	26.303
10/12/23 7:45	0.077	101.163	26.504
10/12/23 8:00	0.084	101.229	26.654
10/12/23 8:15	0.085	101.241	26.654
10/12/23 8:30	0.084	101.23	26.704
10/12/23 8:45	0.093	101.315	26.654
10/12/23 9:00	0.093	101.317	26.754
10/12/23 9:15	0.089	101.276	26.955
10/12/23 9:30	0.091	101.299	27.005
10/12/23 9:45	0.089	101.284	27.405
10/12/23 10:00	0.093	101.323	27.655
10/12/23 10:15	0.093	101.316	28.205
10/12/23 10:30	0.093	101.318	28.603
10/12/23 10:45	0.088	101.272	29.25
10/12/23 11:00	0.084	101.235	29.845

10/12/23 11:15	0.087	101.262	30.093
10/12/23 11:30	0.085	101.238	30.439
10/12/23 11:45	0.08	101.19	30.637
10/12/23 12:00	0.077	101.167	30.637
10/12/23 12:15	0.075	101.142	30.489
10/12/23 12:30	0.074	101.132	30.241
10/12/23 12:45	0.07	101.09	30.489
10/12/23 13:00	0.064	101.033	30.489
10/12/23 13:15	0.063	101.03	30.291
10/12/23 13:30	0.062	101.011	30.192
10/12/23 13:45	0.06	100.999	29.796
10/12/23 14:00	0.068	101.072	29.647
10/12/23 14:15	0.059	100.989	29.845
10/12/23 14:30	0.058	100.973	29.597
10/12/23 14:45	0.057	100.964	29.349
10/12/23 15:00	0.057	100.964	29.349
10/12/23 15:15	0.055	100.951	28.902
10/12/23 15:30	0.059	100.983	28.802
10/12/23 15:45	0.056	100.957	28.603
10/12/23 16:00	0.055	100.942	28.404
10/12/23 16:15	0.057	100.97	28.354
10/12/23 16:30	0.058	100.98	27.955
10/12/23 16:45	0.059	100.988	28.105
10/12/23 17:00	0.058	100.972	27.855
10/12/23 17:15	0.058	100.971	27.506
10/12/23 17:30	0.06	100.994	27.205
10/12/23 17:45	0.065	101.045	27.155
10/12/23 18:00	0.063	101.025	27.005
10/12/23 18:15	0.067	101.064	26.704
10/12/23 18:30	0.068	101.076	26.704
10/12/23 18:45	0.071	101.099	26.704
10/12/23 19:00	0.076	101.154	26.604
10/12/23 19:15	0.079	101.183	26.604
10/12/23 19:30	0.077	101.163	26.504
10/12/23 19:45	0.085	101.236	26.403
10/12/23 20:00	0.081	101.199	26.303
10/12/23 20:15	0.081	101.203	26.202
10/12/23 20:30	0.087	101.259	26.152
10/12/23 20:45	0.085	101.239	26.001
10/12/23 21:00	0.087	101.257	26.052
10/12/23 21:15	0.084	101.229	26.052
10/12/23 21:30	0.09	101.289	26.202
10/12/23 21:45	0.085	101.237	26.202
10/12/23 22:00	0.09	101.287	26.102
10/12/23 22:15	0.084	101.231	25.901
10/12/23 22:30	0.083	101.219	25.851
10/12/23 22:45	0.093	101.315	25.8
10/12/23 23:00	0.092	101.307	25.7
10/12/23 23:15	0.092	101.312	25.649
10/12/23 23:30	0.09	101.287	25.549

10/12/23 23:45	0.094	101.324	25.448
11/12/23 0:00	0.083	101.217	25.498
11/12/23 0:15	0.086	101.246	25.549
11/12/23 0:30	0.074	101.137	25.498
11/12/23 0:45	0.085	101.242	25.347
11/12/23 1:00	0.086	101.25	25.196
11/12/23 1:15	0.076	101.155	25.045
11/12/23 1:30	0.082	101.212	24.994
11/12/23 1:45	0.083	101.221	24.893
11/12/23 2:00	0.069	101.086	24.742
11/12/23 2:15	0.077	101.158	24.641
11/12/23 2:30	0.075	101.146	24.641
11/12/23 2:45	0.072	101.117	24.59
11/12/23 3:00	0.07	101.093	24.54
11/12/23 3:15	0.072	101.109	24.489
11/12/23 3:30	0.066	101.055	24.388
11/12/23 3:45	0.066	101.058	24.287
11/12/23 4:00	0.069	101.08	24.237
11/12/23 4:15	0.066	101.05	24.186
11/12/23 4:30	0.067	101.061	24.136
11/12/23 4:45	0.067	101.06	24.085
11/12/23 5:00	0.072	101.109	23.984
11/12/23 5:15	0.071	101.108	23.933
11/12/23 5:30	0.073	101.126	23.984
11/12/23 5:45	0.073	101.12	23.984
11/12/23 6:00	0.076	101.155	23.984
11/12/23 6:15	0.079	101.177	23.984
11/12/23 6:30	0.081	101.2	23.984
11/12/23 6:45	0.084	101.229	24.237
11/12/23 7:00	0.08	101.19	24.54
11/12/23 7:15	0.093	101.323	24.843
11/12/23 7:30	0.089	101.282	25.095
11/12/23 7:45	0.102	101.407	25.549
11/12/23 8:00	0.101	101.4	26.303
11/12/23 8:15	0.092	101.313	27.405
11/12/23 8:30	0.096	101.346	29.25
11/12/23 8:45	0.094	101.326	30.538
11/12/23 9:00	0.093	101.317	32.066
11/12/23 9:15	0.096	101.346	32.703
11/12/23 9:30	0.096	101.345	32.605
11/12/23 9:45	0.098	101.364	32.703
11/12/23 10:00	0.098	101.371	31.771
11/12/23 10:15	0.095	101.343	32.36
11/12/23 10:30	0.095	101.342	32.899
11/12/23 10:45	0.092	101.312	33.388
11/12/23 11:00	0.092	101.307	33.437
11/12/23 11:15	0.089	101.281	33.729
11/12/23 11:30	0.086	101.248	33.192
11/12/23 11:45	0.082	101.214	33.29
11/12/23 12:00	0.081	101.204	33.485

11/12/23 12:15	0.077	101.163	33.339
11/12/23 12:30	0.077	101.164	33.534
11/12/23 12:45	0.075	101.14	32.703
11/12/23 13:00	0.074	101.134	31.18
11/12/23 13:15	0.071	101.104	31.081
11/12/23 13:30	0.068	101.07	31.574
11/12/23 13:45	0.065	101.045	31.918
11/12/23 14:00	0.063	101.024	31.574
11/12/23 14:15	0.065	101.044	31.328
11/12/23 14:30	0.062	101.018	31.081
11/12/23 14:45	0.061	101.002	30.736
11/12/23 15:00	0.059	100.985	30.736
11/12/23 15:15	0.06	100.998	30.489
11/12/23 15:30	0.055	100.949	30.637
11/12/23 15:45	0.059	100.99	30.291
11/12/23 16:00	0.059	100.982	29.746
11/12/23 16:15	0.059	100.986	29.3
11/12/23 16:30	0.058	100.979	28.902
11/12/23 16:45	0.063	101.027	28.653
11/12/23 17:00	0.064	101.038	28.653
11/12/23 17:15	0.064	101.038	28.304
11/12/23 17:30	0.064	101.033	27.755
11/12/23 17:45	0.068	101.074	27.506
11/12/23 18:00	0.066	101.056	27.155
11/12/23 18:15	0.068	101.07	27.005
11/12/23 18:30	0.073	101.12	26.905
11/12/23 18:45	0.077	101.164	26.805
11/12/23 19:00	0.078	101.17	26.554
11/12/23 19:15	0.078	101.174	26.453
11/12/23 19:30	0.081	101.198	26.253
11/12/23 19:45	0.081	101.197	26.202
11/12/23 20:00	0.086	101.255	25.951
11/12/23 20:15	0.085	101.245	26.001
11/12/23 20:30	0.089	101.284	25.951
11/12/23 20:45	0.09	101.286	25.8
11/12/23 21:00	0.089	101.279	25.75
11/12/23 21:15	0.086	101.25	25.7
11/12/23 21:30	0.09	101.294	25.901
11/12/23 21:45	0.083	101.219	25.851
11/12/23 22:00	0.094	101.332	25.8
11/12/23 22:15	0.086	101.254	25.649
11/12/23 22:30	0.088	101.27	25.599
11/12/23 22:45	0.089	101.282	25.599
11/12/23 23:00	0.087	101.263	25.498
11/12/23 23:15	0.085	101.241	25.297
11/12/23 23:30	0.099	101.377	25.246
11/12/23 23:45	0.077	101.167	25.045
12/12/23 0:00	0.093	101.318	24.893
12/12/23 0:15	0.084	101.231	24.843
12/12/23 0:30	0.072	101.117	24.843

12/12/23 0:45	0.086	101.246	24.742
12/12/23 1:00	0.072	101.118	24.641
12/12/23 1:15	0.071	101.105	24.59
12/12/23 1:30	0.082	101.212	24.489
12/12/23 1:45	0.077	101.165	24.439
12/12/23 2:00	0.067	101.06	24.338
12/12/23 2:15	0.07	101.093	24.287
12/12/23 2:30	0.07	101.09	24.186
12/12/23 2:45	0.066	101.054	24.085
12/12/23 3:00	0.066	101.053	24.034
12/12/23 3:15	0.065	101.046	23.984
12/12/23 3:30	0.065	101.045	23.933
12/12/23 3:45	0.064	101.038	23.882
12/12/23 4:00	0.063	101.023	23.984
12/12/23 4:15	0.063	101.022	23.933
12/12/23 4:30	0.066	101.056	23.933
12/12/23 4:45	0.064	101.033	23.933
12/12/23 5:00	0.066	101.054	23.832
12/12/23 5:15	0.066	101.057	23.731
12/12/23 5:30	0.064	101.033	23.68
12/12/23 5:45	0.068	101.073	23.68
12/12/23 6:00	0.07	101.093	23.781
12/12/23 6:15	0.07	101.09	23.933
12/12/23 6:30	0.072	101.118	24.136
12/12/23 6:45	0.074	101.137	24.237
12/12/23 7:00	0.076	101.153	24.439
12/12/23 7:15	0.082	101.214	24.59
12/12/23 7:30	0.085	101.236	24.792
12/12/23 7:45	0.092	101.313	25.196
12/12/23 8:00	0.077	101.161	25.297
12/12/23 8:15	0.086	101.246	26.905
12/12/23 8:30	0.084	101.231	29.597
12/12/23 8:45	0.088	101.268	31.328
12/12/23 9:00	0.085	101.237	32.703
12/12/23 9:15	0.082	101.211	33.681
12/12/23 9:30	0.085	101.238	34.216
12/12/23 9:45	0.082	101.212	34.605
12/12/23 10:00	0.083	101.221	34.265
12/12/23 10:15	0.082	101.206	34.702
12/12/23 10:30	0.08	101.187	33.485
12/12/23 10:45	0.082	101.215	32.213
12/12/23 11:00	0.082	101.214	32.703
12/12/23 11:15	0.083	101.224	32.507
12/12/23 11:30	0.076	101.157	32.703
12/12/23 11:45	0.082	101.209	32.213
12/12/23 12:00	0.077	101.159	31.82
12/12/23 12:15	0.071	101.106	32.801
12/12/23 12:30	0.071	101.107	31.328
12/12/23 12:45	0.066	101.057	31.475
12/12/23 13:00	0.064	101.033	31.82

12/12/23 13:15	0.064	101.033	31.82
12/12/23 13:30	0.059	100.987	31.328
12/12/23 13:45	0.055	100.948	31.475
12/12/23 14:00	0.055	100.951	31.672
12/12/23 14:15	0.055	100.943	31.525
12/12/23 14:30	0.056	100.952	31.328
12/12/23 14:45	0.053	100.929	31.278
12/12/23 15:00	0.055	100.944	30.686
12/12/23 15:15	0.051	100.912	30.489
12/12/23 15:30	0.054	100.94	30.39
12/12/23 15:45	0.055	100.949	29.845
12/12/23 16:00	0.057	100.964	30.093
12/12/23 16:15	0.056	100.956	29.597
12/12/23 16:30	0.056	100.952	29.001
12/12/23 16:45	0.06	100.997	28.603
12/12/23 17:00	0.06	101.001	28.155
12/12/23 17:15	0.064	101.034	27.805
12/12/23 17:30	0.062	101.02	27.355
12/12/23 17:45	0.062	101.015	27.105
12/12/23 18:00	0.067	101.069	27.205
12/12/23 18:15	0.064	101.03	27.005
12/12/23 18:30	0.068	101.072	26.805
12/12/23 18:45	0.068	101.071	26.754
12/12/23 19:00	0.071	101.105	26.453
12/12/23 19:15	0.073	101.121	26.102
12/12/23 19:30	0.085	101.236	25.851
12/12/23 19:45	0.077	101.158	25.7
12/12/23 20:00	0.083	101.225	25.599
12/12/23 20:15	0.084	101.232	25.398
12/12/23 20:30	0.078	101.173	25.347
12/12/23 20:45	0.083	101.223	25.246
12/12/23 21:00	0.092	101.312	25.146
12/12/23 21:15	0.09	101.289	25.146
12/12/23 21:30	0.087	101.257	24.994
12/12/23 21:45	0.089	101.279	24.944
12/12/23 22:00	0.082	101.215	24.893
12/12/23 22:15	0.093	101.322	24.792
12/12/23 22:30	0.094	101.333	24.792
12/12/23 22:45	0.093	101.323	24.843
12/12/23 23:00	0.096	101.344	24.792
12/12/23 23:15	0.078	101.173	24.792
12/12/23 23:30	0.091	101.302	24.691
12/12/23 23:45	0.078	101.174	24.59
13/12/23 0:00	0.083	101.219	24.54
13/12/23 0:15	0.074	101.128	24.59
13/12/23 0:30	0.08	101.192	24.641
13/12/23 0:45	0.066	101.058	24.54
13/12/23 1:00	0.071	101.104	24.54
13/12/23 1:15	0.072	101.112	24.641
13/12/23 1:30	0.079	101.181	24.641

13/12/23 1:45	0.072	101.117	24.59
13/12/23 2:00	0.067	101.06	24.59
13/12/23 2:15	0.065	101.047	24.54
13/12/23 2:30	0.058	100.981	24.388
13/12/23 2:45	0.055	100.951	24.338
13/12/23 3:00	0.062	101.013	24.287
13/12/23 3:15	0.06	100.998	24.136
13/12/23 3:30	0.061	101.001	24.034
13/12/23 3:45	0.057	100.966	23.984
13/12/23 4:00	0.059	100.982	23.933
13/12/23 4:15	0.054	100.94	23.882
13/12/23 4:30	0.059	100.985	23.832
13/12/23 4:45	0.064	101.035	23.781
13/12/23 5:00	0.063	101.022	23.68
13/12/23 5:15	0.061	101.009	23.629
13/12/23 5:30	0.067	101.061	23.629
13/12/23 5:45	0.069	101.083	23.629
13/12/23 6:00	0.077	101.159	23.68
13/12/23 6:15	0.074	101.136	23.68
13/12/23 6:30	0.077	101.166	23.731
13/12/23 6:45	0.084	101.23	23.781
13/12/23 7:00	0.083	101.221	23.882
13/12/23 7:15	0.09	101.286	24.237
13/12/23 7:30	0.085	101.238	24.893
13/12/23 7:45	0.084	101.233	25.196
13/12/23 8:00	0.098	101.366	25.8
13/12/23 8:15	0.101	101.395	27.805
13/12/23 8:30	0.107	101.46	28.205
13/12/23 8:45	0.108	101.467	29.3
13/12/23 9:00	0.104	101.423	31.377
13/12/23 9:15	0.101	101.402	33.144
13/12/23 9:30	0.099	101.374	33.924
13/12/23 9:45	0.102	101.41	34.119
13/12/23 10:00	0.102	101.407	33.729
13/12/23 10:15	0.102	101.412	32.948
13/12/23 10:30	0.1	101.391	32.066
13/12/23 10:45	0.1	101.39	31.918
13/12/23 11:00	0.098	101.365	30.489
13/12/23 11:15	0.098	101.37	29.647
13/12/23 11:30	0.09	101.294	30.736
13/12/23 11:45	0.09	101.286	30.983
13/12/23 12:00	0.085	101.238	30.785
13/12/23 12:15	0.084	101.227	30.884
13/12/23 12:30	0.076	101.15	32.016
13/12/23 12:45	0.074	101.133	32.066
13/12/23 13:00	0.076	101.154	30.933
13/12/23 13:15	0.072	101.115	31.081
13/12/23 13:30	0.073	101.124	30.835
13/12/23 13:45	0.07	101.094	30.785
13/12/23 14:00	0.064	101.032	30.884

13/12/23 14:15	0.063	101.027	30.489
13/12/23 14:30	0.063	101.026	30.835
13/12/23 14:45	0.061	101.004	30.933
13/12/23 15:00	0.058	100.979	30.736
13/12/23 15:15	0.056	100.958	30.489
13/12/23 15:30	0.06	100.997	30.39
13/12/23 15:45	0.058	100.978	30.241
13/12/23 16:00	0.051	100.909	30.241
13/12/23 16:15	0.057	100.971	30.192
13/12/23 16:30	0.057	100.964	30.093
13/12/23 16:45	0.062	101.015	30.093
13/12/23 17:00	0.059	100.984	29.895
13/12/23 17:15	0.063	101.022	29.796
13/12/23 17:30	0.041	100.806	29.151
13/12/23 17:45	0.066	101.059	28.852
13/12/23 18:00	0.059	100.989	28.802
13/12/23 18:15	0.06	100.999	28.703
13/12/23 18:30	0.062	101.016	28.703
13/12/23 18:45	0.064	101.038	28.653
13/12/23 19:00	0.068	101.072	28.653
13/12/23 19:15	0.066	101.056	28.703
13/12/23 19:30	0.065	101.045	28.703
13/12/23 19:45	0.073	101.127	28.504

चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
(भारत सरकार का उद्यम और आईओसीएल की समूह कंपनी)
Chennai Petroleum Corporation Limited
(A Government of India Enterprise and Group Company of IOCL)



EP&S:01:059

16.12.2023

To:

The Chairperson,
Tamil Nadu Pollution Control Board
76, Anna Salai,
Guindy,
Chennai – 600032.

Dear Madam,

Sub: TNPCB – Industries – M/s. Chennai Petroleum Corporation Limited, Refinery I, II and III, Manali Village, Thiruvottiyur Taluk, Chennai District – Directions under Section 33A of the Water (Prevention and Control of Pollution) Act, 1974 as amended – Issued – Regarding.

Ref: Proceedings No.T6/TNPCB/12753/W/2023, Dated: 11.12.2023

CPCL is in receipt of the letter referred above and action taken on the observations & subsequent directions given by TNPCB during inspection in CPCL on 09.12.23 is attached for your kind perusal:

P. KANNAN
Director (Operations)

Copy To : Member Secretary, TNPCB, Guindy
Joint Chief Environmental Engineer, TNPCB, Arumbakkam.

Action taken on the observations by TNPCCB team inside CPCL on 09.12.23

TNPCCB Observation No.1

The unit was partially in operation. Out of three refineries, only one refinery was in operation and the other two were not in operation due to maintenance. All secondary units were in operation.

CPCL's Response:

CPCL would like to submit that out of 3 Refineries, only one Refinery was in operation. Due to heavy downpour caused by Cyclone Michaung followed by sudden release of water from nearby reservoirs, the water level inside Refinery increased above 1 meter.

Under these unforeseen circumstances, CPCL kept one refinery in operation even under adverse conditions to ensure uninterrupted supply of fuel to the State.

Other 2 Refineries were taken on circulation considering the alarming water level inside the Refinery.

TNPCCB Observation No.2

The unit authorities informed that the unit was inundated by the floods in most of the places causing 3 to 4 feet depth of water level on 04.12.2023 and 05.12.2023.

CPCL's Response:

Agreed.

TNPCCB Observation No.3

During the inspection, it was also noticed that the flood water was completely drained. However, patches of oil deposits were found on the either side of the storm water drains and kerb side of internal roadways.

CPCL's Response:

Entire Manali Industrial Area, including CPCL, was inundated and the water level in Buckingham Canal also increased significantly.

TNPCCB Observation No.4

An oil slick was found in the Storm Water Pond C and also at the connect point of the Storm water Pond A from which the outlet to the Buckingham canal from the unit was found. At this point, a sample was taken for analysis.

CPCL's Response:

Small oil slick found in the Storm Water Pond C and connect point of Storm Water Pond A was removed. Pond C & A are having water undercut baffle type

oil catcher systems to trap the oil continuously. In addition to the above, any oil ingress in the storm pond is trapped in the gravity oil separators & the oil thus trapped is confined to a small area & is recovered through gully suckers / ejectors.

TNPCB Observation No.5

It was observed that the Storm Water Pond A and Storm Water Pond provided for Refinery III were filled with oil slick. At these points, samples were taken for analysis.

CPCL's Response:

Due to the heavy inundation and sudden release of water from reservoirs, minor Oil traces from Contaminated Rain Water System reached the Storm Pond and is being recovered through Gully Suckers and Ejectors.

TNPCB Observation No.6

Mechanism for removal of oil in both Ponds A and C was not in operable condition.

CPCL's Response:

Pond C & A are having water undercut baffle type oil catcher systems which are in operation. In addition to the above, any oil ingress in the storm pond is trapped in the gravity oil separators & the oil thus trapped is confined to a small area & is recovered through gully suckers / ejectors. Recovered oil is handled through a closed Slop oil recovery system and reprocessed with Crude Oil.

TNPCB Observation No.7

All components of the ETP were in operable conditions.

CPCL's Response:

Noted & Agreed.

TNPCB Observation No.8

It was reported by CPCL that during the excessive flow of rainwater, the rainwater mixed with oil was pumped into the Buckingham canal.

CPCL's Response:

CPCL would like to clarify that the rain water alone was pumped & not the oil mixed water. Pumps suction are located at the bottom of the ponds and escaping of oil through pumping is not possible.

As explained earlier, the continuous release of water from Poondi & Puzhal reservoirs in the outside canal led to increase in levels within the Refinery. CPCL had informed the State authorities of the extremely dangerous levels of water creating severe flooding, which has never been experienced by CPCL.

In a normal scenario, the excess surface run-off water from refinery is connected to Buckingham Canal for handling the water during heavy rains via Storm water drain. However, the refinery experienced unprecedented flooding of upto 3 to 4 feet, which occurred due to large water release from reservoirs. Due to high water levels in the refinery, there is a possibility of co-mingling of flood water with traces of oil in the refinery, while getting drained through the Canal.

TNPCB Observation No.9

Oil separator system provided for the storm water installed at ground level was flooded on 04.12.2023 and 05.12.2023

CPCL's Response:

Unforeseen flooding in the refinery was caused by the heavy downpour & sudden release of water from reservoirs. The problem was intensified as the Buckingham Canal level also increased. Due to the above, water level inside Refinery increased to more than 1 m.

TNPCB Observation No.10

Oil slick formed in the Ennore Creek, Buckingham canal and oil deposits within the unit's premises were found to be identical in terms of odour, colour and texture. Hence, it is observed that the oil slick in Ennore creek and Buckingham canal was caused by the oil-mixed effluent discharged by CPCL during floods.

CPCL's Response:

As explained earlier, the continuous release of water in the outside canal led to increase in levels within the Refinery. CPCL had informed the State authorities of the extremely dangerous levels of water creating severe flooding, which has never been experienced by CPCL.

In a normal scenario, the excess surface run-off water from refinery is connected to Buckingham Canal for handling the water during heavy rains via Storm water drain. However, the refinery experienced unprecedented flooding of upto 3 to 4 feet, which occurred due to large water release from reservoirs. Due to high water levels in the refinery, there is a possibility of co-mingling of flood water with traces of oil in the refinery, while getting drained through the Canal.

However, it may be noted that there are around 25 petrochemical, fertilizer and other industries in Manali area along with many Small industries (many of which handle/deal with fuel oil, lubricants and other oils) which were also completely inundated due to flood water. During site inspection by TNPCB, floating oil was

observed in the Buckingham canal upstream of CPCL. Hence, other industries are also likely to have contributed to the Oil slick.

TNPCB Observation No.11

Oil mixed water has entered into the nearby habitations. It was caused damage to the houses and household articles.

CPCL's Response:

Although the Oil spill cannot be attributed to CPCL alone, as a responsible Corporate citizen, CPCL has initiated relief measures for the affected people, in consultation with State authorities. CPCL is providing essential grocery & other items to the people and conducting Medical camps in the affected areas, apart from cleaning of the houses in coordination with State authorities.

TNPCB Observation No.12

Oil spillage has adversely affected the livelihood of the fishermen who depends on fishing in affected areas.

CPCL's Response:

The Oil spill cannot be attributed to CPCL alone, as the entire Manali industrial belt experienced severe flooding during the Cyclone and subsequent discharge of water from reservoirs.

TNPCB's Directions & CPCL's Response

- a) M/s. CPCL shall identify hotspots in Buckingham Canal, Ennore Creek and adjoining area where the oil deposits / oil slick are stagnated and take necessary remedial measures on war footing basis.

CPCL's Reply:

Complied.

CPCL, as a major industry of the belt has taken the lead for inspection of the areas and identified hot spots requiring attention. Remedial measures have been undertaken on war footing basis.

- b) M/s. CPCL and its secondary units and terminals shall ensure that all pipelines (raw materials and products) and tanks are intact with no leakage. If CPCL is found to discharge oil containing water/polluted water against the norms set out for industries under provisions of the Water (Prevention and Control of Pollution) Act, 1974, their operations are liable to be suspended.

CPCL's Reply:

Complied.

CPCL clarifies again that Tanks & Pipelines in CPCL are intact and there are no leaks.

- **CPCL is designed to withstand waterlogging, with storm water systems designed to handle the highest levels of rainfall. In previous instances, including cyclones Vardah, Gaja, Nivar and the 2015 floods, CPCL has demonstrated its capability to prevent release of water contaminated with oil.**
 - **Cyclone Michaung brought 36 hours of incessant rain, causing severe flooding in CPCL Manali Refinery. The storm water system of CPCL was handling this flood situation, however, the discharge of 48,000 cusecs of water from Poondi and Puzhal reservoirs worsened the situation. The District administration was promptly informed about the situation and CPCL management requested to regulate the discharge of water from the reservoirs to prevent complete flooding of the refinery.**
 - **All the industries in the Manali area were also affected severely by flooding.**
 - **Level in canal also increased around 1mt above normal storm water level causing reverse flow. Due to high water levels in the refinery, there is a possibility of co-mingling of flood water with traces of oil in the refinery, while getting drained in the Canal.**
- c) M/s. CPCL shall also be liable to pay environmental compensation for any damages caused in contravention of the extant provisions under the Water (Prevention and Control of Pollution) Act, 1974.

CPCL's Reply:

As explained in previous paras, there was no violation from CPCL's side. The incident occurred due to uncontrolled release of water from reservoirs without prior notice or warning for suitable remedial measures. This is an apt condition of Force Majeure for CPCL.

- d) M/s. CPCL shall also be liable to pay compensation to the families adversely impacted due to the oil spillage including the loss of livelihood.

CPCL's Reply:

CPCL, as a responsible corporate citizen has taken the lead in providing relief measures. Mobile medical units have been deployed in villages near Ennore creek, and medicines handed over. Rice, groceries and other

essential items have been handed to over 6000 families through the nodal officer. Cleaning of houses in affected areas has been initiated in coordination with State authorities.

- e) M/s. CPCL shall carry out a Leak Detection & Repair Study (LDAR) with the help of a reputed technical institution and furnish the same to the Board immediately.

CPCL's Reply:

Complied.

CPCL is carrying out Leak Detection & Repair Study every year & submitting reports regularly.

- f) M/s. CPCL shall undertake a comprehensive mapping study with a reputed technical institution to identify oil spread areas and furnish the report with Action Plan to the Board immediately.

CPCL's Reply:

CPCL is in the process of lining up a reputed agency to carry out oil spill mapping. Target for completion of Job: Jan'24

- g) M/s. CPCL is directed to ensure that no such occurrence happens in future

CPCL's Reply:

Will be ensured. However, infrastructure development to avoid flooding of refinery w.r.t. release of water from reservoirs shall be further taken up with WRD / State Government.

चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
(भारत सरकार का उद्यम और आईओसीएल की समूह कंपनी)
Chennai Petroleum Corporation Limited
(A Government of India Enterprise and Group Company of IOCL)



EP&S:01:059

17.12.2023

To:

The Chairperson,
Tamil Nadu Pollution Control Board
76, Mount Salai,
Guindy,
Chennai – 600032.

Dear Madam,

Sub: TNPCB – Industries – M/s. Chennai Petroleum Corporation Limited – Oil slick in Buckingham Canal & Ennore Creek – Directions issued under Section 33A of the Water (Prevention and Control of Pollution) Act, 1974 as amended – Action Taken Report called for - Reg

Ref: Letter No.T6/TNPCB/F.12753/W/2023, Dated: 14.12.2023

Details called for vide the above referred letter are furnished below:

TNPCB Letter Point No.1

Undertake a complete estimation of oil spill in the area with the help of Experts, CPCL and Coast Guard.

CPCL's Response:

CPCL is coordinating with expert agency / Coast Guard to ascertain the quantity of Oil spill in the area. The details will be shared.

TNPCB Letter Point No. 2

Ensure the deployment of sophisticated machineries and specialized equipments.

CPCL's Response:

CPCL has deployed various machineries & equipment such as Oil skimmers, containment booms, absorption booms, Oil absorption pads, Gully sucker, water jet cleaner etc.

TNPCB Letter Point No. 3

Ensure that specialized sea cleaning agencies are immediately deployed with trained and well equipped man power.

CPCL's Response:

CPCL has deployed following professional agencies to remove the oil from Ennore Creek area:

- *M/s Viraj Sea clean Enterprises Pvt Limited*
- *M/s Neo Will Win*
- *M/s Sea Care Marine*
- *M/s Vens Hydroluft*

Yours faithfully,
for Chennai Petroleum Corporation Limited,



P. KANNAN
Director (Operations)

Copy To : Member Secretary, TNPCB, Guindy
Joint Chief Environmental Engineer, TNPCB, Arumbakkam.

चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
(भारत सरकार का उद्यम और आईओसीएल की समूह कंपनी)
Chennai Petroleum Corporation Limited
(A Government of India Enterprise and Group Company of IOCL)



EP&S:01:059

30.12.2023

To:

Additional Chief Environmental Engineer -1,
Tamil Nadu Pollution Control Board
76 Mount Road Guindy
Chennai 600032

Sub: **ATR to Minutes of the 2nd Meeting of the High Level Committee on oil spillage
in Ennore Creek in the wake of cyclone Michaung held on 13.12.2023**

1. N95 masks shall be provided to the workers carrying out oil removal activities. Masks and gloves should be given to the workers on daily basis.

CPCL's Reply:

All required Personnel Protective Equipment (PPE) have been distributed on daily basis, based on requirement. Around 3000 N95 masks have been distributed so far to the local workforce at Ennore creek area for Safety of the workers.

2. Booms have been provided only in the mouth of the river which shall be covered to the entire width of the river. CPCL should increase the number of booms to contain the oil spill.

CPCL's Reply:

In addition to the 300m wide boom at the mouth of the river, Containment booms of another 1200m have been installed at 7 different locations over a distance of more than 3km from mouth of river.

The installation of booms is being continuously reviewed and implemented as per site requirements.

3. 5-6 Medical Camps have been organized. Since, Eyes/ Skin (Lung issues) are existing in the area, the medical teams with Dermatologist/ Pulmonologist should be stationed in every Kuppam / Village along with Mobile Medical teams. Further, Veterinary teams is to be organized in order to attend to the affected pet animals/ birds.

CPCL's Reply:

Three mobile medical units with requisite medicins, Doctors and Paramedics teams have been stationed by CPCL in Ennore Creek and nearby villages, benefiting approximately 847 individuals as of December 26, 2023.

4. Elementary School near Ennore Kuppam has to be temporarily shifted.

CPCL's Reply: No actions for CPCL

5. MD, CPCL to be informed to engage experts to assess the quantity of oil sludge spilled and assured to furnish the same. Additionally, oil skimmer has been engaged to collect oil floated on water bodies.

CPCL's Reply:

CPCL is coordinating with expert agency / Coast Guard to ascertain the quantity of oil spill in the area. The details will be shared.

A total of 6 Nos of oil skimmers arranged on emergency basis from Mumbai, Paradip and Chennai have been deployed for oil slick removal activities.

6. As per Perambulation Report, 638 Nos. of boats and 453 Nos of nets (5 — 7 Kg each) are damaged.

CPCL's Reply:

CPCL has already contributed on 19.12.2023 to the TamilNadu State Disaster Management Authority, as per the advise from Additional Chief Secretary, Commissioner of Revenue Administration & State Relief Commissioner.

7. It was informed that the boats damaged by oil spillage can be cleaned by Kerosene and hot water. As per GCC assessment, 5858 Households from 120 streets are affected due to the oil spillage.

CPCL's Reply:

Boats are being cleaned manually and also using Hydro-jetting machines. House cleaning of affected areas is being carried out with sufficient manpower equipped with Hydro jetting machines and Wet and dry Vacuum Machines to expedite the work.

8. An agency can be engaged to carry out the cleaning of boats/residences and the expenses shall be borne by CPCL.

CPCL's Reply:

Same as Reply to Point No. 7.

9. The entire remedial work shall be expedited and completed as early as possible by engaging more trained manpower by CPCL.

CPCL's Reply:

Clean up activity at Ennore creek has been executed by the four professional agencies engaged by CPCL. Around 128 boats with 512 manpower have been deployed to expedite the work. CPCL has been continuously involved in the clean-up activities with trained manpower and equipment arranged on emergency basis to expedite the clean-up activities.

Due to these efforts the oil recovery work in the aftermath of oil spillage in the Ennore Creek area was completed on 20.12.2023 (refer DOE&CC press release No. 2573).

CPCL is working on war footing to clean-up and clear the mangrove areas in coordination with TNPCB & State authorities.

10. CPCL shall undertake a complete estimation of oil spill in the area with the help of Experts & Coast Guard and report on Oil Spillage with Mitigation . Plan shall be submitted.

CPCL's Reply:

Same as Reply to Point No.5

11. More number of PPE kits (Masks, Gloves & Gumboots) shall be procured and provided to the workers.

CPCL's Reply:

It is being ensured that all workmen involved in the clean-up activities are using requisite Personal Protective Equipment. All required Personnel Protective Equipment (PPE) are being distributed on daily basis, based on requirement. Around 1300 gloves, 3000 masks, 750 gumboots, 500 Helmets, 900 Boiler Suits and 700 goggles have been distributed to the local workforce at the Ennore creek area for Safety of the workers.

12. Operations shall begin by 7 AM everyday till sunset

CPCL's Reply:

CPCL is making all efforts to get the jobs started at 07:00 am as discussed in the said meeting. CPCL would also like to clarify that there were practical issues related to late arrival of boatmen and hiring of boats on rotation basis from the local fishing hamlets. CPCL officials under the guidance of state authorities are making all out efforts to start the activities as early as possible in the morning considering the limited working hours available for the day.

13. Additional sophisticated machineries and specialized equipment viz., booms, skimmers (5 Nos.) and gully suckers shall be deployed for speedy collection of oil by CPCL.

CPCL's Reply:

Containment booms of around 1500 mts and a total of 6 Nos of oil skimmers were arranged on emergency basis from Mumbai, Paradip and Chennai, and have been deployed for oil slick removal activities. The installation of booms is being continuously reviewed and implemented as per site requirements. Also Resources deployed to clean the shore area using mechanized methods include JCB (7 nos.), Gully Sucker (5 nos.), Hydras (3 nos.), Tractor trailer (2 nos.), Dumpers (15 nos.), Poclain (5 nos.).

14. CPCL shall provide lunch and potable water to the workers involved in oil clearing activities.

CPCL's Reply:

CPCL has arranged for food, refreshments and drinking water to the people involved in the clean-up activities at different locations where the activities are being carried out.

15. An agency shall be engaged for cleaning/ painting/ whitewashing of affected boats and residences. CPCL shall bear the entire expenditure,

CPCL's Reply:

Same as Reply to Point No. 7.

16. More Health teams shall be deployed with Dermatologist/ Pulmonologist for health checkup of affected residents.

CPCL's Reply:

Same as Reply to Point No.3

17. Fire & Rescue Vans shall be engaged for safety of workers.

CPCL's Reply: Adequate Safety precautions were taken during the clean-up activities.

PPE were distributed as required. Ambulance was deployed at site.

Anil Sahni 30/12/23
(Anil Sahni)

CGM (TS)

Proposal to develop Regional and Local Drainage Master Plan for the Manali Industrial Area to mitigate flooding

Balaji Narasimhan, B.S. Murty, and Ligy Philip

Department of Civil Engineering, IIT Madras

Background:

Manali is a major industrial and economic hub of Chennai housing some of the largest industries in the region such as: Chennai Petroleum Corporation Limited (CPCL), Madras Fertilizers Limited (MFL), Manali Petro Chemical Ltd (MPL), Tamil Nadu Petroproducts Limited (TPL), Sriram Fibres Ltd (SRF), Madras Rubber Factory (MRF), Kothari Petrochemicals Ltd, Balmer Lawrie & Co, Toshiba JSW Power Systems Private Limited and many more. This area is also endowed with many water bodies, and macro drains such as Buckingham canal, Kosasthaliyar river and Redhills surplus course. Despite the access to the waterbodies for effective flood drainage, the area is experiencing frequent flooding due to lack of a drainage master plan for the region, encroachments and bottle necks in the macro drains and inadequate storm water drainage system.

The Manali Industrial Area got heavily flooded during the floods of 2015. It got heavily flooded again during November 2021. Frequent flooding brings this industrial hub to a grounding halt for several days leading to several hundreds of crores of loss to the economy. Further, most of the industries in this region also handle hazardous chemicals; hence, any flooding in this region poses a significant risk of environmental exposure of the hazardous chemicals.

In response to the flooding of 2021, Sri P. Premapriyan Secretary, Manali Industrial Association (MIA), VP - Operations, KPL requested IIT Madras to visit the flood affected areas and give a proposal for flood mitigation. In response to this request and following a virtual meeting on Nov. 26, 2021, Profs. Balaji Narasimhan and B.S. Murty visited the flood affected areas of the Manali Industrial Estate on December 4, 2021. At the end of the site visit, a detailed presentation of the flooding problem was also made by the Dr. Palanivelu Rajmohan, Associate General Manager - Health, Safety & Environment (HSE), of Toshiba JSW Power Systems Pvt. Ltd.

Observations from the Site Visit:



Photo 1: Stormwater drain outfall from Kothari, MGR nagar, Periyar Nagar, & CPCL ETP plant, Balmer Lawrie leading up to B canal in the East near CPCL. The drain is not completely connected to the B. Canal. The temporary pipe culvert for construction purposes does not appear to be adequate



Map 1: New SWD layout observed in the area. SWD outfall is disconnected from the B. Canal. There are several obstructions for the outfall due to bridge construction and the CPCL pipelines



Photo2: CPCL pipeline networks at the SWD outfall location. The construction of new bridge has completely disconnected the drainage from this region. Further, the Buckingham canal flow capacity is severely compromised due to the bridge construction



Map 2: SWD outfall disconnected from the B. Canal. B. Canal is severely obstructed



Photo 3: The Breach near TTRO plant for enabling discharge of flood waters



Map 3: Site of the breach to dispose the flood waters from Sathangadu lake through Kodungaiyur and ultimately into the B. Canal south of CPCL.



Photo 4: Reduced width of the Redhills surplus channel at the highway bridge site on Manali High Road (North of MFL). This may be one of the reasons for MFL getting flooded



Map 4: Site of the bridge at Manali High Road across the Flood carrier from Red Hills



Map 5: Constricted bridge site and causeway with inadequate capacity may be the reason for flood jumping the channel and inundating SPL and JSW.

The photos from the site visits and the maps from the satellite imagery are presented only for illustrating the variety of obstructions in the region. They are not meant to be comprehensive for effective flood removal. We observed several such pressure points along the flood carrier as well as obstructions to the local drainage across the region.

Any ad-hoc measures to address these flooding and water logging issue for each site locally without considering the regional issues could at best be only a band-aid measure. Further, the flooding may unintentionally be transferred to some other site. Hence, there is a need for a thorough investigation / study by considering the regional and local flooding / drainage issues together for developing a comprehensive and sustainable flood and storm water drainage master plan.

Methodology to develop a Regional and Local Drainage Master Plan

The flooding in a region could be due to two primary reasons:

1. Flood discharge from reservoirs and lakes and the capacity of the flood carrier is overwhelmed due to encroachments, siltation, and obstructions thus jumping the course and inundating the near by areas (e.g. case of SPL, MFL and JSW). This is called Fluvial flooding.

2. Lack of local storm drainage, storm drainage with inadequate capacity, obstructions to local drainage (e.g. case of Kothari, Balmer and Lawrie, and CPCL). This is called Pluvial flooding.

The regional drainage plan will look at flood carrier capacity needed along the different sections of the macro canals (Redhill surplus, B. Canal and Kosasthaliyar river to the North) and size / alignment for arterial storm water drains that would dispose off into these macro drains. Further, the need for flood levees, width at bridge sites, tidal influences, and obstructions until Ennore creek would also be studied.

The local drainage plan will look at the SWD feeder drain alignment and size for different localities (for the roads outside the industry premises) considering any future expansion and growth into account.

The site level drainage plan within each industry premises is also important for outfall into the feeder SWD. But this is not within the scope of this proposal.

For carrying out such a study, we need to adopt a watershed / catchment-based approach for design and sizing of the storm water drains. Hence, a good digital elevation model (DEM) is needed for capturing the natural and man-made terrain features that may facilitate or obstruct the flow of water. The digital elevation models available from the open sources have a coarse spatial resolution (> 30m) and have poor vertical accuracy (greater than $\pm 2m$). As the terrain in this region is very flat, it is important to capture the terrain features in this area (approx. 25 to 30 sq.km) with greater accuracy. The terrain data could be captured accurately with a photogrammetric drone survey merged with terrain-based LIDAR survey and RTK systems. This survey will provide digital elevation model of the terrain at a spatial resolution of < 1m with a vertical accuracy of < 15cm at critical places to be used as a basis for the drainage master plan.

In addition to the DEM, we may need to collect soil samples and conduct infiltration tests to assess the drainage characteristics of the soil. The cross-section survey of the flood carried canal, B. Canal, and the kosasthaliyar river would have to be carried out to design levees or to suggest widening at the bridge sites. The master plan will study design rainfall of 2yr, 5yr, 10yr, 25yr, 50yr and 100yr return periods so that ultimately the design could for an acceptable risk level. The macro canals should typically have a drainage capacity to carry a flood from 25yr rainfall event, whereas the SWDs would typically be designed for 2 yr return period events. However, considering the importance of this industrial hub, we may need to ensure that the macro canals and flood carries are able to safely carry 50 year flood events, whereas the SWDs are able to safely carry and dispose of 5 yr or 10 yr return period events.

The alignment, hydrologic and the hydraulic sizing of the SWDs, improvements needed at the macro canal would be designed using hydrologic / hydraulic and stormwater drainage models.

Another important aspect regarding stormwater runoff from the Industrial area is that it is highly prone to non-point source pollution loads of Chemicals and oil spills with potential to contaminate the receiving water bodies and polluting the fragile Ennore Creek ecosystem. Ideally on-site and instream pollution abatement & treatment measures should also be a part of such a stormwater and flood drainage master plan demonstrating Environmental stewardship of the industries. However, at the moment this aspect is not included in this master plan proposal. If there is interest from the Manali Industrial Association, we can develop this component and include it in the proposal along with appropriate budget provisions.

Budget

Item	Budget (INR in Lakhs)
Drone Survey	15.00
Terrestrial LIDAR Survey	15.00
RTK survey, Bathymetry, Cross section	15.00
Soil Survey for infiltration properties	4.50
Data Procurement from other agencies	5.00
Man Power: Modeler (2 no. for 6 months)	7.20
Man Power: Field Staff (2 no. for 6 months)	3.60
Professional consultancy charges for IIT Madras faculty	10.00
Contingencies (5%)	3.77
Sub-total	79.07
Institutional Overheads (20%)	15.81
Total	94.88
GST (18%)	17.08
Grant Total (including GST)	111.96

The budget for undertaking this study by IIT Madras is INR 112 Lakhs for a project duration of 6 months.

Project Duration (6 months):

Project Inception & Mobilization: 1 month

Drone and Field Survey: 1 month

Hydrologic and Hydraulic Modelling: 2 months

Preliminary Drainage plan: by 4th month

Final Flood and Drainage master plan: by 6th month

Alternatively, you may take-up the study with some other consulting agency and IIT Madras can handhold the design process and vetting of the final design and master plan. The consolidated professional charges for hand-holding the design process and vetting would be INR 25 lakhs.

**BEFORE THE NATIONAL GREEN
TRIBUNAL
SOUTHERN ZONE, CHENNAI
OA No. 180 of 2023 (SZ)**
IN THE MATTER OF :
Tribunal on its own motion SUO MOTU
... Applicant
Vs
The District Collector and Ors.
... Respondents

**INDEX TO ADDITIONAL TYPED SET OF
PAPERS – II**

**M/s. M VIJAYA MEHANATH
S SARAVANAN
R SURESH
E KARTHIKEYAN
COUNSEL FOR 7TH RESPONDENT**