Banksia Road Dardanup Landfill

Leachate Balance Assessment Report

Cleanaway Solid Waste

12 March 2021
Ref: 201515R004

Building exceptional
outcomes together

Document History and Status

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Executive Summary

Tonkin has been engaged by Cleanaway to prepare a leachate balance assessment for the Dardanup Landfill. This leachate balance has been prepared to assist Cleanaway in determining their leachate management measures at Dardanup Landfill. This modelling exercise has been undertaken to provide an up to date estimate of the leachate production and the capacity of existing infrastructure to dispose of leachate.

Cleanaway have measured levels of leachate in their ponds for the purposes of estimating the actual evaporation from the ponds between November 2020 and February 2021. These observations were used to reflect on the outcomes of the modelling and to discuss the performance of the leachate management system under the current operational scenario at the site.

The balance model found that leachate generation exceeds the disposal capacity of the existing infrastructure in all stages of the site's operation and closure. The excess leachate volumes during the Cell 8 operation were modelled as 38,550 m^3/annum. The balance model also estimated the leachate excess during the closure stage as 14,840 m^3/annum.

The site data provided suggest that a balance between leachate generation and disposal is being achieved for the time between November 2020 and February 2021. These observations were not in agreeance with the volumes of excess leachate modelled. This may be explained by limitations of the modelling tools used, as it would appear based on the site observations that the leachate management system is currently managing the volumes of leachate being generated at the site.

Should it become evident that the leachate management system is not coping with the leachate volumes generated or leachate volumes used for operations need to be reduced, other measures should be implemented to reduce the excess leachate volumes. The modelling found that covering the ponds during the wettest parts of the year may be an effective measure to reduce leachate excess. These measures could include measures to reduce leachate generation or increase leachate disposal capacity. Specific measures have been discussed in the report but include both operational measures and engineering solutions.

Contents

Project: Banksia Road Dardanup Landfill | Leachate Balance Assessment Report
Client: Cleanaway Solid Waste
Ref: 201515R004

Executive Summary iii

1 Introduction 1

1.1 Purpose 1

2 Modelling Methodology 2

2.1 Methodology 2

2.2 Basis of Model 2

2.3 Changes to site since 2015 6

3 Site Observations 7

3.1 Overview 7

3.2 Recorded Site Data and Observations 7

4 Results and Discussion 12

4.1 Leachate Disposal Capacity 12

4.2 Leachate Generation 13

4.3 Leachate Balance 14

4.4 Covered Pond Scenario 17

4.5 Discussion 18

5 Conclusion 20

Tables

Table 2.1 Active Cell Staging 3
Table 2.2 Rehabilitation Cell Staging 4
Table 2.3 HELP Model Outputs 6
Table 3.1 Approximate Daily Evaporation 8
Table 3.2 Total Evaporation Observed 9
Table 3.3 Pan Evaporation Comparison 10
Table 4.1 Leachate Disposal Capacity 12
Table 4.2 Leachate Generation by Cell Staging 13
Table 4.3 Leachate Generation by Rehabilitation Staging 13
Table 4.4 Leachate Excess by Rehabilitation Stage 14
Table 4.5 Covered Pond Disposal Scenario 17
Table 4.6 Covered Pond Leachate Balance 17

Figures

Figure 4.1 Leachate Balance - Method 1 15
Figure 4.2 Leachate Balance - Method 2 16

Appendices

Appendix A – Detailed Modelling Methodology
Appendix B – Detailed Staging
Appendix C – HELP Modelling Outputs
Appendix D – Leachate Balance Modelling Results

1 Introduction

Tonkin has been engaged by Cleanaway to prepare a leachate balance assessment for the Dardanup Landfill (the Site). The site is located approximately 6 km from Dardanup, WA. The leachate balance is being undertaken to compare the leachate generation across the life of the site with the disposal capacity and to quantify any deficit in disposal capacity. The leachate balance has been undertaken for the solid waste disposal operations at the site and does not consider the separate liquid waste disposal cells. This report has been prepared to summarise the modelling conducted, the results and our conclusions from the assessment.

A previous leachate balance assessment was prepared for the site in 2015[1], to estimate the leachate generation across the lifetime of the site. This updated leachate balance has been prepared to account for changes to the site, including the construction of new landfill cells, new leachate ponds and the installation of sprinklers in the leachate ponds.

Cleanaway have measured levels of leachate in their ponds for the purposes of estimating the actual evaporation from the ponds between November 2020 and February 2021. These observations and how they reflect upon the modelling undertaken have been discussed in this report.

1.1 Purpose

This document has been prepared to assist Cleanaway in determining their leachate management measures at Dardanup Landfill, as well as for whole of life costing purposes for their operations at Dardanup. This modelling exercise has been undertaken to provide an up to date estimate of the leachate production and the capacity of existing infrastructure to dispose of leachate.

[1] Golder Associates (2015). Banksia Road Landfill Leachate Volume Estimation, Revision 0, 25 June 2015, Ref: 1523088-013-R-Rev0

2 Modelling Methodology

2.1 Methodology

The methodology used for the leachate modelling is based upon the method described in Chapter 7.2 of the Landfill Site Design Manual published by the Irish EPA (2000).[2] This method uses infiltration rates through the landfill cover which have been estimated using the HELP (Hydrologic Evaluation of Landfill Performance)[3] model. The basis and inputs to this model have been discussed in this section. For detailed methodology refer to Appendix A.

2.2 Basis of Model

The model requires a series of inputs and assumptions that form the basis of the leachate balance model. Further discussion around the development of the inputs and assumptions is provided in Appendix A.

2.2.1 Reference Documentation and Input Data

In preparing this report, we have relied upon the following documents:

- Previous leachate balance modelling: Golder Associates (2015). Banksia Road Landfill Leachate Volume Estimation, Revision 0, 25 June 2015, Ref: 1523088-013-R-Rev0.
- Rehabilitation and Closure Plan: Cleanaway (2020). Banksia Road Landfill, Rehabilitation and Closure Plan, Version 2, 15 September 2020.
- Schroeder, P.R., Dozier, T.S., Zappi, P.A., McEnroe, B.M., Sjostrom, J.W. and Peyton, R.L. (1994). The Hydrologic Evaluation of Landfill Performance (HELP) model: Engineering documentation for version 3. Cincinnati, OH: U.S. Environmental Protection Agency Risk Reduction Engineering Laboratory.
- Berger, K., Schroeder, P.R., 2013: The Hydrologic Evaluation of Landfill Performance (HELP) Model. Version HELP 3.95 D. Institute of Soil Science, University of Hamburg, Germany.
- Cleanaway (2020). Dardanup Landfill Masterplan, Drawing Details Report, Version 1, October 2020.
- Tonkin (2016). Banksia Road Dardanup Landfill, Phytocap Trial Monitoring Plan, 20 July 2016, Revision B, Ref: 20155261R002B.
- Leachate pond design documentation:
  - Pond 1 & 2: WML Consultants (2011). Banksia Road Landfill, Proposed New Leachate Ponds, General Arrangement of Earthworks, Stage 1 Works, 10 October 2011, Revision B, Ref: 4556-C-153.
  - Pond 3: WML Consultants (2015). Banksia Road Landfill, Cell 12 Construction, Detailed Layout, Sheet 8 of 12, February 2015, Revision 0, Ref: 5243-C-108.
  - Primary Pond: WML Consultants (2003). Solid Waste Disposal Facility Wellington Location 3003 Lot 2, Banksia Road Landfill, Site Plan, March 2003, Ref: 1288-004.

2.2.2 Site Staging

The staging of the site and rehabilitation has been based on the Masterplan Report and the Rehabilitation and Closure Plan supplied by Cleanaway. Cells are assumed to be under daily cover, interim cover or final capping. The currently active cell and the previously active cell are assumed to be under daily cover, with other uncapped cells under interim cover. The staging of active cells is shown in Table 2.1 and the staging of cell rehabilitation is shown in Table 2.2. Additional staging information is contained within Appendix B.

[2] Environmental Protection Agency (2000). *Landfill Manuals, Landfill Site Design,* 2000, Wexford, Ireland, Ref: 12/00/750

[3] Berger, K., Schroeder, P.R., 2013: The Hydrologic Evaluation of Landfill Performance (HELP) Model. Version HELP 3.95 D. Institute of Soil Science, University of Hamburg, Germany

Table 2.1 Active Cell Staging

Cell No.	Area (m^2)	Construction Date	Filled Date	Interim Cover Date
5	42,890	*Constructed*	*Filled*	*Under Interim*
1	*12,790*	*Constructed*	*Filled*	*Under Interim*
2	*12,790*	*Constructed*	*Filled*	*Under Interim*
12A	21,180	October 2022	November 2024	December 2024
12	27,135	*Constructed*	*Filled*	*Under Interim*
3	*13,065*	*Constructed*	*Filled*	*Under Interim*
4	*13,065*	*Constructed*	*Filled*	*Under Interim*
4B	18,300	*Constructed*	*Filled*	*Under Interim*
6	18,260	*Constructed*	November 2021	November 2021
7	18,485	*Constructed*	December 2022	December 2022
8	17,340	October 2021	November 2023	October 2024
9	25,330	October 2024	September 2025	March 2028
10	25,520	December 2024	December 2028	April 2029
15	19,770	March 2028	January 2030	August 2031
16	21,195	April 2029	May 2032	February 2035
17	21,805	August 2031	November 2035	July 2037
11	25,385	February 2035	April 2038	November 2040
13	25,370	July 2037	August 2041	April 2043
14	25,170	November 2040	January 2044	March 2045 (Capping)
18	22,425	April 2043	July 2046	May 2048
19	23,005	October 2045	February 2049	March 2051 (Capping)
20	26,375	May 2048	August 2050	March 2051 (Capping)
Total	**476,655**			

Table 2.2 Rehabilitation Cell Staging

Rehabilitation Stage	Cells	Area (Ha)	Model Area (m^2)	Complete Capping
1	5	5.41	54,100	Feb 23
2	1, 2	2.56	25,600	Mar 24
3	12A	2.12	21,200	Mar 25
5	Part 3/4, Part 4B, Part 12	3.51	35,100	Mar 26
6	6, Part 7, Part 3/4	3.71	37,100	Mar 27
4	Part 7, Part 3/4, Part 4B, Part 12, Part 15	2.92	29,200	Mar 28
7	8, 9, 10, Part 7	6.81	68,100	Mar 32
8	Part 15, 16, 17	6	60,000	Mar 38 (Nov 40)
9	11, 13, 14	6.28	62,800	Mar 45
10	18, 19, 20	7.18	71,800	Mar 51
Total		**47.8***	**478,000***	

*Note: Total areas include the 13,000 m^2 of existing capped area, which is not shown in the staging table.

2.2.3 Climate Data

Climate data for the site have been determined using the SILO database[4] which provides daily meteorological datasets for a range of climate variables based upon Bureau of Meteorology (BOM) data. 50 years of actual climate data has been used for the assessment. Additional climate data were obtained from BOM stations at Dardanup East and Donnybrook for use as inputs into the HELP model. For further information refer to Appendix A.

2.2.4 Leachate Ponds and Evaporation

The evaporation of leachate from the ponds is the primary loss of leachate from the system. The pond evaporation is based upon the area of the ponds and the evaporation data from SILO. The evaporation from the pond has been scaled from the pan evaporation based upon published guidance and data collected on site. The mean annual pan evaporation for the site is 1,488.5 mm and the pond evaporation has been adopted as 1,190.8 mm.

There are four leachate ponds at Dardanup Landfill; these ponds are known as the Primary Pond, Pond 1, Pond 2, and Pond 3. These ponds have a total surface area of approximately 20,250 m^2 and an operating capacity of approximately 26,700 m^3. Based upon the mean annual evaporation, approximately 24,100 m^3 of leachate evaporates from these ponds each yearly. The mean annual rainfall into these ponds is approximately 20,390 m^3, giving an annual pond balance (rainfall – evaporation) of approximately 5,010 m^3. For further detail on the leachate ponds and the evaporation, please refer to Appendix A.

[4] Queensland Government (2020). *SILO, LongPaddock,* The State of Queensland 1995-2020, Available <https://www.longpaddock.qld.gov.au/silo/>

2.2.4.1 Forced Evaporation from Pond Sprinklers

Sprinklers have been installed in all four leachate ponds to increase the volume of evaporation from these ponds. The sprinklers are operated 12 hours a day. Based upon the nomograph shown in Zazueta (2011)[5], the total forced evaporation from these sprinklers is estimated to range from 2.4 m^3/day to 4.8 m^3/day. The annual forced evaporation is estimated to total approximately 1,300 m^3.

2.2.5 Waste Absorptive Capacity

The Irish EPA provides guidance on the absorptive capacity of MSW based upon the density of waste as placed. Based upon the Rehabilitation and Closure plan, a waste density of 1 t/m^3 has been assumed which results in a waste absorptive capacity of 0.025 m^3/t. Based upon the rehabilitation and closure plan, a filling rate of 350,000 t/year has been assumed until the capacity of the site is exhausted in August 2050. This results in an annual absorptive capacity of approximately 8,750 m^3. In the model, the absorptive capacity of the waste has the effect of reducing the generation of leachate from the landfill cells.

2.2.6 Leachate Trucking to Tipface

When operational and weather conditions are suitable, Cleanaway currently truck leachate to the tip face and interim cover areas at the Dardanup Landfill. Approximately 90 m^3 of leachate has been irrigated onto the tipface daily between October 2020 and March 2021 (5 months). The intention is to distribute leachate to improve the opportunity for disposal via evaporation, but limit over-wetting to minimise infiltration and disruption of the filling operations. The model assumes that all leachate sprayed evaporates, with approximately 13,590 m^3/year of leachate disposed of through this method. This is expected to continue into the future.

Additionally, these rates of leachate trucking are expected to continue into April during some years. There is some capacity to truck leachate to the tipface for dust suppression during winter months. It is noted that trucking capacity during winter is less than during summer. Trucking has not been modelled during April and winter as it may not occur in all years.

2.2.7 Leachate Generation Modelling

The leachate generation volumes have been determined using the HELP model[3] as inputs into the water balance model. The HELP model is a water balance model that was developed by the United States EPA specifically to estimate the performance of landfill caps and liners.

The leakage through the phytocap was not modelled using HELP, as it is not suitable for modelling the performance of a phytocap. Instead, the trial goal of drainage through the cap being <5% of rainfall was used for the modelling. This correlates to a mean annual infiltration of 46.8 mm.

Two cover profiles were modelled using HELP; a 150 mm daily cover and a 500 mm interim cover. The parameters for these cover profiles were determined based upon information provided by Cleanaway. HELP models drainage and runoff from these cover profiles which are shown in Table 2.3. Further detail on the HELP modelling is provided in Appendix A, with outputs from the HELP model provided in Appendix C.

[5] Zazueta, F. (2011). *Evaporation Loss During Sprinkler Irrigation,* The Institute of Food and Agricultural Sciences (IFAS), University of Florida, Originally published April 1994, Revised November 2011, Publication BUL290.

Table 2.3 HELP Model Outputs

Cover Profile	Total Volume (mm/year)
Daily Cover Drainage	460.1
Interim Cover Drainage	326.5
Interim Cover Runoff	85.1

2.2.8 Water Balance Model Assumptions

The water balance model is based upon the following assumptions:

- Infiltration into landfill cells (from areas under daily, interim and final cover) is taken up by the absorptive capacity of waste material. Excess absorptive capacity remains and takes up leachate generated in future months. Leachate generated from direct incident rainfall is not taken up by the waste absorptive capacity.
- No leachate is lost from the system other than through evaporation.
- As part of the storage balance, any leachate that cannot be transferred to the leachate ponds remains in the landfill cells.
- All leachate generated within the landfill is collected and can be transferred to the ponds.
- No run on from areas that are not landfilled enters the leachate collection system and no groundwater flows into the leachate collection system.

2.2.9 Pond Cover Consideration

Consideration has been given to covering the pond during the wettest months of the year to reduce incident rainfall into the basin. This scenario was assessed as the majority of the rainfall occurs during winter months at Dardanup, with a comparatively small proportion of evaporation occurring during these months. To assess the feasibility of such a treatment a scenario was modelled with all leachate ponds covered from May to September (inclusive). It is assumed that the ponds would be covered in such a way as to exclude all rainfall from entering the basins and this would prevent any evaporation occurring from the basins.

2.3 Changes to site since 2015

The previous leachate balance model was produced in 2015 and this balance has been prepared to account for the changes to the site since then. The changes to the site since 2015 include:

- The tonnages of waste disposed of at the site have increased.
- The configuration and staging of landfill cells at the site have been updated.
- The staging of the rehabilitation (capping) of landfill cells at the site has been updated.
- An additional leachate pond (Pond 3) has been constructed at the site.
- Sprinklers have been installed in all leachate ponds to increase the evaporation of leachate.

3 Site Observations

3.1 Overview

Cleanaway make regular measurements of the freeboard level in the leachate ponds and the level of leachate in the sump of each landfill cell. Weekly data recorded from October 2020 to February 2021 was provided to inform the leachate balance modelling. Additionally, measured rainfall data and the volume of leachate sprayed from water carts on site was provided for the same period.

Leachate is pumped from the landfill cells to the Primary Pond, from which it can be transferred to Ponds 1, 2 and 3. Since the week ending 19 November 2020, no leachate has been pumped from the primary pond to Ponds 1, 2 or 3. Using the recorded freeboard levels in the three ponds combined with the site rainfall data this enables an estimate of the evaporation from these ponds to be made. These data will then be used to provide commentary on the modelled disposal capacity compared to the conditions observed on site.

3.2 Recorded Site Data and Observations

Cleanaway provided data recorded at the site from the week ending 15 October 2020 to the week ending 4 February 2021 (17 weeks). The data provided includes weekly measurements of:

- The head of leachate measured in each leachate sump
- The freeboard measured in each of the four leachate ponds
- The weekly rainfall measured at the site
- The number of water cart loads of leachate removed.

3.2.1 Evaporation Data

No leachate was pumped to Ponds 1, 2 and 3 between 19 November 2020 and 4 February 2021 (the end of the available data). As no leachate was pumped to these ponds the only inflows to and outflows from these ponds is from evaporation and rainfall. The data was used beginning 3/10/2020 to avoid impact from leachate inflows being captured in the data.

To estimate the evaporation from the ponds, the average freeboard level across the three ponds was calculated. The freeboard level in each pond fluctuates, as the sprinklers within the three ponds draw leachate from Pond 2 but irrigate all three ponds. This results in a transfer of leachate from Pond 2 to Ponds 1 and 3. Other transfers were made between the three ponds to ensure they all remained at similar operating levels. To account for these fluctuations the change in the average freeboard level across the three ponds was calculated for each week. The incident rainfall into the ponds was then added to the change in freeboard to account for this inflow and an approximate daily evaporation was then calculated. This approximate daily evaporation is assumed to be typical for the four leachate ponds at the site. The approximate daily evaporation calculated for each week is shown in Table 3.1 below.

Table 3.1 Approximate Daily Evaporation

Week Ending Date	Average Freeboard (mm)	Measured Rainfall (mm)	Change in Freeboard (mm)	Change in Freeboard with Rainfall (mm)	Daily Evaporation (mm/day)
3/10/2020	550	6.2	-	-	-
10/12/2020	600	0	50	50	7.1
17/12/2020	650	7	50	57	8.1
24/12/2020	723	0	73	73	10.5
31/12/2020	783	0	60	60	8.6
7/01/2021	883	0	100	100	14.3
14/01/2021	933	0	50	50	7.1
21/01/2021	983	0	50	50	7.1
28/01/2021	1100	0.6	117	117	16.8
4/02/2021	1217	0	117	117	16.7

These data were then used to estimate the volume of evaporation from the ponds. The daily evaporation (mm/day) was applied to the surface area of the leachate ponds. This methodology assumes that the ponds are maintained at maximum operating level, giving a surface area of 20,250 m^2. Due to this assumption, the volumes of evaporation calculated can be taken as estimates only, however, they do provide useful context as to the magnitude of the evaporation from the ponds. The volume of evaporation calculated is shown in Table 3.2. The weekly evaporation calculated from the pan evaporation factor has also been included for comparative purposes.

Table 3.2 Total Evaporation Observed

Week Ending Date	Weekly Evaporation (mm) (Observed)	Weekly Evaporation (m^3)	Weekly Evaporation (m^3) (Pan)
10/12/2020	50	1012.8	951
17/12/2020	57	1154.5	951
24/12/2020	73	1485.4	951
31/12/2020	60	1215.3	951
07/01/2021	100	2025.5	1061
14/01/2021	50	1012.8	1061
21/01/2021	50	1012.8	1061
28/01/2021	117	2375.2	1061
04/02/2021	117	2363.1	1061
TOTAL	674	13657.3	9111

Note: The January pan evaporation has been used for the week ending 4 February.

3.2.2 Comparison to Modelled Disposal

3.2.2.1 Pan and Pond Evaporation

The leachate balance model as discussed in Section 2 uses the pan evaporation and a reduction factor for the estimation of the evaporation from the ponds. The pan evaporation used is a long term monthly average for the site taken from the SILO grid point for the site. The evaporation that has been observed and recorded at the site has been used to reflect on the model.

The evaporation data discussed in Section 3.2.1 was used to scale the daily evaporation observed in each week to the average pan evaporation for the month in which the week occurred. The effect of the forced evaporation was then subtracted from the observed evaporation (Refer Section 2.2.4) to estimate the evaporation without the effect of the sprinklers. This was then compared to the monthly pan evaporation. These results are shown in Table 3.3 below.

Table 3.3 Pan Evaporation Comparison

Week Ending Date	Daily Evaporation (mm/day)	Monthly Evaporation (Scaled) (mm)	Monthly Pan Evaporation (mm)	Actual Evaporation Percentage
10/12/2020	7.1	217	208	104%
17/12/2020	8.1	248	208	119%
24/12/2020	10.5	321	208	154%
31/12/2020	8.6	262	208	126%
07/01/2021	14.3	437	232	189%
14/01/2021	7.1	216	232	93%
21/01/2021	7.1	216	232	93%
28/01/2021	16.8	514	232	221%
04/02/2021	16.7	511	232	220%

The fifth column of Table 3.3 shows the percentage of the pan evaporation that the estimation of actual evaporation was. As shown, the majority of the weeks had a greater evaporation than that of the average pan evaporation with the exception of two weeks that had an evaporation equivalent to 93% of the pan evaporation. Anecdotally, weather conditions at the site during the period of data provided have been favourable for evaporation, with minimal rain and sunny days. These data suggest that the evaporation may in many cases be in excess of the pan evaporation. The factor to convert between pan and pond evaporation in the modelling is sensitive to many factors including siting and construction of the ponds and wind direction. Based upon these data, the pan evaporation factor for the months of December, January and February has been selected as 90%, with 80% used in the other months as discussed in Appendix A.

As shown in Table 3.2, the observed evaporation was estimated to be 13,700 m^3 in comparison to the 9,100 m^3 modelled from the pan evaporation. The model accounts for a further 260 m^3 of forced evaporation during this period. As discussed, this further supports the usage of a higher factor during the months of December, January and February.

3.2.3 Water Cart Disposal Assumption

The data also includes the actual volumes of leachate irrigated onto the tipface for dust suppression and operational purposes. A total of 4,900,000 Litres were irrigated during the time the data were available. This volume is in general agreeance with the assumption of 90 m^3 day made in the modelling.

3.2.4 Cell Leachate Levels

The data provided also includes the heads of leachate measured weekly in each landfill cell. This measurement is taken to monitor the volume of leachate present in each cell. The last measurements were provided for the week ending 21 January 2021, where all landfill cells measured had leachate heads of 300 mm or less above the measurement level. Anecdotal evidence provided by Cleanaway suggests that leachate levels increase during the wetter winter period which can then be drawn down during summer months. The data provided suggests that for this season a balance of leachate is being achieved at the site with minimal heads of leachate present within the landfill cells and the volumes in the ponds being at acceptable levels.

4 Results and Discussion

The leachate balance model was run on a monthly time step from November 2020 to December 2059. The full results of the leachate balance model are contained within Appendix D and are summarised in the following sections.

4.1 Leachate Disposal Capacity

Leachate is only disposed of via evaporation in the ponds, irrigation of leachate from water trucks onto landfilled areas and the additional evaporative effect of the sprinklers. This disposal capacity remains fixed as long as the ponds, sprinklers and irrigation volumes remain the same. The leachate disposal capacity is shown in Table 4.1. For the purposes of the modelling it has been assumed that the irrigation of leachate ceases following the closure of the site. The incident rainfall into the leachate ponds is also provided to give context to the disposal volumes.

Table 4.1 Leachate Disposal Capacity

Month	Pond Evaporation (m^3)	Irrigation Disposal (m^3)	Forced Evaporation (m^3)	Total Leachate Disposal (m^3)	*Leachate Pond Incident Rainfall (m^3)*
January	4,230	2,790	150	7,170	*296*
February	3,540	2,520	130	6,200	*340*
March	2,680	2,790	150	5,610	*477*
April	1,580	0	110	1,690	*1,037*
May	1,070	0	110	1,180	*2,809*
June	820	0	110	930	*3,706*
July	850	0	70	920	*4,076*
August	1,030	0	70	1,110	*2,968*
September	1,320	0	70	1,400	*2,279*
October	1,920	0	110	2,030	*1,255*
November	2,570	2,700	110	5,370	*800*
December	3,790	2,790	110	6,690	*351*
Total	**25,400**	**13,590**	**1,300**	**40,290**	*20,395*
Total (Closure Phase)	*25,405*	*0*	*1,298*	*26,703*	*20,395*

4.2 Leachate Generation

The leachate generation varies as the staging of the site progresses. The generation from the leachate ponds (incident rainfall) remains constant at 20,395 m^3 per annum as the area is fixed over the lifetime of the site. Table 4.2 shows the peak annual leachate generation following the commencement of each landfill cell. Table 4.3 shows the leachate generation following the construction of each rehabilitation stage. The numbers given in these tables represent a snapshot in time, providing the peak leachate generation volume in a 12-month period during the operation of each cell or rehabilitation stage. These leachate generation numbers include the volume of leachate generated in the leachate ponds. Leachate generation peaks over the 12 months from May 2022 to April 2025 at 78,940 m^3 per annum.

Table 4.2 Leachate Generation by Cell Staging

Cell	Annual Leachate Generation (m^3)	Cell	Annual Leachate Generation (m^3)
Current	*Note 1*	17	50,250
8	78,940	11	54,080
12A	70,410	13	63,210
9	*Note 1*	14	53,880
10	74,910	18	61,130
15	50,780	19	50,510
16	57,510	20	60,030

Note 1: The 'Current' and 'Cell 9' stages are a partial year only.

Table 4.3 Leachate Generation by Rehabilitation Staging

Rehabilitation Stage	Annual Leachate Generation (m^3)	Rehabilitation Stage	Annual Leachate Generation (m^3)
Current	78,850	4	59,590
1	70,210	7	63,210
2	62,560	8	61,240
3	74,910	9	63,360
5	64,490	10	41,540
6	53,420		

4.3 Leachate Balance

The leachate balance model also calculates the balance of leachate. Two approaches have been taken to calculate the balance of leachate. The first assumes that all leachate is pumped from the cells to the ponds and reports excess leachate above the pond freeboard level. The second assumes that the ponds remain full at all times and that any excess leachate is stored in the landfill cells. The modelling shows that there is a deficit of leachate disposal capacity at all stages of the site's operation, resulting in excess leachate being generated over time that cannot be disposed of in the existing leachate basins. The peak annual excess of leachate is shown by each rehabilitation stage in Table 4.4. These numbers represent a snapshot in time of the peak annual leachate excess for any 12-month period within each rehabilitation stage.

Table 4.4 Leachate Excess by Rehabilitation Stage

Rehabilitation Stage	Annual Leachate Excess (m^3)	Rehabilitation Stage	Annual Leachate Excess (m^3)
Current	38,550	4	19,300
1	29,920	7	22,920
2	22,270	8	20,950
3	34,610	9	23,070
5	24,190	10	14,840
6	13,120		

The pond balances are shown in Figure 4.1 and Figure 4.2. Figure 4.1 shows the total volume of leachate in the ponds and the volume of excess leachate in each month above the freeboard level (green line). Figure 4.1 also shows the volume of the pond and the additional volume between the freeboard level and the crest of the pond (zone between the base of the chart and the light blue line). This shows that the pond is regularly reaching its operating level. The excess leachate is from the freeboard level, and in some months the volume of excess leachate is greater than the volume between the freeboard level and the top of the pond (green line above the light blue line). The model does not account for the storage capacity in the landfill cells. The rehabilitation stages are shown as vertical lines on both Figures 4.1 and 4.2. Figure 4.2 shows the cumulative volume of excess leachate in the system that cannot be managed through evaporation in the existing ponds. This figure shows that during all stages of the landfill operation there is excess leachate generated, with approximately 700,000 m^3 of excess leachate generated up until December 2059 (the final timestep of the model). These results are not sufficiently consistent with what is being observed on site, which is discussed further in Section 4.5. The modelling and figures do however provide insight into suitable leachate management strategies should leachate accumulation begin to be observed. This is also discussed in Section 4.5.

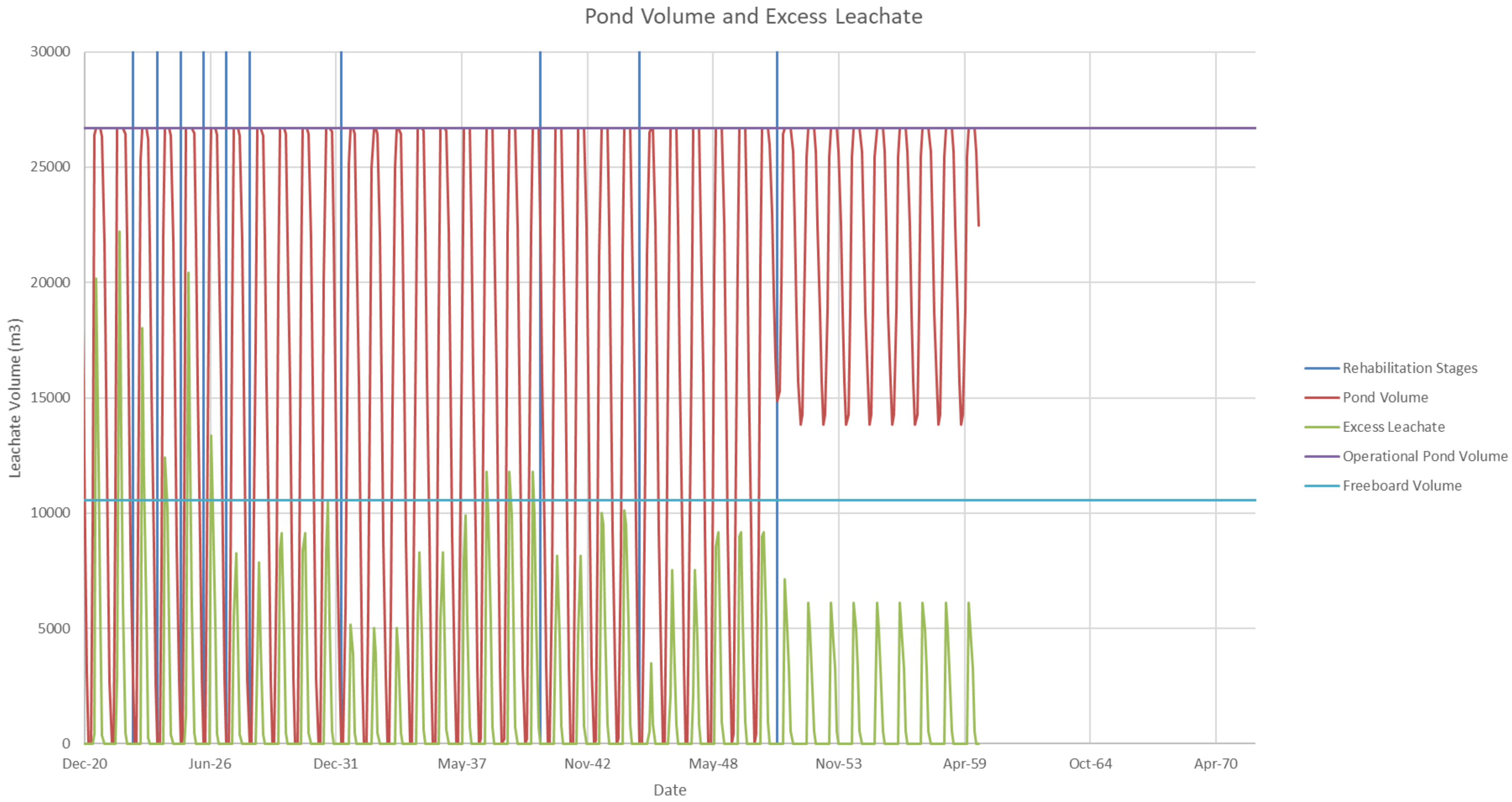

Figure 4.1 Leachate Balance - Method 1

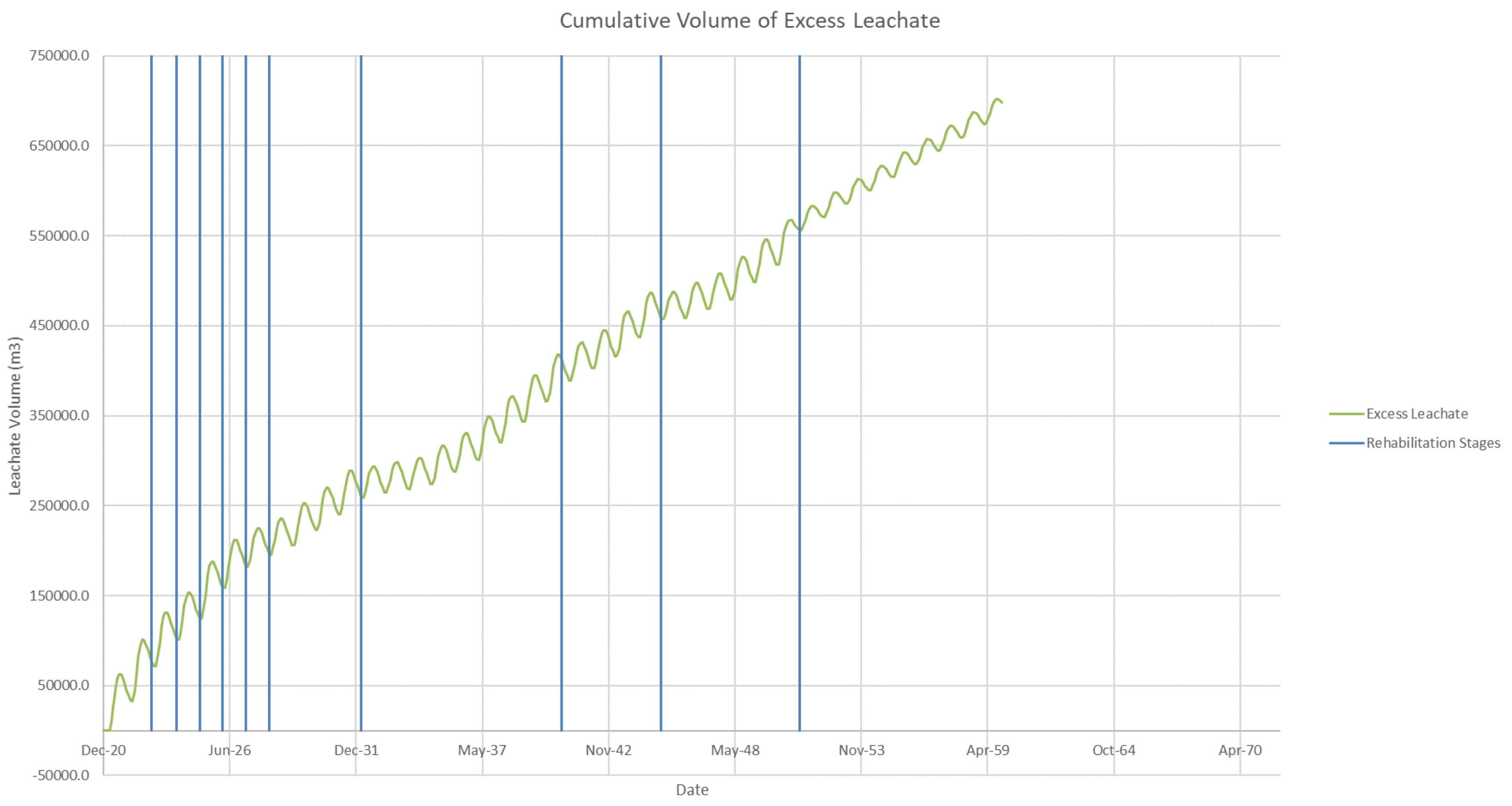

Figure 4.2 Leachate Balance - Method 2

4.4 Covered Pond Scenario

An additional scenario was modelled assuming that the leachate ponds were covered for the period between the start of May and the end of September each year. This period accounts for approximately 80% of the mean annual rainfall but only 22% of the mean annual pan evaporation. Covering the ponds with a cover that prevents both rainfall ingress and evaporation would result in a significant reduction in the leachate generation from incident rainfall into the basin. The leachate balance was modelled for this scenario.

The leachate disposal capacity of the pond is impacted by the exclusion of evaporation for 5 months of the year. The total disposal capacity of the leachate management system is shown in Table 4.5. As shown, the total disposal capacity is decreased from 40,290 m^3 during operation and 26,703 m^3 during closure to 34,660 m^3 during operation and 21,070 m^3 during closure. The incident rainfall into the basins has decreased from 20,395 m^3 per annum to 4,560 m^3 per annum. This results in an increased disposal capacity of the basins, as the decrease in generation from incident rainfall exceeds the reduction in disposal capacity by approximately 10,000 m^3.

Table 4.5 Covered Pond Disposal Scenario

Stage	Pond Evaporation (m^3)	Irrigation Disposal (m^3)	Forced Evaporation (m^3)	Total Leachate Disposal (m^3)	*Leachate Pond Incident Rainfall (m^3)*
Operation	20,310	13,590	760	34,660	*4,560*
Closure	20,310	0	760	21,070	*4,560*

The leachate generation in each stage decreases by approximately 15,800 m^3/year due to the reduction in rainfall into the leachate basins. This improves the leachate balance that has been modelled, with the maximum annual deficit decreasing from 38,552 m^3 to 28,350 m^3 under the covered pond scenario. The post closure deficit decreases from 14,840 m^3 to 4,640 m^3. The cumulative leachate excess through to the final timestep of the model (December 2059) decreases from approximately 700,000 m^3 to 300,000 m^3. This volume represents the total volume that requires management by alternative disposal methodology. The leachate balance for each stage of rehabilitation under the covered pond scenario is shown in Table 4.6.

Table 4.6 Covered Pond Leachate Balance

Rehabilitation Stage	Annual Leachate Excess (m^3)	Rehabilitation Stage	Annual Leachate Excess (m^3)
Current	28,350	4	9,100
1	19,720	7	12,720
2	12,060	8	10,750
3	24,410	9	12,870
5	13,990	10	4,640
6	2,920		

These modelled results show that covering the pond may be a feasible solution for decreasing the leachate generation at the site. The climate conditions are favourable to covering the pond during winter, as a large proportion of the rainfall occurs during 5 months of the year and the evaporation during these months is only a small proportion of the annual total.

4.5 Discussion

4.5.1 Excess Leachate

The leachate balance modelling was undertaken for all stages of site operation and the closure phase. The Cell 8 operational stage results in the highest volume of leachate generated under the current staging model. The annual volume of leachate generation modelled during the Cell 8 operational scenario is 78,940 m^3/annum, with the disposal capacity modelled as 40,290 m^3/annum during the operational stages of the site. This results in an excess of leachate estimated at 38,550 m^3/annum above what is disposed of via evaporation and leachate trucking.

The annual leachate generation modelled during the closure phase is 41,540 m^3/annum, with the disposal capacity modelled as 26,700 m^3/annum during the closure phase. This estimated excess of leachate is 14,840 m^3/annum during the closure phase. As identified in Section 4.3 above there is excess leachate that is not disposed of via evaporation in every stage of the operation of the landfill. Figure 4.1 shows the excess leachate generated per month and Figure 4.2 shows the cumulative excess of leachate over time. It is expected that under the scenario modelled the volume of leachate generated in an average year exceeds the disposal capacity of the current infrastructure. The current disposal capacity of the ponds is approximately 5,010 m^3/year, and due to the marginal difference between evaporative capacity (leachate disposal) and leachate generation due to rainfall into the ponds, a very large pond surface area is required to dispose of all the leachate generated.

As discussed in Section 3, Cleanaway have provided site data to allow the outcomes of the model to be compared to the conditions observed on site. The site data provided suggest that a balance is being achieved for leachate for the recent summer season at least. The site data also suggest that evaporation from the ponds exceeds the evaporation modelled from the published pan evaporation. This does not agree with the modelling undertaken which estimated that there is an excess of leachate beyond that which can be disposed of on site during all stages of site operation and closure. This discrepancy may be explained by either leachate generation being overestimated by the modelling or the disposal being underestimated, or a combination of both. Without site data on actual measured leachate generation (measured flows into the ponds), it is difficult to calibrate the leachate generation modelled in HELP. The HELP model has been developed as a design tool, and when used to inform site operations it is most useful when applied for comparative estimates. It is considered that the HELP model can overestimate infiltration due to the use of daily instead of hourly data, which has the effect of reducing runoff quantities. HELP may also underestimate evaporation rates in semi-arid to arid summer conditions such as those experienced at Dardanup.

Based on the site data provided it appears that the leachate management system is adequately managing leachate disposal via evaporation from the ponds supplemented by regular use of leachate for operational purposes such as dust suppression within the landfill cells. Cleanaway should continue regular monitoring of leachate levels in the sumps and ponds to ensure that leachate continues to be managed at the site to prevent accumulation of leachate within landfill cells and ponds. Should it become evident that the leachate management system is not coping with the leachate volumes generated or leachate volumes used for operations need to be reduced, other measures should be implemented to reduce the excess leachate volumes. To reduce the excess leachate either the leachate generation can be reduced, or alternative leachate disposal measures could be provided. Measures to reduce leachate generation could include:

- Modifying the tipface area(s) as far as practical to reduce direct infiltration.

- Increasing the thickness of the interim cover to further reduce interim cover infiltration rates.
- Capping completed areas as quickly as possible after cells are complete.
- Placing interim cover over as large an area as is practicable to reduce the extent of the area covered by daily cover.
- Modifications to the cap design to reduce infiltration, pending the outcome of the current capping trial.
- Covering of the evaporation ponds during the wetter months of the year to prevent rainfall/incident rainfall entering the evaporation ponds as discussed in Section 4.4.

Measures to increase leachate disposal may include:

- Construction of additional leachate storage ponds.
- Installation of additional measures to increase evaporation such as sprinklers, wetted surfaces or other leachate destruction methods.
- Recirculation of leachate through landfill cells (if licence permits).
- Increased use of leachate on internal cell haul roads if weather conditions allow.
- Disposal of leachate off-site.

4.5.2 Sensitivities

The model has several sensitivities that have a significant impact on the leachate balance. These sensitivities provide opportunities to reduce the leachate generation significantly.

4.5.2.1 Impact of Incident Rainfall into Leachate Basins

Incident rainfall into the leachate basins is responsible for a significant proportion of the total leachate generation, particularly when the full site is capped where approximately 49% of the total leachate is due to incident rainfall. The mean annual rainfall is equal to approximately 75% of the mean annual evaporation which reduces the amount of leachate that can be disposed of via the leachate ponds. Additionally, the catchment area of the leachate ponds is approximately 10% greater than the evaporative area, further compromising the effectiveness of evaporating leachate from the ponds.

Due to these factors, increasing the number or size of evaporation ponds to provide greater disposal capacity also increases the leachate generation, requiring many ponds to deal with the excess leachate at the site. Measures to reduce the impact of incident rainfall into the basins could include covering of basins to eliminate incident rainfall or reducing the number of ponds and disposing of leachate generated in the landfill through other mechanical forced evaporation/destruction means.

4.5.2.2 Use of Interim Cover

According to the staging adopted in the model large areas are covered with daily cover throughout the operation of the landfill. According to the outputs of the HELP model, areas under interim cover generate approximately 58% less leachate than those areas under daily cover. Where possible, placing of interim cover on areas sooner could assist in reducing the amount of leachate generated.

5 Conclusion

We have prepared this leachate balance for the Dardanup Landfill to assess the leachate generation at the site and to quantify any deficit in disposal capacity of the current infrastructure. This balance has been prepared to account for the current site infrastructure and future staging of the site.

The balance model found that leachate generation exceeds the disposal capacity of the existing infrastructure in all stages of the site's operation and closure. The excess leachate volumes during the Cell 8 operation were modelled as 38,550 m^3/annum.

The balance model also estimated the leachate excess during the closure stage as 14,840 m^3/annum. To manage any excess leachate at the site measures could be implemented to reduce the leachate generation and/or measures could be implemented to increase the disposal capacity. The modelling suggests that the covering of the leachate ponds during the winter months could be a feasible measure to reduce the leachate generation at the site, as the climate conditions are such that the majority of rainfall occurs in 5 months of the year while evaporation is lowest.

Cleanaway also provided some data measured on site between late 2020 and early 2021 to allow for reflection to be made between the model and the observations made on site. These data suggest that a balance between leachate generation and disposal is being achieved for this season and time period. These observations were not in agreeance with the deficit in disposal capacity modelled. This may be explained by limitations of the modelling tools used, as it would appear based on the site observations that the leachate management system is currently managing the volumes of leachate being generated at the site. Should it become evident that the leachate management system is not coping with the leachate volumes generated or leachate volumes used for operations need to be reduced, other measures should be implemented to reduce the excess leachate volumes.

Appendix A – Detailed Modelling Methodology

1 Detailed Modelling Methodology

This appendix provides further detail on the methodology, inputs and assumptions made as a part of the leachate balance modelling undertaken for Dardanup Landfill.

1.1 Methodology

The methodology used for the leachate modelling is based upon the method described in Chapter 7.2 of the Landfill Site Design Manual published by the Irish EPA (2000).[i] This method contains a water balance equation that can be used to estimate the leachate generation of a landfill throughout different stages of the site life. The water balance equation given by Irish EPA is shown below:

$$\boldsymbol{Lo = [ER(A) + LW + IRCA + ER(l)] - [aW]}$$

Where:

Lo = Leachate produced (m^3)

ER = Effective rainfall (m)

A = Area of active cell (m^2)

LW = Liquid Waste (m^3)

IRCA = Infiltration through restored and capped areas (m)

l = surface area of lagoons (m^2)

a = absorptive capacity of waste (m^3/t)

W = weight of waste deposited (t/a)

The effective rainfall (*ER*) accounts for the evapotranspiration from the landfill area. The water balance equation used for this modelling exercise is derived from the equation given by the Irish EPA but takes the leachate generation calculated by the HELP (Hydrologic Evaluation of Landfill Performance)[ii] model and separates leachate generation and evaporation. The equation used is shown below:

$$\boldsymbol{Lo = [I_A(A) + I_i(i) + I_c(RCA) + R(l)] - [aW] - [E(l)] - U}$$

Where:

R = Rainfall (m)

i = Area under interim cover (m^2)

RCA = Restored and capped area (m^2)

E = Pond evaporation (m)

I_A = Active area infiltration (m)

I_i = Interim cover infiltration (m)

I_c = Capped area infiltration (m)

U = Leachate usage (m^3) (Irrigation etc.)

All other parameters are as above.

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[i] Environmental Protection Agency (2000). *Landfill Manuals, Landfill Site Design,* 2000, Wexford, Ireland, Ref: 12/00/750

[ii] Berger, K., Schroeder, P.R., 2013: The Hydrologic Evaluation of Landfill Performance (HELP) Model. Version HELP 3.95 D. Institute of Soil Science, University of Hamburg, Germany

The infiltration factors above are derived using the HELP model which was developed by the United States EPA and further developed by Klaus Berger at the University of Hamburg. The HELP model accounts for runoff and evapotranspiration and as such the actual rainfall is applied instead of the effective rainfall, as per the Irish EPA method. As is the case on site, it is assumed that no liquid waste (including excess liquid contained in sludges) is disposed of at the site.

1.2 Basis of Model

The model requires a series of inputs and assumptions that form the basis of the leachate balance model. The body of the leachate balance assessment report also provides information on the basis of the model.

1.2.1 Site Staging

Site staging is discussed in the body of the report.

1.2.2 Climate Data

Climate data for the site have been determined using the SILO database[iii] which provides daily meteorological datasets for a range of climate variables based upon Bureau of Meteorology (BOM) data. 50 years of actual climate data has been used for the assessment, ranging from 1970 – 2020. Data was obtained using the SILO patched point system for the grid location -33.45, 115.80 which is close to the Dardanup Landfill site. Parameters obtained from SILO as inputs into the HELP model and the leachate balance model include daily temperatures, rainfall, evaporation, and solar radiation. Additionally, wind speed and relative humidity data were obtained from BOM stations at Dardanup East and Donnybrook for use as inputs into the HELP model. The mean monthly rainfall values extracted from the SILO data, and used to calculate the pond leachate generation and final cap leachate generation are shown in Table 1.1.

Table 1.1 Mean Monthly Rainfall

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tot.
Mean Rainfall (mm/mth)	12.9	14.8	20.7	45.1	122.2	161.2	177.3	129.1	99.1	54.6	34.8	15.3	887.3

1.2.3 Leachate Ponds and Evaporation

The evaporation of leachate from the ponds is the primary loss of leachate from the system. The pond evaporation is based upon the area of the ponds and the evaporation data from SILO. Evaporation from the ponds has been adopted as 80% of the pan evaporation as recommended by the Victorian Landfill BPEM[iv] except for the summer months of December, January and February. Cleanaway have measured evaporation from their leachate ponds between December 2020 and early February 2021 and have found that daily evaporation has ranged between 93% and 220% of the average pan evaporation in this time. Based upon these trials the evaporation for the summer months of December, January and February has been taken as 90% of the pan evaporation. This is discussed further in Section 3 of the body of the report The daily evaporation data obtained from SILO for the site from 1970-2020 was collated to determine average daily pan evaporation values for each month and was then multiplied by the appropriate factor, these data are shown in Table 1.2.

[iii] Queensland Government (2020). SILO, LongPaddock, The State of Queensland 1995-2020, Available <https://www.longpaddock.qld.gov.au/silo/>

[iv] Victorian EPA (2020). *Best Practice Environmental Management, Siting, design, operation and rehabilitation of landfills,* Publication 788.3, August 2015, Carlton, Vic

Table 1.2 Mean Daily Pond Evaporation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tot.
Pond Evaporation (mm/day)	5.99	5.55	4.26	2.60	1.70	1.35	1.35	1.65	2.18	3.05	4.22	5.37	1190.8

There are four leachate ponds at Dardanup Landfill; these ponds are known as the Primary Pond, Pond 1, Pond 2, and Pond 3. Design drawings have been provided by Cleanaway for Ponds 1, 2 and 3, which shows they are of a similar size. Designs were not able to be provided for the primary pond. The parameters for the primary pond have been determined from survey and it has been assumed that the depth, freeboard and side slope are the same as for Ponds 1 - 3. For the purpose of the modelling it is assumed that the ponds are operated at freeboard level all the time to maximise the evaporative surface area. The properties of these ponds are shown in Table 1.3. A summary of monthly evaporation (disposal) and monthly incident rainfall (generation) from the basins is given in Table 1.4. This table also shows the balance of the pond (Rainfall – evaporation), where positive numbers show that rainfall (leachate generation) exceeds evaporation (leachate disposal). The yearly balance for the ponds is approximately 5,010 m^3 of disposal capacity.

Table 1.3 Leachate Pond Properties

Parameter	Primary Pond	Pond 1	Pond 2	Pond 3
Total Dimensions	55 m x 75 m	73 m x 82 m	79 m x 82 m	82 m x 78 m
Total Surface Area	4,125 m^2	5,990 m^2	6,480 m^2	6,400 m^2
Depth	2.0 m (Assumed)	2.0 m	2.0 m	2.0 m
Freeboard	500 mm (Assumed)	500 mm (Licence Table 1.4.7)	500 mm (Licence Table 1.4.7)	500 mm (Licence Table 1.4.7)
Operating Dimensions	52 m x 72 m	70 m x 79 m	70 m x 79 m	69 m x 79 m
Operating Surface Area	3,744 m^2	5,530 m^2	5,530 m^2	5,450 m^2
Operating Depth	1.5 m (Assumed)	1.5 m	1.5 m	1.5 m
Side Slopes	1(V):3(H) (Assumed)	1(V):3(H)	1(V):3(H)	1(V):3(H)
Operating Volume	4,820 m^3	7,330 m^3	7,330 m^3	7,220 m^3

Table 1.4 Monthly Basin Generation and Disposal

Month	Total Pond Incident Rainfall (m^3/month)	Total Pond Evaporation (m^3/month)	Pond Balance (Rainfall – Evaporation) (m^3/month)
January	296	4,233	-3,936
February	340	3,544	-3,204
March	477	2,678	-2,201
April	1,037	1,581	-544
May	2,809	1,069	1,740
June	3,706	818	2,888
July	4,076	846	3,230
August	2,968	1,035	1,933
September	2,279	1,325	954
October	1,255	1,917	-662
November	800	2,565	-1,765
December	351	3,794	-3,442
Total	**20,394**	**24,119**	**-5,010**

1.2.3.1 Forced Evaporation from Pond Sprinklers

Sprinklers have been installed in all four leachate ponds to increase the volume of evaporation from these ponds. The sprinklers are operated 12 hours a day and have the following properties:

- Holman Plastic Butterfly Sprinkler Head, 5m radius throw. 9 sprinklers in Primary Pond and Pond 1, 8 sprinklers in Pond 2 and 6 sprinklers in Pond 3. Nozzles are approximately 10 mm in diameter.
- 700 mm high on floating pontoons.
- Primary pond sprinklers fed from a transfer pump via a 63 mm main line to 40 mm headers.
- Pond 1, 2 and 3 fed from a transfer pump via 50 mm main lines to 40 mm headers.
- One diesel and one electric transfer pump are used to supply leachate to the sprinklers. These pumps are each assumed to deliver a flow rate of 5.5 L/s with a head of 26 psi at the nozzle.

To estimate the forced evaporative effect of the sprinklers installed at Dardanup Landfill, the nomograph shown in Zazueta (2011)[v] was used to estimate the percentage of evaporative loss in each quarter during the year. This nomograph requires both climate (percentage relative humidity, air temperature and wind velocity) and sprinkler parameters (nozzle pressure and nozzle diameter). The nomograph inputs and the corresponding evaporation are shown in Table 1.5. Total forced evaporation volumes by month are shown in Table 1.6.

[v] Zazueta, F. (2011). *Evaporation Loss During Sprinkler Irrigation,* The Institute of Food and Agricultural Sciences (IFAS), University of Florida, Originally published April 1994, Revised November 2011, Publication BUL290.

Table 1.5 Forced Evaporation

Parameter	Summer	Autumn	Winter	Spring
Relative Humidity	45.8%	59.5%	73.0%	57.7%
Air Temperature	21.7 ºC	17.3 ºC	11.7 ºC	15.2 ºC
Wind Velocity	16.0 km/hr	12.2 km/hr	11.1 km/hr	15.2 km/hr
Nozzle Diameter	10 mm	10 mm	10 mm	10 mm
Nozzle Pressure	26 psi	26 psi	26 psi	26 psi
Percentage Evaporation Loss	2.0%	1.5%	1.0%	1.5%
Loss (L/day)	4752 L/day	3564 L/day	2376 L/day	3564 L/day
Loss (m^3/day)	4.752 m^3/day	3.564 m^3/day	2.376 m^3/day	3.564 m^3/day

Table 1.6 Forced Evaporation Volumes

Month	Forced Evaporation (m^3/month)
Jan	147
Feb	133
Mar	147
Apr	107
May	111
Jun	107
Jul	74
Aug	74
Sep	71
Oct	111
Nov	107
Dec	111
Total	**1,299**

According to Zazueta (2011), in general, to increase evaporation loss from sprinklers small nozzles operated at high pressures should be used at times where climate demand is greatest such as during the early afternoon. Additionally, the flow rate through the sprinklers could also be increased as the volume evaporated is a percentage of the total volume irrigated.

1.2.4 Leachate Generation Modelling

The leachate generation volumes have been determined using the HELP model[i] as inputs into the water balance model. The HELP model is a water balance model that was developed by the United States EPA specifically to estimate the performance of landfill caps and liners. The climate inputs to HELP were obtained from SILO. The following sections discuss the modelling of different cover profiles and the leachate generation volumes used in the water balance model.

1.2.4.1 Cover Profiles

Three cover profiles were used in the water balance modelling. The daily cover and interim cover profiles were modelled using HELP, while the phytocap leachate generation was calculated differently as HELP is unsuitable for modelling the performance of phytocaps. Phytocap generation is discussed below in Section 1.2.4.1.

The soil used for daily and interim cover is referred to as 'Clay' on-site but is classified as a Silty Sand material according to AS1726. The daily cover is not deliberately compacted when placed and is stripped prior to placement of the next lift of waste. The soil texture used to calculate the runoff curve was a sandy clay loam for both the daily cover and interim cover. This texture was selected as observations on site suggest that the cover material forms a crust on the surface and promotes runoff occurring. The use of a sandy loam resulted in low modelled values of runoff which were considered to provide overestimates of the infiltration through the cover profiles. As such, the daily cover has been modelled in HELP as a sandy clay loam using the default permeability of 1.2×10^{-5} m/s. The daily cover profile was modelled as:

- Thickness: 15 cm (Table 1.4.8 of Licence).
- Soil: Texture Number 10 (Sandy Clay/Sandy Clay Loam).

The interim cover is understood to be compacted by track rolling when placed and is expected to have a lower permeability and as such was modelled differently to the daily cover. The ROSETTA model[vi] can be used to estimate a number of soil parameters based on bulk density and particle size distribution. To allow for this estimate to be made for the interim cover, in-situ dry density tests were undertaken on several core samples retrieved from the interim cover at the site, with the in-situ dry density across the samples averaging 1.64 t/m^3. Laboratory particle size distribution results for the interim cover material were also supplied by Cleanaway. Based upon these laboratory results it was estimated that the interim cover has an as-placed hydraulic conductivity of 5.2×10^{-6} m/s. Based upon this, the interim cover profile was modelled with the following properties:

- Thickness: 50 cm.
- Soil: Texture Number 10 (Sandy Clay/Sandy Clay Loam).
- Hydraulic Conductivity (k_{sat}): 5.2×10^{-6} m/s (5.2×10^{-4} cm/s)

1.2.4.2 HELP Modelling Results

The HELP modelling outputs modelled runoff and leakage volumes which are used as inputs into the water balance model. The leakage is the volume of rainfall that moves through the cover profile and becomes leachate. The daily cover does not generate runoff that exits the leachate collection system, and it has been assumed that 20% of the area under interim cover generates runoff that enters the leachate collection system. The leakage volumes from HELP are shown in below in Table 1.7 and Table 1.8. The HELP modelling outputs have been provided as Appendix C.

[vi] United States Department of Agriculture (1999). *ROSETTA Model,* Version 1.0, 1999, Agricultural Research Service, U.S. Department of Agriculture.

Table 1.7 Daily Cover Model Results

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tot
Leakage (mm/mth	5.4	5.1	7.5	21.0	71.7	104.4	118.5	67.2	35.5	10.7	8.1	4.8	**460.1**

Table 1.8 Interim Cover Model Results

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tot
Runoff	1.5	1.0	2.3	8.7	44.8	81.3	96.7	59.3	25.4	3.8	0.8	1.1	**326.5**
Leakage	2.1	1.0	1.9	3.9	16.1	20.1	22.0	10.1	4.5	1.2	0.8	1.4	**85.1**

1.2.4.3 Phytocap Leachate Generation

The leakage through the phytocap was not modelled using HELP, as it is not suitable for modelling the performance of a phytocap. Instead, the outputs from the modelling discussed in the capping design report[vii] were used as inputs into the leachate balance model, however the modelling undertaken as a part of the design resulted in 10% of annual rainfall becoming drainage through the cap. This large drainage percentage is occurring due to the model underestimating runoff from the cap. A field trial is currently being conducted to calibrate the model outputs. The phytocap trial monitoring plan states that the goal for drainage through the cap is <5% of rainfall which correlates to a mean annual infiltration of 46.8 mm. The 5% of rainfall goal from the trial modelling plan has been used as the input drainage for the final cap in the water balance model. The monthly drainage through the phytocap is shown in Table 1.9.

Table 1.9 Phytocap Mean Monthly Drainage

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Drainage (mm/mth)	0.64	0.74	1.04	2.26	6.11	8.06	8.87	6.46	4.96	2.73	1.74	0.76

1.2.5 Water Balance Model Assumptions

The water balance model is based upon the following assumptions:

- Infiltration into landfill cells (from areas under daily, interim and final cover) is taken up by the absorptive capacity of waste material. Excess absorptive capacity remains and takes up leachate generated in future months. Leachate generated from direct incident rainfall is not taken up by the waste absorptive capacity.
- No leachate is lost from the system other than through evaporation.

[vii] Tonkin (2020). *Banksia Road Dardanup Landfill, Capping Design Report,* Revision 2, 15 September 2020, Ref: 201515R001Rev2

- As part of the storage balance, any leachate that cannot be transferred to the leachate ponds remains in the landfill cells.
- All leachate generated within the landfill is collected and can be transferred to the ponds.
- No run on from areas that are not landfilled enters the leachate collection system and no groundwater flows into the leachate collection system.

1.2.6 Pond Cover Consideration

Consideration has been given to covering the pond during the wettest months of the year to reduce incident rainfall into the basin. To assess the feasibility of such a treatment a scenario was modelled with all leachate ponds covered from May to September (inclusive). It is assumed that the ponds would be covered in such a way as to exclude all rainfall from entering the basins and this would prevent any evaporation occurring from the basins.

Appendix B – Detailed Staging

Key	
F	Future (Not constructed)
A	Active Cell
D	Daily Cover (Previous Cell)
I	Interim Cover
C	Capped Area

Cell	5	1	2	12A	12	3	4	4B	6	7	8	9	10	15	16	17	11	13	14	18	19	20	Total Constructed	Total Active	Total Interim	Total Capped
Cell Area	42,888.28	12,790.90	12,790.90	21,182.19	27,135.80	13,065.45	13,065.45	18,306.27	18,256.51	18,486.88	17,339.64	25,332.78	25,520.18	19,767.25	21,194.57	21,806.89	25,385.67	25,369.81	25,166.42	22,422.62	23,007.36	26,373.62				
Nov-20	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Dec-20	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Jan-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Feb-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Mar-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Apr-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
May-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Jun-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Jul-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Aug-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Sep-21	I	I	I	F	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	F	176,786	36,743	127,043	13,000
Oct-21	I	I	I	F	I	I	I	I	A	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	54,083	127,043	13,000
Nov-21	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Dec-21	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Jan-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Feb-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Mar-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Apr-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
May-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Jun-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Jul-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Aug-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Sep-22	I	I	I	F	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	194,126	35,827	145,300	13,000
Oct-22	I	I	I	A	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	215,308	57,009	145,300	13,000
Nov-22	I	I	I	A	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	F	F	215,308	57,009	145,300	13,000
Dec-22	I	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	163,786	13,000
Jan-23	I	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	163,786	13,000
Feb-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Mar-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Apr-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
May-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Jun-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Jul-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Aug-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Sep-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Oct-23	C	I	I	A	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Nov-23	C	I	I	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Dec-23	C	I	I	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Jan-24	C	I	I	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Feb-24	C	I	I	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	109,686	67,100
Mar-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Apr-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
May-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Jun-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Jul-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Aug-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Sep-24	C	C	C	A	I	I	I	I	I	I	D	F	F	F	F	F	F	F	F	F	F	F	215,308	38,522	84,086	92,700
Oct-24	C	C	C	A	I	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	240,641	46,515	101,426	92,700
Nov-24	C	C	C	D	I	I	I	I	I	I	I	A	F	F	F	F	F	F	F	F	F	F	240,641	46,515	101,426	92,700
Dec-24	C	C	C	I	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	122,608	92,700
Jan-25	C	C	C	I	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	122,608	92,700
Feb-25	C	C	C	I	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	122,608	92,700
Mar-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Apr-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
May-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Jun-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Jul-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Aug-25	C	C	C	C	I	I	I	I	I	I	I	A	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Sep-25	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900

Oct-25	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Nov-25	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Dec-25	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Jan-26	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Feb-26	C	C	C	C	I	I	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	101,408	113,900
Mar-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Apr-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
May-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Jun-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Jul-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Aug-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000

Sep-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Oct-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Nov-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Dec-26	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Jan-27	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Feb-27	C	C	C	C	C	C	I	I	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	66,308	149,000
Mar-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Apr-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
May-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Jun-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Jul-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Aug-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Sep-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Oct-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Nov-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Dec-27	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Jan-28	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Feb-28	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	F	F	266,161	50,853	29,208	186,100
Mar-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Apr-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
May-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Jun-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Jul-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Aug-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Sep-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Oct-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Nov-28	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Dec-28	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Jan-29	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Feb-29	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Mar-29	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	F	F	F	285,928	45,287	25,341	215,300
Apr-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
May-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jun-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jul-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Aug-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Sep-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Oct-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Nov-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Dec-29	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jan-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Feb-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Mar-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Apr-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
May-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jun-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jul-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Aug-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Sep-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Oct-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Nov-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Dec-30	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jan-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Feb-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Mar-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Apr-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
May-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jun-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Jul-31	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	F	F	F	307,123	40,962	50,861	215,300
Aug-31	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Sep-31	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Oct-31	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Nov-31	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Dec-31	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Jan-32	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Feb-32	C	C	C	C	C	C	C	C	C	C	I	I	I	I	A	A	F	F	F	F	F	F	328,930	43,001	70,628	215,300
Mar-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Apr-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
May-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jun-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jul-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400

Aug-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Sep-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Oct-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Nov-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Dec-32	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jan-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Feb-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Mar-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Apr-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
May-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400

Jun-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jul-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Aug-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Sep-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Oct-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Nov-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Dec-33	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jan-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Feb-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Mar-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Apr-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
May-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jun-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jul-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Aug-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Sep-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Oct-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Nov-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Dec-34	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Jan-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	F	F	F	328,930	43,001	2,528	283,400
Feb-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Mar-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Apr-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
May-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jun-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jul-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Aug-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Sep-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Oct-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Nov-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Dec-35	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jan-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Feb-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Mar-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Apr-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
May-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jun-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jul-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Aug-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Sep-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Oct-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Nov-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Dec-36	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jan-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Feb-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Mar-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Apr-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
May-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jun-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	F	F	F	354,316	47,193	23,723	283,400
Jul-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Aug-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Sep-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Oct-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Nov-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Dec-37	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Jan-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Feb-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Mar-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	A	A	F	F	F	F	379,685	50,755	45,530	283,400
Apr-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
May-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jun-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jul-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Aug-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Sep-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Oct-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Nov-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Dec-38	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jan-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Feb-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Mar-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Apr-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400

May-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jun-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jul-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Aug-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Sep-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Oct-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Nov-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Dec-39	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jan-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Feb-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Mar-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Apr-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
May-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jun-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Jul-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Aug-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Sep-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Oct-40	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	I	D	A	F	F	F	F	379,685	50,755	45,530	283,400
Nov-40	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Dec-40	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Jan-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Feb-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Mar-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Apr-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
May-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Jun-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Jul-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	F	F	F	404,852	50,536	10,916	343,400
Aug-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Sep-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Oct-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Nov-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Dec-41	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Jan-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Feb-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Mar-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Apr-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
May-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Jun-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Jul-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Aug-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Sep-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Oct-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Nov-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Dec-42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Jan-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Feb-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Mar-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	F	F	F	404,852	50,536	10,916	343,400
Apr-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
May-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Jun-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Jul-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Aug-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Sep-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Oct-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Nov-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Dec-43	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	A	A	F	F	427,274	47,589	36,285	343,400
Jan-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Feb-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Mar-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Apr-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
May-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Jun-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Jul-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Aug-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Sep-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Oct-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Nov-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Dec-44	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Jan-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Feb-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	D	A	F	F	427,274	47,589	36,285	343,400
Mar-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852

Apr-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
May-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
Jun-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
Jul-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
Aug-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
Sep-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	F	F	427,274	22,423	0	404,852
Oct-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Nov-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Dec-45	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Jan-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Feb-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Mar-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Apr-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
May-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Jun-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	F	450,282	45,430	0	404,852
Jul-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Aug-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Sep-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Oct-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Nov-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Dec-46	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Jan-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Feb-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Mar-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Apr-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
May-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Jun-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Jul-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Aug-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Sep-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Oct-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Nov-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Dec-47	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Jan-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Feb-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Mar-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
Apr-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	A	F	450,282	45,430	0	404,852
May-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Jun-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Jul-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Aug-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Sep-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Oct-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Nov-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Dec-48	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Jan-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	A	A	476,655	49,381	22,423	404,852
Feb-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Mar-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Apr-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
May-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Jun-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Jul-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Aug-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Sep-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Oct-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Nov-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Dec-49	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Jan-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Feb-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Mar-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Apr-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
May-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Jun-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Jul-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	A	476,655	49,381	22,423	404,852
Aug-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Sep-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Oct-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Nov-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Dec-50	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Jan-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852
Feb-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	D	D	476,655	49,381	22,423	404,852

Mar-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Apr-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
May-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Jun-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Jul-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Aug-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Sep-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Oct-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Nov-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Dec-51	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Jan-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Feb-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Mar-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Apr-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
May-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Jun-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Jul-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Aug-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Sep-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Oct-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Nov-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655
Dec-52	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	476,655	-	0	476,655

Appendix C – HELP Modelling Outputs

```
******************************************************************************
******************************************************************************
**                                                                          **
**                                                                          **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE               **
**                                                                          **
**              HELP Version 3.95 D          (10 August 2012)               **
**                               developed at                               **
**        Institute of Soil Science, University of Hamburg, Germany         **
**                                 based on                                 **
**              US HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)               **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                   **
**                    USAE WATERWAYS EXPERIMENT STATION                     **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY              **
**                                                                          **
**                                                                          **
******************************************************************************
******************************************************************************


 TIME:  12.12     DATE:   5.03.2021


 PRECIPITATION DATA FILE:      T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_Rain.d4
 TEMPERATURE DATA FILE:        T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_TAve.d7
 SOLAR RADIATION DATA FILE:    T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_SRad.d13
 EVAPOTRANSPIRATION DATA F. 1: T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup_D.d11
 SOIL AND DESIGN DATA FILE  1: T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup_D.d10
 OUTPUT DATA FILE:             T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup Daily Cover.out


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      TITLE:  Dardanup Leachate Balance - Daily Cover

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                           WEATHER DATA SOURCES
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```
NOTE:  PRECIPITATION DATA FOR     Dardanup            WA
         WAS ENTERED FROM A TEXT FILE.


NOTE:  TEMPERATURE DATA FOR       Dardanup            WA
         WAS ENTERED FROM A TEXT FILE.


NOTE:  SOLAR RADIATION DATA FOR   Dardanup            WA
         WAS ENTERED FROM A TEXT FILE.


******************************************************************************

                              LAYER DATA   1
------------------------------------------------------------------------------

                           VALID FOR  50 YEARS


    NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
             COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                LAYER  1
                                --------

                      TYPE 1 - VERTICAL PERCOLATION LAYER
                          MATERIAL TEXTURE NUMBER  10
          THICKNESS                  =     15.00   CM
          POROSITY                   =      0.3980 VOL/VOL
          FIELD CAPACITY             =      0.2440 VOL/VOL
          WILTING POINT              =      0.1360 VOL/VOL
          INITIAL SOIL WATER CONTENT  =      0.1534 VOL/VOL
          EFFECTIVE SAT. HYD. CONDUCT.=      0.1200E-03 CM/SEC


******************************************************************************

                 GENERAL DESIGN AND EVAPORATIVE ZONE DATA   1
------------------------------------------------------------------------------

                           VALID FOR  50 YEARS


        NOTE:  SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
                 SOIL DATA BASE USING SOIL TEXTURE #10 WITH BARE
```

```
          GROUND CONDITIONS, A SURFACE SLOPE OF  5.% AND
          A SLOPE LENGTH OF   50. METERS.

SCS RUNOFF CURVE NUMBER              =     94.17
FRACTION OF AREA ALLOWING RUNOFF     =      0.0    PERCENT
AREA PROJECTED ON HORIZONTAL PLANE   =      1.0000 HECTARES
EVAPORATIVE ZONE DEPTH               =     15.0    CM
INITIAL WATER IN EVAPORATIVE ZONE    =      2.302  CM
UPPER LIMIT OF EVAPORATIVE STORAGE   =      5.970  CM
FIELD CAPACITY OF EVAPORATIVE ZONE   =      3.660  CM
LOWER LIMIT OF EVAPORATIVE STORAGE   =      2.040  CM
SOIL EVAPORATION ZONE DEPTH          =     15.0    CM
INITIAL SNOW WATER                   =      0.000  CM
INITIAL INTERCEPTION WATER           =      0.000  CM
INITIAL WATER IN LAYER MATERIALS     =      2.302  CM
TOTAL INITIAL WATER                  =      2.302  CM
TOTAL SUBSURFACE INFLOW              =      0.00   MM/YR


******************************************************************************

                      EVAPOTRANSPIRATION DATA   1
------------------------------------------------------------------------------

                          VALID FOR  50 YEARS


 NOTE:  EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
          Dardanup            WA
     STATION LATITUDE                        = -33.42 DEGREES
     MAXIMUM LEAF AREA INDEX                 =   0.00
     START OF GROWING SEASON (JULIAN DATE)   =    105
     END OF GROWING SEASON (JULIAN DATE)     =    349
     EVAPORATIVE ZONE DEPTH                  =  15.0  CM
     AVERAGE ANNUAL WIND SPEED               =  13.60 KPH
     AVERAGE 1ST QUARTER RELATIVE HUMIDITY   =  47.7  %
     AVERAGE 2ND QUARTER RELATIVE HUMIDITY   =  67.3  %
     AVERAGE 3RD QUARTER RELATIVE HUMIDITY   =  70.2  %
     AVERAGE 4TH QUARTER RELATIVE HUMIDITY   =  50.8  %

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                   FINAL WATER STORAGE AT END OF YEAR 2019
------------------------------------------------------------------------------

                    LAYER         (CM)         (VOL/VOL)
                    -----        ------        ---------
                      1          2.0521          0.1368
```

TOTAL WATER IN LAYERS	2.052
SNOW WATER	0.000
INTERCEPTION WATER	0.000
TOTAL FINAL WATER	2.052

****

****

PEAK DAILY VALUES FOR YEARS 1970 THROUGH 2019

	(MM)	(CU. METERS)
PRECIPITATION	131.00	1310.000
RUNOFF	0.000	0.0000
PERCOLATION/LEAKAGE THROUGH LAYER 1	75.338516	753.38513
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.3752	
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.1360	

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AVERAGE MONTHLY VALUES (MM) FOR YEARS 1970 THROUGH 2019

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	13.15	14.98	20.44	45.41	122.21	160.73
	177.32	130.14	98.70	55.05	34.82	15.29
STD. DEVIATIONS	27.04	21.77	23.66	35.59	61.56	67.02
	61.91	43.32	40.70	27.60	23.11	21.12

RUNOFF

```
 ------
   TOTALS                  0.000    0.000    0.000    0.000    0.000    0.000
                           0.000    0.000    0.000    0.000    0.000    0.000

   STD. DEVIATIONS         0.000    0.000    0.000    0.000    0.000    0.000
                           0.000    0.000    0.000    0.000    0.000    0.000

 POTENTIAL EVAPOTRANSPIRATION
 ----------------------------
   TOTALS                236.493  199.910  181.519  103.750   76.326   60.765
                          60.934   76.468   97.788  158.393  186.339  220.294

   STD. DEVIATIONS         8.869   10.057    6.541    4.989    2.256    1.546
                           1.434    2.410    4.524    7.098    9.471   10.158

 ACTUAL EVAPOTRANSPIRATION
 -------------------------
   TOTALS                  9.168    8.563   10.454   21.204   44.991   53.760
                          59.119   68.522   67.038   45.454   26.843   13.111

   STD. DEVIATIONS         9.115    9.698   11.394   17.682   16.504    9.876
                           4.095   10.115   16.974   21.475   15.761   11.534

 PERCOLATION/LEAKAGE THROUGH LAYER  1
 ------------------------------------
   TOTALS                  5.4290   5.1263   7.5056  20.9742  71.6894 104.4412
                         118.4975  67.2307  35.5216  10.7396   8.1082   4.8145

   STD. DEVIATIONS        19.8407  11.8995  15.3603  24.3903  51.8044  61.6958
                          58.2855  36.5052  27.0659  11.7518  10.1254  14.1876

*******************************************************************************


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     AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1970 THROUGH 2019
-------------------------------------------------------------------------------

                                      MM               CU. METERS     PERCENT
                              --------------------    -----------   ---------
 PRECIPITATION                  888.25    ( 144.090)      8882.5     100.00

 RUNOFF                           0.000   (  0.0000)         0.00      0.000

 POTENTIAL EVAPOTRANSPIRATION 1658.979    ( 30.0523)     16589.79

 ACTUAL EVAPOTRANSPIRATION      428.226   ( 57.7084)      4282.26     48.210

 PERCOLATION/LEAKAGE THROUGH    460.07767 (116.95273)     4600.777    51.79573
   LAYER  1

 CHANGE IN WATER STORAGE         -0.050   (  0.2975)        -0.50     -0.006
```

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****

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******************************************************************************
******************************************************************************
**                                                                          **
**                                                                          **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE               **
**                                                                          **
**              HELP Version 3.95 D          (10 August 2012)               **
**                               developed at                               **
**        Institute of Soil Science, University of Hamburg, Germany         **
**                                 based on                                 **
**              US HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)               **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                   **
**                    USAE WATERWAYS EXPERIMENT STATION                     **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY              **
**                                                                          **
**                                                                          **
******************************************************************************
******************************************************************************


 TIME:  12.13     DATE:   5.03.2021


 PRECIPITATION DATA FILE:      T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_Rain.d4
 TEMPERATURE DATA FILE:        T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_TAve.d7
 SOLAR RADIATION DATA FILE:    T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\SILO_SRad.d13
 EVAPOTRANSPIRATION DATA F. 1: T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup_I.d11
 SOIL AND DESIGN DATA FILE  1: T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup_I_Lab.d10
 OUTPUT DATA FILE:             T:\2020\201515 Dardanup Landfill Landscaping Plan
- Cleanaway Solid Waste\4_Working\4 Calculations\Leachate Assessment\HELP\Rev2
Update\Dardanup Interim Cover.out


******************************************************************************

     TITLE:  Dardanup Leachate Balance - Interim Cover - Calibrated K

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                           WEATHER DATA SOURCES
------------------------------------------------------------------------------
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```
          NOTE:  PRECIPITATION DATA FOR     Dardanup            WA
                   WAS ENTERED FROM A TEXT FILE.


          NOTE:  TEMPERATURE DATA FOR       Dardanup            WA
                   WAS ENTERED FROM A TEXT FILE.


          NOTE:  SOLAR RADIATION DATA FOR   Dardanup            WA
                   WAS ENTERED FROM A TEXT FILE.


******************************************************************************

                            LAYER DATA   1
------------------------------------------------------------------------------

                          VALID FOR  50 YEARS


      NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
               COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                LAYER  1
                                --------

                     TYPE 1 - VERTICAL PERCOLATION LAYER
                         MATERIAL TEXTURE NUMBER   0
            THICKNESS                  =     50.00   CM
            POROSITY                   =      0.3980 VOL/VOL
            FIELD CAPACITY             =      0.2440 VOL/VOL
            WILTING POINT              =      0.1360 VOL/VOL
            INITIAL SOIL WATER CONTENT  =      0.1806 VOL/VOL
            EFFECTIVE SAT. HYD. CONDUCT.=      0.5200E-03 CM/SEC


******************************************************************************

                 GENERAL DESIGN AND EVAPORATIVE ZONE DATA   1
------------------------------------------------------------------------------

                          VALID FOR  50 YEARS


          NOTE:  SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
                   SOIL DATA BASE USING SOIL TEXTURE #10 WITH A
```

```
          POOR STAND OF GRASS, A SURFACE SLOPE OF 33.%
          AND A SLOPE LENGTH OF  200. METERS.

SCS RUNOFF CURVE NUMBER              =     90.29
FRACTION OF AREA ALLOWING RUNOFF     =    100.0    PERCENT
AREA PROJECTED ON HORIZONTAL PLANE   =      1.0000 HECTARES
EVAPORATIVE ZONE DEPTH               =     30.0    CM
INITIAL WATER IN EVAPORATIVE ZONE    =      4.149  CM
UPPER LIMIT OF EVAPORATIVE STORAGE   =     11.940  CM
FIELD CAPACITY OF EVAPORATIVE ZONE   =      7.320  CM
LOWER LIMIT OF EVAPORATIVE STORAGE   =      4.080  CM
SOIL EVAPORATION ZONE DEPTH          =     30.0    CM
INITIAL SNOW WATER                   =      0.000  CM
INITIAL INTERCEPTION WATER           =      0.000  CM
INITIAL WATER IN LAYER MATERIALS     =      9.029  CM
TOTAL INITIAL WATER                  =      9.029  CM
TOTAL SUBSURFACE INFLOW              =      0.00   MM/YR


******************************************************************************

                       EVAPOTRANSPIRATION DATA   1
------------------------------------------------------------------------------

                           VALID FOR  50 YEARS


 NOTE:  EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
          Dardanup            WA
     STATION LATITUDE                         = -33.42 DEGREES
     MAXIMUM LEAF AREA INDEX                  =   1.00
     START OF GROWING SEASON (JULIAN DATE)    =    105
     END OF GROWING SEASON (JULIAN DATE)      =    349
     EVAPORATIVE ZONE DEPTH                   =  30.0  CM
     AVERAGE ANNUAL WIND SPEED                =  13.60 KPH
     AVERAGE 1ST QUARTER RELATIVE HUMIDITY    =  47.7  %
     AVERAGE 2ND QUARTER RELATIVE HUMIDITY    =  67.3  %
     AVERAGE 3RD QUARTER RELATIVE HUMIDITY    =  70.2  %
     AVERAGE 4TH QUARTER RELATIVE HUMIDITY    =  50.8  %

******************************************************************************



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                   FINAL WATER STORAGE AT END OF YEAR 2019
------------------------------------------------------------------------------

                    LAYER          (CM)         (VOL/VOL)
                    -----         ------        ---------
                      1           8.9599          0.1792
```

TOTAL WATER IN LAYERS	8.960
SNOW WATER	0.000
INTERCEPTION WATER	0.000
TOTAL FINAL WATER	8.960

****

****

PEAK DAILY VALUES FOR YEARS 1970 THROUGH 2019

	(MM)	(CU. METERS)
PRECIPITATION	131.00	1310.000
RUNOFF	78.276	782.7569
PERCOLATION/LEAKAGE THROUGH LAYER 1	30.842375	308.42374
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.3320	
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.1360	

****

****

AVERAGE MONTHLY VALUES (MM) FOR YEARS 1970 THROUGH 2019

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	13.15	14.98	20.44	45.41	122.21	160.73
	177.32	130.14	98.70	55.05	34.82	15.29
STD. DEVIATIONS	27.04	21.77	23.66	35.59	61.56	67.02
	61.91	43.32	40.70	27.60	23.11	21.12
RUNOFF						

TOTALS	2.136	1.018	1.850	3.850	16.121	20.138
	21.954	10.086	4.508	1.236	0.809	1.408
STD. DEVIATIONS	11.278	3.404	5.881	11.778	18.100	18.269
	16.631	8.889	5.395	2.469	1.728	7.578

POTENTIAL EVAPOTRANSPIRATION

TOTALS	236.493	199.910	181.519	103.750	76.326	60.765
	60.934	76.468	97.788	158.393	186.339	220.294
STD. DEVIATIONS	8.869	10.057	6.541	4.989	2.256	1.546
	1.434	2.410	4.524	7.098	9.471	10.158

ACTUAL EVAPOTRANSPIRATION

TOTALS	10.040	9.461	12.835	22.416	47.349	54.924
	58.895	72.018	81.817	61.939	31.706	13.283
STD. DEVIATIONS	11.126	9.793	14.515	18.763	16.370	7.081
	2.334	5.899	12.819	26.193	18.960	14.171

PERCOLATION/LEAKAGE THROUGH LAYER 1

TOTALS	1.4534	0.9925	2.2771	8.7312	44.7597	81.3054
	96.6850	59.3065	25.3595	3.7443	0.7857	1.0703
STD. DEVIATIONS	5.5764	3.5588	5.9940	13.7775	35.1350	48.6170
	42.8564	32.1503	25.1160	7.8713	3.2230	5.3497

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1970 THROUGH 2019

	MM		CU. METERS	PERCENT
PRECIPITATION	888.25	(144.090)	8882.5	100.00
RUNOFF	85.114	(33.1110)	851.14	9.582
POTENTIAL EVAPOTRANSPIRATION	1658.979	(30.0523)	16589.79	
ACTUAL EVAPOTRANSPIRATION	476.683	(62.3879)	4766.83	53.665
PERCOLATION/LEAKAGE THROUGH LAYER 1	326.47061	(95.51300)	3264.706	36.75419
CHANGE IN WATER STORAGE	-0.014	(0.4021)	-0.14	-0.002

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Appendix D – Leachate Balance Modelling Results

Leachate Pond Water Balance

Project:	Dardanup Landfill Leachate Balance
Job No:	201515
Client:	Cleanaway
Date:	5/03/2021
Revision:	2
Calculated:	IPN
Review:	

Inputs	
Infiltration Coefficients	
Pan to Pond Evaporation Factor	0.8
Pond Total Surface Area (m2)	22985
Pond Evaporation Area (m2)	20255
Operational Pond Volume (m3)	26697
Total Pond Volume (m3)	37258
Waste	
Annual Waste Disposal (t)	350000
Waste Density (t/m3)	1
Absorptive Capacity (m3/t)	0.025
% of interim area runoff entering LCS	0.2

Climate Data					
Month	Rainfall (mm)	Pan Evaporation (mm)	Pond Evaporation (mm)	Forced Evaporation (m3/mo)	Irrigation (m3/mo)
January	12.9	232.2	209.0	147.3	2790
February	14.8	194.4	175.0	133.1	2520
March	20.7	165.2	132.2	147.3	2790
April	45.1	97.6	78.1	106.9	0
May	122.2	66.0	52.8	110.5	0
June	161.2	50.5	40.4	106.9	0
July	177.3	52.2	41.8	73.7	0
August	129.1	63.9	51.1	73.7	0
September	99.1	81.8	65.4	71.3	0
October	54.6	118.3	94.7	110.5	0
November	34.8	158.3	126.6	106.9	2700
December	15.3	208.1	187.3	110.5	2790

Leachate Generation				
Month	Final Cap	Interim Cover	Interim Cover Runoff	Daily Cover
January	0.64	1.45	2.14	5.43
February	0.74	0.99	1.02	5.13
March	1.04	2.28	1.85	7.51
April	2.26	8.73	3.85	20.97
May	6.11	44.76	16.12	71.69
June	8.06	81.31	20.14	104.44
July	8.87	96.69	21.95	118.50
August	6.46	59.31	10.09	67.23
September	4.96	25.36	4.51	35.52
October	2.73	3.75	1.24	10.74
November	1.74	0.79	0.81	8.11
December	0.76	1.07	1.41	4.81

	Active Area				Climate Data		Leachate Generation						
Date	**Total Constructed Area**	**Total Active Area**	**Total Interim Area**	**Total Final Capped Area**	**Rainfall**	**Pond Evaporation**	**Capped Area Leachate Generation**	**Active Area Leachate Generation**	**Interim Area Leachate Generation**	**Interim Area Runoff to LCS**	**Pond Leachate Generation**	**Total Leachate Generation**	**Total Leachate Generation**
Input	**Input** (m^2)	**Input** (m^2)	**Input** (m^2)	**Input** (m^2)	Input2 (mm/mo)	Input2 (mm/mo)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	Cells Only (m^3)	Cells + Pond (m^3)
Nov-20	176786	36743	127043	13000	34.82	126.64	22.63	297.99	100.36	20.58	800.34	441.57	1241.90
Dec-20	176786	36743	127043	13000	15.29	187.27	9.94	176.74	135.94	35.83	351.39	358.44	709.83
Jan-21	176786	36743	127043	13000	12.90	208.98	8.38	199.52	184.21	54.27	296.42	446.38	742.80
Feb-21	176786	36743	127043	13000	14.79	174.96	9.61	188.49	125.77	25.87	339.83	349.74	689.58
Mar-21	176786	36743	127043	13000	20.74	132.19	13.48	275.94	289.66	47.01	476.60	626.08	1102.69
Apr-21	176786	36743	127043	13000	45.12	78.05	29.33	770.51	1109.09	97.82	1036.98	2006.74	3043.73
May-21	176786	36743	127043	13000	122.23	52.80	79.45	2634.13	5686.45	409.59	2809.44	8809.62	11619.06
Jun-21	176786	36743	127043	13000	161.25	40.40	104.81	3837.48	10329.87	511.73	3706.22	14783.89	18490.11
Jul-21	176786	36743	127043	13000	177.34	41.79	115.27	4354.09	12283.79	557.72	4076.05	17310.87	21386.92
Aug-21	176786	36743	127043	13000	129.12	51.09	83.93	2470.26	7534.92	256.37	2967.90	10345.48	13313.39
Sep-21	176786	36743	127043	13000	99.14	65.41	64.44	1305.13	3221.81	114.59	2278.81	4705.97	6984.78
Oct-21	194126	54083	127043	13000	54.61	94.65	35.50	580.85	476.41	31.51	1255.24	1124.27	2379.51
Nov-21	194126	35827	145300	13000	34.82	126.64	22.63	290.55	114.79	23.54	800.34	451.51	1251.85
Dec-21	194126	35827	145300	13000	15.29	187.27	9.94	172.33	155.47	40.97	351.39	378.71	730.10
Jan-22	194126	35827	145300	13000	12.90	208.98	8.38	194.54	210.68	62.07	296.42	475.68	772.09
Feb-22	194126	35827	145300	13000	14.79	174.96	9.61	183.79	143.85	29.58	339.83	366.83	706.66
Mar-22	194126	35827	145300	13000	20.74	132.19	13.48	269.06	331.28	53.76	476.60	667.58	1144.18
Apr-22	194126	35827	145300	13000	45.12	78.05	29.33	751.28	1268.47	111.88	1036.98	2160.95	3197.94
May-22	194126	35827	145300	13000	122.23	52.80	79.45	2568.40	6503.61	468.45	2809.44	9619.91	12429.35
Jun-22	194126	35827	145300	13000	161.25	40.40	104.81	3741.72	11814.31	585.27	3706.22	16246.10	19952.32
Jul-22	194126	35827	145300	13000	177.34	41.79	115.27	4245.44	14049.01	637.87	4076.05	19047.59	23123.64
Aug-22	194126	35827	145300	13000	129.12	51.09	83.93	2408.62	8617.72	293.21	2967.90	11403.48	14371.38
Sep-22	194126	35827	145300	13000	99.14	65.41	64.44	1272.56	3684.80	131.06	2278.81	5152.86	7431.66
Oct-22	215308	57009	145300	13000	54.61	94.65	35.50	612.27	544.87	36.03	1255.24	1228.68	2483.92
Nov-22	215308	57009	145300	13000	34.82	126.64	22.63	462.34	114.79	23.54	800.34	623.30	1423.64
Dec-22	215308	38522	163786	13000	15.29	187.27	9.94	185.29	175.25	46.19	351.39	416.67	768.06
Jan-23	215308	38522	163786	13000	12.90	208.98	8.38	209.17	237.49	69.97	296.42	525.02	821.43
Feb-23	215308	38522	109686	67100	14.79	174.96	49.60	197.62	108.59	22.33	339.83	378.14	717.98
Mar-23	215308	38522	109686	67100	20.74	132.19	69.57	289.30	250.09	40.58	476.60	649.53	1126.14
Apr-23	215308	38522	109686	67100	45.12	78.05	151.36	807.80	957.56	84.46	1036.98	2001.19	3038.17
May-23	215308	38522	109686	67100	122.23	52.80	410.08	2761.63	4909.57	353.63	2809.44	8434.90	11244.35
Jun-23	215308	38522	109686	67100	161.25	40.40	540.98	4023.22	8918.60	441.82	3706.22	13924.62	17630.84
Jul-23	215308	38522	109686	67100	177.34	41.79	594.96	4564.84	10605.58	481.52	4076.05	16246.90	20322.95
Aug-23	215308	38522	109686	67100	129.12	51.09	433.21	2589.82	6505.50	221.35	2967.90	9749.88	12717.79
Sep-23	215308	38522	109686	67100	99.14	65.41	332.63	1368.30	2781.65	98.94	2278.81	4581.51	6860.31
Oct-23	215308	38522	109686	67100	54.61	94.65	183.22	413.72	411.32	27.20	1255.24	1035.47	2290.72
Nov-23	215308	38522	109686	67100	34.82	126.64	116.82	312.41	86.65	17.77	800.34	533.65	1333.99
Dec-23	215308	38522	109686	67100	15.29	187.27	51.29	185.29	117.36	30.93	351.39	384.88	736.27
Jan-24	215308	38522	109686	67100	12.90	208.98	43.27	209.17	159.05	46.86	296.42	458.34	754.76
Feb-24	215308	38522	109686	67100	14.79	174.96	49.60	197.62	108.59	22.33	339.83	378.14	717.98
Mar-24	215308	38522	84086	92700	20.74	132.19	96.11	289.30	191.72	31.11	476.60	608.24	1084.84
Apr-24	215308	38522	84086	92700	45.12	78.05	209.11	807.80	734.07	64.75	1036.98	1815.74	2852.72
May-24	215308	38522	84086	92700	122.23	52.80	566.53	2761.63	3763.71	271.09	2809.44	7362.97	10172.41
Jun-24	215308	38522	84086	92700	161.25	40.40	747.37	4023.22	6837.07	338.70	3706.22	11946.36	15652.58
Jul-24	215308	38522	84086	92700	177.34	41.79	821.95	4564.84	8130.32	369.14	4076.05	13886.24	17962.30
Aug-24	215308	38522	84086	92700	129.12	51.09	598.49	2589.82	4987.17	169.69	2967.90	8345.16	11313.07
Sep-24	215308	38522	84086	92700	99.14	65.41	459.53	1368.30	2132.43	75.85	2278.81	4036.10	6314.91
Oct-24	240641	46515	101426	92700	54.61	94.65	253.12	499.57	380.35	25.15	1255.24	1158.20	2413.44
Nov-24	240641	46515	101426	92700	34.82	126.64	161.39	377.24	80.13	16.43	800.34	635.18	1435.52
Dec-24	266161	50853	122608	92700	15.29	187.27	70.86	244.60	131.19	34.58	351.39	481.23	832.62
Jan-25	266161	50853	122608	92700	12.90	208.98	59.77	276.13	177.78	52.38	296.42	566.07	862.48
Feb-25	266161	50853	122608	92700	14.79	174.96	68.53	260.88	121.38	24.96	339.83	475.75	815.58
Mar-25	266161	50853	101408	113900	20.74	132.19	118.09	381.91	231.21	37.52	476.60	768.73	1245.33
Apr-25	266161	50853	101408	113900	45.12	78.05	256.93	1066.39	885.29	78.08	1036.98	2286.70	3323.68
May-25	266161	50853	101408	113900	122.23	52.80	696.10	3645.65	4539.03	326.94	2809.44	9207.72	12017.16
Jun-25	266161	50853	101408	113900	161.25	40.40	918.29	5311.08	8245.51	408.47	3706.22	14883.35	18589.57
Jul-25	266161	50853	101408	113900	177.34	41.79	1009.92	6026.08	9805.17	445.18	4076.05	17286.35	21362.40
Aug-25	266161	50853	101408	113900	129.12	51.09	735.36	3418.84	6014.52	204.64	2967.90	10373.37	13341.27
Sep-25	266161	50853	101408	113900	99.14	65.41	564.62	1806.30	2571.71	91.47	2278.81	5034.10	7312.91
Oct-25	266161	50853	101408	113900	54.61	94.65	311.01	546.16	380.28	25.15	1255.24	1262.60	2517.85
Nov-25	266161	50853	101408	113900	34.82	126.64	198.30	412.42	80.11	16.43	800.34	707.26	1507.60

	Absorptive Capacity					Losses				Pond Balance			Storage Balance - Full Pond	
Date	**Waste Filling**	**Absorptive Capacity**	**Excess Absorptive Capacity**	**Total Leachate Generation after Absorption**	**Total Leachate Generation after Absorption**	**Evaporation**	**Forced Evaporation**	**Irrigation**	**Total Losses**	**End Month**	**Excess Leachate**	**Cumulative Excess Leachate**	**Excess Disposal Capacity**	**Cell Storage**
Input	(t)	(m^3)	(m^3)	In Cells Only (m^3)	Total (m^3)	(m^3)	(m^3)	Input2 (m^3)	(m^3)	(m^3)	Above freeboard level (m^3)	(m^3)	(m^3)	(m^3)
										26697				0
Nov-20	350000	729.17	287.60	0.00	800.34	2565.16	106.92	2700.00	5372.08	22125.26	0.00	-4571.74	4571.74	0.00
Dec-20	350000	1016.77	658.33	0.00	351.39	3793.16	110.48	2790.00	6693.64	15783.01	0.00	-10913.99	6342.25	0.00
Jan-21	350000	1387.50	941.11	0.00	296.42	4232.85	147.31	2790.00	7170.17	8909.26	0.00	-17787.74	6873.75	0.00
Feb-21	350000	1670.28	1320.54	0.00	339.83	3543.72	133.06	2520.00	6196.78	3052.32	0.00	-23644.68	5856.95	0.00
Mar-21	350000	2049.70	1423.62	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	-28782.99	5138.31	0.00
Apr-21	350000	2152.79	146.04	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	-29433.90	650.91	0.00
May-21	350000	875.21	0.00	7934.41	10743.85	1069.50	110.48	0.00	1179.98	9563.87	0.00	-19870.03	-9563.87	9563.87
Jun-21	350000	729.17	0.00	14054.72	17760.94	818.37	106.92	0.00	925.29	26399.52	431.69	-3034.38	-16835.66	26399.52
Jul-21	350000	729.17	0.00	16581.70	20657.76	846.45	73.66	0.00	920.11	26697.00	20169.34	16703.27	-19737.65	46137.17
Aug-21	350000	729.17	0.00	9616.32	12584.22	1034.93	73.66	0.00	1108.58	26697.00	12204.81	28178.91	-11475.64	57612.81
Sep-21	350000	729.17	0.00	3976.81	6255.61	1324.88	71.28	0.00	1396.16	26697.00	5588.61	33038.36	-4859.45	62472.26
Oct-21	350000	729.17	0.00	395.10	1650.35	1917.20	110.48	0.00	2027.69	26319.66	351.82	32661.02	377.34	62094.92
Nov-21	350000	729.17	277.66	0.00	800.34	2565.16	106.92	2700.00	5372.08	21747.92	0.00	28089.28	4571.74	57523.18
Dec-21	350000	1006.82	628.11	0.00	351.39	3793.16	110.48	2790.00	6693.64	15405.67	0.00	21747.03	6342.25	51180.93
Jan-22	350000	1357.28	881.60	0.00	296.42	4232.85	147.31	2790.00	7170.17	8531.92	0.00	14873.28	6873.75	44307.18
Feb-22	350000	1610.77	1243.94	0.00	339.83	3543.72	133.06	2520.00	6196.78	2674.97	0.00	9016.33	5856.95	38450.23
Mar-22	350000	1973.11	1305.53	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	3878.02	5138.31	33311.92
Apr-22	350000	2034.70	0.00	126.26	1163.24	1580.97	106.92	0.00	1687.89	0.00	0.00	3353.37	524.65	32787.27
May-22	350000	729.17	0.00	8890.74	11700.18	1069.50	110.48	0.00	1179.98	10520.20	0.00	13873.58	-10520.20	43307.48
Jun-22	350000	729.17	0.00	15516.94	19223.16	818.37	106.92	0.00	925.29	26697.00	2850.24	32171.45	-18297.87	61605.35
Jul-22	350000	729.17	0.00	18318.42	22394.48	846.45	73.66	0.00	920.11	26697.00	22203.53	53645.81	-21474.37	83079.72
Aug-22	350000	729.17	0.00	10674.31	13642.22	1034.93	73.66	0.00	1108.58	26697.00	13262.80	66179.45	-12533.63	95613.35
Sep-22	350000	729.17	0.00	4423.69	6702.50	1324.88	71.28	0.00	1396.16	26697.00	6035.50	71485.78	-5306.33	100919.68
Oct-22	350000	729.17	0.00	499.51	1754.76	1917.20	110.48	0.00	2027.69	26424.07	456.24	71212.85	272.93	100646.75
Nov-22	350000	729.17	105.87	0.00	800.34	2565.16	106.92	2700.00	5372.08	21852.33	0.00	66641.11	4571.74	96075.01
Dec-22	350000	835.03	418.37	0.00	351.39	3793.16	110.48	2790.00	6693.64	15510.08	0.00	60298.86	6342.25	89732.76
Jan-23	350000	1147.53	622.52	0.00	296.42	4232.85	147.31	2790.00	7170.17	8636.33	0.00	53425.11	6873.75	82859.01
Feb-23	350000	1351.69	973.54	0.00	339.83	3543.72	133.06	2520.00	6196.78	2779.39	0.00	47568.17	5856.95	77002.07
Mar-23	350000	1702.71	1053.17	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	42429.85	5138.31	71863.76
Apr-23	350000	1782.34	0.00	218.85	1255.83	1580.97	106.92	0.00	1687.89	0.00	0.00	41997.79	432.06	71431.70
May-23	350000	729.17	0.00	7705.74	10515.18	1069.50	110.48	0.00	1179.98	9335.20	0.00	51332.99	-9335.20	80766.90
Jun-23	350000	729.17	0.00	13195.45	16901.67	818.37	106.92	0.00	925.29	25311.59	0.00	67309.38	-15976.39	96743.28
Jul-23	350000	729.17	0.00	15517.74	19593.79	846.45	73.66	0.00	920.11	26697.00	18017.43	85983.06	-18673.68	115416.96
Aug-23	350000	729.17	0.00	9020.72	11988.62	1034.93	73.66	0.00	1108.58	26697.00	11609.20	96863.09	-10880.04	126297.00
Sep-23	350000	729.17	0.00	3852.34	6131.14	1324.88	71.28	0.00	1396.16	26697.00	5464.15	101598.08	-4734.98	131031.98
Oct-23	350000	729.17	0.00	306.31	1561.55	1917.20	110.48	0.00	2027.69	26230.86	263.03	101131.94	466.14	130565.84
Nov-23	350000	729.17	195.51	0.00	800.34	2565.16	106.92	2700.00	5372.08	21659.12	0.00	96560.20	4571.74	125994.10
Dec-23	350000	924.68	539.80	0.00	351.39	3793.16	110.48	2790.00	6693.64	15316.88	0.00	90217.95	6342.25	119651.85
Jan-24	350000	1268.97	810.62	0.00	296.42	4232.85	147.31	2790.00	7170.17	8443.13	0.00	83344.20	6873.75	112778.10
Feb-24	350000	1539.79	1161.65	0.00	339.83	3543.72	133.06	2520.00	6196.78	2586.18	0.00	77487.26	5856.95	106921.16
Mar-24	350000	1890.82	1282.58	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	72348.94	5138.31	101782.84
Apr-24	350000	2011.75	196.01	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	71698.04	650.91	101131.94
May-24	350000	925.18	0.00	6437.79	9247.23	1069.50	110.48	0.00	1179.98	8067.25	0.00	79765.29	-8067.25	109199.19
Jun-24	350000	729.17	0.00	11217.19	14923.41	818.37	106.92	0.00	925.29	22065.38	0.00	93763.42	-13998.13	123197.32
Jul-24	350000	729.17	0.00	13157.08	17233.13	846.45	73.66	0.00	920.11	26697.00	12410.57	110076.44	-16313.02	139510.34
Aug-24	350000	729.17	0.00	7616.00	10583.90	1034.93	73.66	0.00	1108.58	26697.00	10204.48	119551.75	-9475.32	148985.65
Sep-24	350000	729.17	0.00	3306.94	5585.74	1324.88	71.28	0.00	1396.16	26697.00	4918.74	123741.33	-4189.58	153175.23
Oct-24	350000	729.17	0.00	429.03	1684.27	1917.20	110.48	0.00	2027.69	26353.59	385.75	123397.92	343.41	152831.82
Nov-24	350000	729.17	93.98	0.00	800.34	2565.16	106.92	2700.00	5372.08	21781.85	0.00	118826.18	4571.74	148260.08
Dec-24	350000	823.15	341.92	0.00	351.39	3793.16	110.48	2790.00	6693.64	15439.60	0.00	112483.93	6342.25	141917.83
Jan-25	350000	1071.09	505.02	0.00	296.42	4232.85	147.31	2790.00	7170.17	8565.85	0.00	105610.18	6873.75	135044.08
Feb-25	350000	1234.19	758.44	0.00	339.83	3543.72	133.06	2520.00	6196.78	2708.90	0.00	99753.23	5856.95	129187.14
Mar-25	350000	1487.61	718.88	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	94614.92	5138.31	124048.82
Apr-25	350000	1448.05	0.00	838.65	1875.64	1580.97	106.92	0.00	1687.89	187.75	0.00	94802.67	-187.75	124236.57
May-25	350000	729.17	0.00	8478.55	11288.00	1069.50	110.48	0.00	1179.98	10295.76	0.00	104910.69	-10108.02	134344.59
Jun-25	350000	729.17	0.00	14154.19	17860.40	818.37	106.92	0.00	925.29	26697.00	1263.05	121845.80	-16935.12	151279.71
Jul-25	350000	729.17	0.00	16557.18	20633.23	846.45	73.66	0.00	920.11	26697.00	20442.29	141558.93	-19713.12	170992.83
Aug-25	350000	729.17	0.00	9644.20	12612.11	1034.93	73.66	0.00	1108.58	26697.00	12232.69	153062.45	-11503.52	182496.35
Sep-25	350000	729.17	0.00	4304.93	6583.74	1324.88	71.28	0.00	1396.16	26697.00	5916.74	158250.03	-5187.58	187683.93
Oct-25	350000	729.17	0.00	533.44	1788.68	1917.20	110.48	0.00	2027.69	26457.99	490.16	158011.02	239.01	187444.92
Nov-25	350000	729.17	21.91	0.00	800.34	2565.16	106.92	2700.00	5372.08	21886.25	0.00	153439.28	4571.74	182873.18

Dec-25	266161	50853	101408	113900	15.29	187.27	87.07	244.60	108.51	28.60	351.39	468.77	820.17	350000	751.08	282.30	0.00	351.39	3793.16	110.48	2790.00	6693.64	15544.01	0.00	147097.04	6342.25	176530.94
Jan-26	266161	50853	101408	113900	12.90	208.98	73.44	276.13	147.04	43.32	296.42	539.94	836.35	350000	1011.47	471.53	0.00	296.42	4232.85	147.31	2790.00	7170.17	8670.26	0.00	140223.29	6873.75	169657.19
Feb-26	266161	50853	101408	113900	14.79	174.96	84.20	260.88	100.39	20.65	339.83	466.12	805.95	350000	1200.70	734.58	0.00	339.83	3543.72	133.06	2520.00	6196.78	2813.31	0.00	134366.34	5856.95	163800.24
Mar-26	266161	50853	66308	149000	20.74	132.19	154.48	381.91	151.18	24.53	476.60	712.10	1188.70	350000	1463.75	751.65	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	129228.03	5138.31	158661.93
Apr-26	266161	50853	66308	149000	45.12	78.05	336.11	1066.39	578.87	51.06	1036.98	2032.43	3069.41	350000	1480.81	0.00	551.61	1588.60	1580.97	106.92	0.00	1687.89	0.00	0.00	129128.74	99.29	158562.64
May-26	266161	50853	66308	149000	122.23	52.80	910.61	3645.65	2967.96	213.78	2809.44	7737.99	10547.44	350000	729.17	0.00	7008.83	9818.27	1069.50	110.48	0.00	1179.98	8638.29	0.00	137767.03	-8638.29	167200.93
Jun-26	266161	50853	66308	149000	161.25	40.40	1201.28	5311.08	5391.53	267.09	3706.22	12170.97	15877.19	350000	729.17	0.00	11441.81	15148.03	818.37	106.92	0.00	925.29	22861.03	0.00	151989.77	-14222.74	181423.67
Jul-26	266161	50853	66308	149000	177.34	41.79	1321.15	6026.08	6411.35	291.09	4076.05	14049.66	18125.72	350000	729.17	0.00	13320.50	17396.55	846.45	73.66	0.00	920.11	26697.00	13369.64	168466.21	-16476.44	197900.11
Aug-26	266161	50853	66308	149000	129.12	51.09	961.97	3418.84	3932.74	133.81	2967.90	8447.37	11415.27	350000	729.17	0.00	7718.20	10686.11	1034.93	73.66	0.00	1108.58	26697.00	10306.69	178043.73	-9577.52	207477.63
Sep-26	266161	50853	66308	149000	99.14	65.41	738.62	1806.30	1681.58	59.81	2278.81	4286.30	6565.11	350000	729.17	0.00	3557.13	5835.94	1324.88	71.28	0.00	1396.16	26697.00	5168.94	182483.51	-4439.78	211917.41
Oct-26	266161	50853	66308	149000	54.61	94.65	406.86	546.16	248.66	16.44	1255.24	1218.12	2473.36	350000	729.17	0.00	488.95	1744.19	1917.20	110.48	0.00	2027.69	26413.51	445.67	182200.01	283.49	211633.91
Nov-26	266161	50853	66308	149000	34.82	126.64	259.41	412.42	52.38	10.74	800.34	734.95	1535.29	350000	729.17	0.00	5.79	806.12	2565.16	106.92	2700.00	5372.08	21847.55	0.00	177634.06	4565.96	207067.96
Dec-26	266161	50853	66308	149000	15.29	187.27	113.90	244.60	70.95	18.70	351.39	448.15	799.54	350000	729.17	281.02	0.00	351.39	3793.16	110.48	2790.00	6693.64	15505.31	0.00	171291.81	6342.25	200725.71
Jan-27	266161	50853	66308	149000	12.90	208.98	96.08	276.13	96.15	28.33	296.42	496.68	793.10	350000	1010.19	513.50	0.00	296.42	4232.85	147.31	2790.00	7170.17	8631.56	0.00	164418.06	6873.75	193851.96
Feb-27	266161	50853	66308	149000	14.79	174.96	110.15	260.88	65.65	13.50	339.83	450.17	790.00	350000	1242.67	792.50	0.00	339.83	3543.72	133.06	2520.00	6196.78	2774.61	0.00	158561.12	5856.95	187995.02
Mar-27	266161	50853	29208	186100	20.74	132.19	192.94	381.91	66.59	10.81	476.60	652.25	1128.85	350000	1521.67	869.42	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	153422.80	5138.31	182856.71
Apr-27	266161	50853	29208	186100	45.12	78.05	419.80	1066.39	254.99	22.49	1036.98	1763.67	2800.65	350000	1598.59	0.00	165.08	1202.06	1580.97	106.92	0.00	1687.89	0.00	0.00	152936.98	485.83	182370.88
May-27	266161	50853	29208	186100	122.23	52.80	1137.34	3645.65	1307.36	94.17	2809.44	6184.52	8993.97	350000	729.17	0.00	5455.36	8264.80	1069.50	110.48	0.00	1179.98	7084.82	0.00	160021.80	-7084.82	189455.70
Jun-27	266161	50853	29208	186100	161.25	40.40	1500.39	5311.08	2374.92	117.65	3706.22	9304.04	13010.26	350000	729.17	0.00	8574.88	12281.10	818.37	106.92	0.00	925.29	18440.63	0.00	171377.61	-11355.81	200811.51
Jul-27	266161	50853	29208	186100	177.34	41.79	1650.10	6026.08	2824.15	128.22	4076.05	10628.55	14704.60	350000	729.17	0.00	9899.39	13975.44	846.45	73.66	0.00	920.11	26697.00	5528.13	184432.94	-13055.33	213866.84
Aug-27	266161	50853	29208	186100	129.12	51.09	1201.49	3418.84	1732.34	58.94	2967.90	6411.62	9379.53	350000	729.17	0.00	5682.46	8650.36	1034.93	73.66	0.00	1108.58	26697.00	8270.94	191974.72	-7541.78	221408.62
Sep-27	266161	50853	29208	186100	99.14	65.41	922.53	1806.30	740.72	26.35	2278.81	3495.89	5774.70	350000	729.17	0.00	2766.72	5045.53	1324.88	71.28	0.00	1396.16	26697.00	4378.53	195624.08	-3649.37	225057.98
Oct-27	266161	50853	29208	186100	54.61	94.65	508.16	546.16	109.53	7.24	1255.24	1171.10	2426.34	350000	729.17	0.00	441.93	1697.17	1917.20	110.48	0.00	2027.69	26366.49	398.65	195293.57	330.51	224727.47
Nov-27	266161	50853	29208	186100	34.82	126.64	324.00	412.42	23.07	4.73	800.34	764.22	1564.56	350000	729.17	0.00	35.06	835.39	2565.16	106.92	2700.00	5372.08	21829.80	0.00	190756.89	4536.68	220190.79
Dec-27	266161	50853	29208	186100	15.29	187.27	142.25	244.60	31.25	8.24	351.39	426.35	777.74	350000	729.17	302.82	0.00	351.39	3793.16	110.48	2790.00	6693.64	15487.56	0.00	184414.64	6342.25	213848.54
Jan-28	266161	50853	29208	186100	12.90	208.98	120.00	276.13	42.35	12.48	296.42	450.96	747.38	350000	1031.99	581.03	0.00	296.42	4232.85	147.31	2790.00	7170.17	8613.81	0.00	177540.89	6873.75	206974.79
Feb-28	266161	50853	29208	186100	14.79	174.96	137.57	260.88	28.92	5.95	339.83	433.31	773.15	350000	1310.19	876.88	0.00	339.83	3543.72	133.06	2520.00	6196.78	2756.86	0.00	171683.94	5856.95	201117.84
Mar-28	285928	45287	25341	215300	20.74	132.19	223.22	340.11	57.78	9.38	476.60	630.48	1107.08	350000	1606.05	975.57	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	166545.63	5138.31	195979.53
Apr-28	285928	45287	25341	215300	45.12	78.05	485.67	949.68	221.23	19.51	1036.98	1676.09	2713.07	350000	1704.74	28.65	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	165894.72	650.91	195328.63
May-28	285928	45287	25341	215300	122.23	52.80	1315.80	3246.66	1134.27	81.70	2809.44	5778.42	8587.86	350000	757.81	0.00	5020.61	7830.05	1069.50	110.48	0.00	1179.98	6650.07	0.00	172544.79	-6650.07	201978.69
Jun-28	285928	45287	25341	215300	161.25	40.40	1735.80	4729.82	2060.48	102.07	3706.22	8628.18	12334.40	350000	729.17	0.00	7899.01	11605.23	818.37	106.92	0.00	925.29	17330.01	0.00	183224.74	-10679.94	212658.64
Jul-28	285928	45287	25341	215300	177.34	41.79	1909.01	5366.56	2450.23	111.25	4076.05	9837.05	13913.10	350000	729.17	0.00	9107.88	13183.93	846.45	73.66	0.00	920.11	26697.00	3626.00	195488.56	-12263.82	224922.46
Aug-28	285928	45287	25341	215300	129.12	51.09	1390.01	3044.67	1502.98	51.14	2967.90	5988.80	8956.71	350000	729.17	0.00	5259.64	8227.54	1034.93	73.66	0.00	1108.58	26697.00	7848.13	202607.52	-7118.96	232041.42
Sep-28	285928	45287	25341	215300	99.14	65.41	1067.28	1608.61	642.65	22.86	2278.81	3341.39	5620.20	350000	729.17	0.00	2612.23	4891.03	1324.88	71.28	0.00	1396.16	26697.00	4224.03	206102.39	-3494.87	235536.29
Oct-28	285928	45287	25341	215300	54.61	94.65	587.89	486.39	95.03	6.28	1255.24	1175.59	2430.84	350000	729.17	0.00	446.43	1701.67	1917.20	110.48	0.00	2027.69	26370.98	403.15	205776.37	326.02	235210.27
Nov-28	285928	45287	25341	215300	34.82	126.64	374.84	367.28	20.02	4.11	800.34	766.24	1566.58	350000	729.17	0.00	37.08	837.41	2565.16	106.92	2700.00	5372.08	21836.32	0.00	201241.71	4534.66	230675.61
Dec-28	285928	45287	25341	215300	15.29	187.27	164.58	217.83	27.11	7.15	351.39	416.67	768.06	350000	729.17	312.50	0.00	351.39	3793.16	110.48	2790.00	6693.64	15494.07	0.00	194899.46	6342.25	224333.36
Jan-29	285928	45287	25341	215300	12.90	208.98	138.83	245.91	36.74	10.83	296.42	432.31	728.72	350000	1041.66	609.36	0.00	296.42	4232.85	147.31	2790.00	7170.17	8620.32	0.00	188025.71	6873.75	217459.61
Feb-29	285928	45287	25341	215300	14.79	174.96	159.16	232.32	25.09	5.16	339.83	421.73	761.57	350000	1338.52	916.79	0.00	339.83	3543.72	133.06	2520.00	6196.78	2763.38	0.00	182168.76	5856.95	211602.67
Mar-29	285928	45287	25341	215300	20.74	132.19	223.22	340.11	57.78	9.38	476.60	630.48	1107.08	350000	1645.96	1015.48	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	177030.45	5138.31	206464.35
Apr-29	307123	40962	50861	215300	45.12	78.05	485.67	858.97	444.02	39.16	1036.98	1827.82	2864.81	350000	1744.65	0.00	83.17	1120.16	1580.97	106.92	0.00	1687.89	0.00	0.00	176462.72	567.73	205896.62
May-29	307123	40962	50861	215300	122.23	52.80	1315.80	2936.55	2276.55	163.98	2809.44	6692.88	9502.32	350000	729.17	0.00	5963.71	8773.15	1069.50	110.48	0.00	1179.98	7593.17	0.00	184055.90	-7593.17	213489.80
Jun-29	307123	40962	50861	215300	161.25	40.40	1735.80	4278.05	4135.53	204.87	3706.22	10354.25	14060.47	350000	729.17	0.00	9625.08	13331.30	818.37	106.92	0.00	925.29	19999.19	0.00	196461.91	-12406.02	225895.81
Jul-29	307123	40962	50861	215300	177.34	41.79	1909.01	4853.98	4917.77	223.28	4076.05	11904.04	15980.09	350000	729.17	0.00	11174.88	15250.93	846.45	73.66	0.00	920.11	26697.00	8362.18	210792.73	-14330.82	240226.63
Aug-29	307123	40962	50861	215300	129.12	51.09	1390.01	2753.86	3016.58	102.64	2967.90	7263.10	10231.00	350000	729.17	0.00	6533.93	9501.83	1034.93	73.66	0.00	1108.58	26697.00	9122.42	219185.98	-8393.25	248619.88
Sep-29	307123	40962	50861	215300	99.14	65.41	1067.28	1454.96	1289.84	45.88	2278.81	3857.96	6136.76	350000	729.17	0.00	3128.79	5407.60	1324.88	71.28	0.00	1396.16	26697.00	4740.60	223197.42	-4011.43	252631.32
Oct-29	307123	40962	50861	215300	54.61	94.65	587.89	439.93	190.73	12.61	1255.24	1231.17	2486.41	350000	729.17	0.00	502.00	1757.24	1917.20	110.48	0.00	2027.69	26426.56	458.72	222926.97	270.44	252360.87
Nov-29	307123	40962	50861	215300	34.82	126.64	374.84	332.20	40.18	8.24	800.34	755.46	1555.80	350000	729.17	0.00	26.29	826.63	2565.16	106.92	2700.00	5372.08	21881.11	0.00	218381.52	4545.45	247815.42
Dec-29	307123	40962	50861	215300	15.29	187.27	164.58	197.03	54.42	14.34	351.39	430.37	781.76	350000	729.17	298.80	0.00	351.39	3793.16	110.48	2790.00	6693.64	15538.86	0.00	212039.28	6342.25	241473.18
Jan-30	307123	40962	50861	215300	12.90	208.98	138.83	222.42	73.75	21.73	296.42	456.73	753.14	350000	1027.97	571.24	0.00	296.42	4232.85	147.31	2790.00	7170.17	8665.11	0.00	205165.53	6873.75	234599.43
Feb-30	307123	40962	50861	215300	14.79	174.96	159.16	210.13	50.35	10.36	339.83	430.00	769.84	350000	1300.41	870.41	0.00	339.83	3543.72	133.06	2520.00	6196.78	2808.16	0.00	199308.58	5856.95	228742.48
Mar-30	307123	40962	50861	215300	20.74	132.19	223.22	307.62	115.96	18.82	476.60	665.62	1142.22	350000	1599.57	933.95	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	194170.27	5138.31	223604.17
Apr-30	307123	40962	50861	215300	45.12	78.05	485.67	858.97	444.02	39.16	1036.98	1827.82	2864.81	350000	1663.12	0.00	164.70	1201.69	1580.97	106.92	0.00	1687.89	0.00	0.00	193684.07	486.20	223117.97
May-30	307123	40962	50861	215300	122.23	52.80	1315.80	2936.55	2276.55	163.98	2809.44	6692.88	9502.32	350000	729.17	0.00	5963.71	8773.15	1069.50	110.48	0.00	1179.98	7593.17	0.00	201277.24	-7593.17	230711.14
Jun-30	307123	40962	50861	215300	161.25	40.40	1735.80	4278.05	4135.53	204.87	3706.22	10354.25	14060.47	350000	729.17	0.00	9625.08	13331.30	818.37	106.92	0.00	925.29	19999.19	0.00	213683.26	-12406.02	243117.16
Jul-30	307123	40962	50861	215300	177.34	41.79	1909.01	4853.98	4917.77	223.28	4076.05	11904.04	15980.09	350000	729.17	0.00	11174.88	15250.93	846.45	73.66	0.00	920.11	26697.00	8362.18	228014.08	-14330.82	257447.98
Aug-30	307123	40962	50861	215300	129.12	51.09	1390.01	2753.86	3016.58	102.64	2967.90	7263.10	10231.00	350000	729.17	0.00	6533.93	9501.83	1034.93	73.66	0.00	1108.58	26697.00	9122.43	236407.33	-8393.25	265841.23
Sep-30	307123	40962	50861	215300	99.14	65.41	1067.28	1454.96	1289.84	45.88	2278.81	3857.96	6136.76	350000	729.17	0.00	3128.79	5407.60	1324.88	71.28	0.00	1396.16	26697.00	4740.60	240418.76	-4011.43	269852.66
Oct-30	307123	40962	50861	215300	54.61	94.65	587.89	439.93	190.73	12.61	1255.24	1231.17	2486.41	350000	729.17	0.00	502.00	1757.24	1917.20	110.48	0.00	2027.69	26426.56	458.72	240148.32	270.44	269582.22
Nov-30	307123	40962	50861	215300	34.82	126.64	374.84	332.20	40.18	8.24	800.34	755.46	1555.80	350000	729.17	0.00	26.29	826.63	2565.16	106.92	2700.00	5372.08	21881.11	0.00	235602.87	4545.45	265036.77
Dec-30	307123	40962	50861	215300	15.29	187.27	164.58	197.03	54.42	14.34	351.39	430.37	781.76	350000	729.17	298.80	0.00	351.39	3793.16	110.48	2790.00	6693.64	15538.86	0.00	229260.62	6342.25	258694.52
Jan-31	307123	40962	50861	215300	12.90	208.98	138.83	222.42	73.75	21.73	296.42	456.73	753.14	350000	1027.97	571.24	0.00	296.42	4232.85	147.31	2790.00	7170.17	8665.11	0.00	222386.87	6873.75	251820.77
Feb-31	307123	40962	50861	215300	14.79	174.96	159.16	210.13	50.35	10.36	339.83	430.00	769.84	350000	1300.41	870.41	0.00	339.83	3543.72	133.06	2520.00	6196.78	2808.16	0.00	216529.92	5856.95	245963.82
Mar-31	307123	40962	50861	215300	20.74	132.19	223.22	307.62	115.96	18.82	476.60	665.62	1142.22	350000	1599.57	933.95	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	211391.61	5138.31	240825.51
Apr-31	307123	40962	50861	215300	45.12	78.05	485.67	858.97	444.02	39.16	1036.98	1827.82	2864.81	350000	1663.12	0.00	164.70	1201.69	1580.97	106.92	0.00	1687.89	0.00	0.00	210905.41	486.20	240339.31
May-31	307123	40962	50861	215300	122.23	52.80	1315.80	2936.55	2276.55	163.98	2809.44	6692.88	9502.32	350000	729.17	0.00	5963.71	8773.15	1069.50	110.48	0.00	1179.98	7593.17	0.00	218498.58	-7593.17	247932.49
Jun-31	307123	40962	50861	215300	161.25	40.40	1735.80	4278.05	4135.53	204.87	3706.22	10354.25	14060.47	350000	729.17	0.00	9625.08	13331.30	818.37	106.92	0.00	925.29	19999.19	0.00	230904.60	-12406.02	260338.50
Jul-31	307123	40962	50861	215300	177.34	41.79	1909.01	4853.98	4917.77	223.28	4076.05	11904.04	15980.09	350000	729.17	0.00	11174.88	15250.93	846.45	73.66	0.00	920.11	26697.00	8362.18	245235.42	-14330.82	274669.32
Aug-31	328930	43001	70628	215300	129.12	51.09	1390.01	2890.99	4188.98	142.53	2967.90	8612.51	11580.41	350000	729.17	0.00	7883.34	10851.24	1034.93	73.66	0.00	1108.58	26697.00	10471.83	254978.08	-9742.66	284411.98
Sep-31	328930	43001	70628	215300	99.14	65.41	1067.28	1527.41	1791.14	63.71	2278.81	4449.53	6728.34	350000	729.17	0.00	3720.37	5999.17	1324.88	71.28	0.00	1396.16	26697.00	5332.17	259581.09	-4603.01	289014.99
Oct-31	328930	43001	70628	215300	54.61	94.65	587.89	461.84	264.86	17.52	1255.24	1332.10	2587.35	350000	729.17	0.00	602.93	1858.18	1917.20	110.48	0.00	2027.69	26527.49	559.66	259411.58	169.51	288845.48
Nov-31	328930	43001	70628	215300	34.82	126.64	374.84	348.74	55.80	11.44	800.34	790.82	1591.16	350000	729.17	0.00	61.65	861.99	2565.16	106.92	2700.00	5372.08	22017.40	0.00	254901.49	4510.09	284335.39
Dec-31	328930	43001	70628	215300	15.29	187.27	164.58	206.84	75.57	19.92	351.39	466.90	818.30	350000	729.17	262.26	0.00	351.39	3793.16	110.48	2790.00	6693.64	15675.15	0.00	248559.25	6342.25	277993.15
Jan-32	328930	43001	70628	215300	12.90	208.98	138.83	233.50	102.41	30.17	296.42	504.91	801.32	350000	991.43	486.52	0.00	296.42	4232.85	147.31	2790.00	7170.17	8801.40	0.00	241685.50	6873.75	271119.40
Feb-32	328930	43001	70628	215300	14.79	174.96	159.16	220.60	69.92	14.38	339.83	464.06	803.89	350000	1215.69	751.63	0.00	339.83	3543.72	133.06	2520.00	6196.78	2944.46	0.00	235828.55	5856.95	265262.45
Mar-32	328930	43001	2528	283400	20.74	132.19	293.82	322.94	5.76	0.94	476.60	623.46	1100.06	350000	1480.80	857.34	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	230690.24	5138.31	260124.14
Apr-32	328930	43001	2528	283400	45.12	78.05	639.29	901.74	22.07	1.95	1036.98	1565.05	2602.03	350000	1586.50	21.45	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	230039.33	650.91	259473.23
May-32	328930	43001	2528	283400	122.23	52.80	1731.99	3082.77	113.17	8.15	2809.44	4936.09	7745.54	350000	750.62	0.00	4185.47	6994.92	1069.50	110.48	0.00	1179.98	5814.94	0.00	235854.27	-5814.94	265288.17
Jun-32	328930	43001	2528	283400	161.25	40.40	2284.84	4491.07	205.59	10.18	3706.22	6991.69	10697.91	350000	729.17	0.00	6262.52	9968.74	818.37	106.92	0.00	925.29	14858.39	0.00	244897.73	-9043.46	274331.63
Jul-32	328930	43001	2528	283400	177.34	41.79	2512.84	5095.67	244.48	11.10	4076.05	7864.09	11940.14	350000	729.17	0.00	7134.93	11210.98	846.45	73.66	0.00	920.11	25149.26	0.00	255188.60	-10290.87	284622.50
Aug-32	328930	43001	2528	283400	129.12	51.09	1829.68	2890.99	149.96	5.10	2967.90	4875.74	7843.64	350000	729.17	0.00	4146.57	7114.47	1034.93	73.66	0.00	1108.58	26697.00	5187.32	261194.48	-6005.89	290628.39
Sep-32	328930	43001	2528	283400	99.14	65.41	1404.86	1527.41	64.12	2.28	2278.81	2998.67	5277.48	350000	729.17	0.00	2269.51	4548.31	1324.88	71.28	0.00	1396.16	26697.00	3881.31	264346.63	-3152.15	293780.53
Oct-32	328930	43001	2528	283400	54.61	94.65	773.84	461.84	9.48	0.63	1255.24	1245.79	2501.03	350000	729.17	0.00	516.62	1771.87	1917.20	110.48	0.00	2027.69	26441.18	473.35	264090.81	255.82	293524.71
Nov-32	328930	43001	2528	283400	34.82	126.64	493.40	348.74	2.00	0.41	800.34	844.55	1644.89	350000	729.17	0.00	115.38	915.72	2565.16	106.92	2700.00	5372.08	21984.82	0.00	259634.45	4456.36	289068.35
Dec-32	328930	43001	2528	283400	15.29	187.27	216.63	206.84	2.71	0.71	351.39	426.89	778.28	350000	729.17	302.28	0.00	351.39	3793.16	110.48	2790.00	6693.64	15642.57	0.00	253292.21	6342.25	282726.11
Jan-33	328930	43001	2528	283400	12.90	208.98	182.74	233.50	3.67	1.08	296.42	420.98	717.40	350000	1031.45	610.47	0.00	296.42	4232.85	147.31	2790.00	7170.17	8768.82	0.00	246418.46	6873.75	275852.36
Feb-33	328930	43001	2528	283400	14.79	174.96	209.50	220.60	2.50	0.51	339.83	433.12	772.95	350000	1339.63	906.51	0.00	339.83	3543.72	133.06	2520.00	6196.78	2911.88	0.00	240561.51	5856.95	269995.41
Mar-33	328930	43001	2528	283400	20.74	132.19	293.82	322.94	5.76	0.94	476.60	623.46	1100.06	350000	1635.68	1012.22	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	235423.20	5138.31	264857.10
Apr-33	328930	43001	2528	283400	45.12	78.05	639.29	901.74	22.07	1.95	1036.98	1565.05	2602.03	350000	1741.39	176.33	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	234772.29	650.91	264206.19
May-33	328930	43001	2528	283400	122.23	52.80	1731.99	3082.77	113.17	8.15	2809.44	4936.09	7745.54	350000	905.50	0.00	4030.59	6840.03	1069.50	110.48	0.00	1179.98	5660.05	0.00	240432.35	-5660.05	269866.25
Jun-33	328930	43001	2528	283400	161.25	40.40	2284.84	4491.07	205.59	10.18	3706.22	6991.69	10697.91	350000	729.17	0.00	6262.52	9968.74	818.37	106.92	0.00	925.29	14703.51	0.00	249475.80	-9043.46	278909.71
Jul-33	328930	43001	2528	283400	177.34	41.79	2512.84	5095.67	244.48	11.10	4076.05	7864.09	11940.14	350000	729.17	0.00	7134.93	11210.98	846.45	73.66	0.00	920.11	24994.38	0.00	259766.67	-10290.87	289200.57
Aug-33	328930	43001	2528	283400	129.12	51.09	1829.68	2890.99	149.96	5.10	2967.90	4875.74	7843.64	350000	729.17	0.00	4146.57	7114.47	1034.93	73.66	0.00	1108.58	26697.00	5032.44	265772.56	-6005.89	295206.46
Sep-33	328930	43001	2528	283400	99.14	65.41	1404.86	1527.41	64.12	2.28	2278.81	2998.67	5277.48	350000	729.17	0.00	2269.51	4548.31	1324.88	71.28	0.00	1396.16	26697.00	3881.31	268924.71	-3152.15	298358.61
Oct-33	328930	43001	2528	283400	54.61	94.65	773.84	461.84	9.48	0.63	1255.24	1245.79	2501.03	350000	729.17	0.00	516.62	1771.87	1917.20	110.48	0.00	2027.69	26441.18	473.35	268668.89	255.82	298102.79
Nov-33	328930	43001	2528	283400	34.82	126.64	493.40	348.74	2.00	0.41	800.34	844.55	1644.89	350000	729.17	0.00	115.38	915.72	2565.16	106.92	2700.00	5372.08	21984.82	0.00	264212.53	4456.36	293646.43
Dec-33	328930	43001	2528	283400	15.29	187.27	216.63	206.84	2.71	0.71	351.39	426.89	778.28	350000	729.17	302.28	0.00	351.39	3793.16	110.48	2790.00	6693.64	15642.57	0.00	257870.29	6342.25	287304.19
Jan-34	328930	43001	2528	283400	12.90	208.98	182.74	233.50	3.67	1.08	296.42	420.98	717.40	350000	1031.45	610.47	0.00	296.42	4232.85	147.31	2790.00	7170.17	8768.82	0.00	250996.54	6873.75	280430.44
Feb-34	328930	43001	2528	283400	14.79	174.96	209.50	220.60	2.50	0.51	339.83	433.12	772.95	350000	1339.63	906.51	0.00	339.83	3543.72	133.06	2520.00	6196.78	2911.88	0.00	245139.59	5856.95	274573.49
Mar-34	328930	43001	2528	283400	20.74	132.19	293.82	322.94	5.76	0.94	476.60	623.46	1100.06	350000	1635.68	1012.22	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	240001.28	5138.31	269435.18
Apr-34	328930	43001	2528	283400	45.12	78.05	639.29	901.74	22.07	1.95	1036.98	1565.05	2602.03	350000	1741.39	176.33	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	239350.37	650.91	268784.27

May-34	328930	43001	2528	283400	122.23	52.80	1731.99	3082.77	113.17	8.15	2809.44	4936.09	7745.54	350000	905.50	0.00	4030.59	6840.03	1069.50	110.48	0.00	1179.98	5660.05	0.00	245010.43	-5660.05	274444.33
Jun-34	328930	43001	2528	283400	161.25	40.40	2284.84	4491.07	205.59	10.18	3706.22	6991.69	10697.91	350000	729.17	0.00	6262.52	9968.74	818.37	106.92	0.00	925.29	14703.51	0.00	254053.88	-9043.46	283487.78
Jul-34	328930	43001	2528	283400	177.34	41.79	2512.84	5095.67	244.48	11.10	4076.05	7864.09	11940.14	350000	729.17	0.00	7134.93	11210.98	846.45	73.66	0.00	920.11	24994.38	0.00	264344.75	-10290.87	293778.65
Aug-34	328930	43001	2528	283400	129.12	51.09	1829.68	2890.99	149.96	5.10	2967.90	4875.74	7843.64	350000	729.17	0.00	4146.57	7114.47	1034.93	73.66	0.00	1108.58	26697.00	5032.44	270350.64	-6005.89	299784.54
Sep-34	328930	43001	2528	283400	99.14	65.41	1404.86	1527.41	64.12	2.28	2278.81	2998.67	5277.48	350000	729.17	0.00	2269.51	4548.31	1324.88	71.28	0.00	1396.16	26697.00	3881.31	273502.79	-3152.15	302936.69
Oct-34	328930	43001	2528	283400	54.61	94.65	773.84	461.84	9.48	0.63	1255.24	1245.79	2501.03	350000	729.17	0.00	516.62	1771.87	1917.20	110.48	0.00	2027.69	26441.18	473.35	273246.97	255.82	302680.87
Nov-34	328930	43001	2528	283400	34.82	126.64	493.40	348.74	2.00	0.41	800.34	844.55	1644.89	350000	729.17	0.00	115.38	915.72	2565.16	106.92	2700.00	5372.08	21984.82	0.00	268790.61	4456.36	298224.51
Dec-34	328930	43001	2528	283400	15.29	187.27	216.63	206.84	2.71	0.71	351.39	426.89	778.28	350000	729.17	302.28	0.00	351.39	3793.16	110.48	2790.00	6693.64	15642.57	0.00	262448.36	6342.25	291882.26
Jan-35	328930	43001	2528	283400	12.90	208.98	182.74	233.50	3.67	1.08	296.42	420.98	717.40	350000	1031.45	610.47	0.00	296.42	4232.85	147.31	2790.00	7170.17	8768.82	0.00	255574.61	6873.75	285008.51
Feb-35	354316	47193	23723	283400	14.79	174.96	209.50	242.10	23.49	4.83	339.83	479.92	819.75	350000	1339.63	859.71	0.00	339.83	3543.72	133.06	2520.00	6196.78	2911.88	0.00	249717.67	5856.95	279151.57
Mar-35	354316	47193	23723	283400	20.74	132.19	293.82	354.42	54.09	8.78	476.60	711.10	1187.70	350000	1588.88	877.78	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	244579.36	5138.31	274013.26
Apr-35	354316	47193	23723	283400	45.12	78.05	639.29	989.63	207.10	18.27	1036.98	1854.29	2891.27	350000	1606.95	0.00	247.34	1284.32	1580.97	106.92	0.00	1687.89	0.00	0.00	244175.79	403.57	273609.69
May-35	354316	47193	23723	283400	122.23	52.80	1731.99	3383.23	1061.84	76.48	2809.44	6253.55	9063.00	350000	729.17	0.00	5524.39	8333.83	1069.50	110.48	0.00	1179.98	7153.85	0.00	251329.64	-7153.85	280763.54
Jun-35	354316	47193	23723	283400	161.25	40.40	2284.84	4928.79	1928.92	95.56	3706.22	9238.11	12944.33	350000	729.17	0.00	8508.94	12215.16	818.37	106.92	0.00	925.29	18443.73	0.00	262619.52	-11289.88	292053.42
Jul-35	354316	47193	23723	283400	177.34	41.79	2512.84	5592.32	2293.78	104.14	4076.05	10503.09	14579.14	350000	729.17	0.00	9773.92	13849.97	846.45	73.66	0.00	920.11	26697.00	5405.76	275549.38	-12929.86	304983.28
Aug-35	354316	47193	23723	283400	129.12	51.09	1829.68	3172.76	1407.01	47.87	2967.90	6457.32	9425.23	350000	729.17	0.00	5728.16	8696.06	1034.93	73.66	0.00	1108.58	26697.00	8316.64	283136.86	-7587.48	312570.76
Sep-35	354316	47193	23723	283400	99.14	65.41	1404.86	1676.28	601.62	21.40	2278.81	3704.15	5982.96	350000	729.17	0.00	2974.99	5253.79	1324.88	71.28	0.00	1396.16	26697.00	4586.79	286994.48	-3857.63	316428.39
Oct-35	354316	47193	23723	283400	54.61	94.65	773.84	506.85	88.96	5.88	1255.24	1375.54	2630.78	350000	729.17	0.00	646.37	1901.62	1917.20	110.48	0.00	2027.69	26570.93	603.09	286868.41	126.07	316302.31
Nov-35	354316	47193	23723	283400	34.82	126.64	493.40	382.73	18.74	3.84	800.34	898.72	1699.05	350000	729.17	0.00	169.55	969.89	2565.16	106.92	2700.00	5372.08	22168.74	0.00	282466.22	4402.19	311900.12
Dec-35	354316	47193	23723	283400	15.29	187.27	216.63	227.00	25.38	6.69	351.39	475.70	827.10	350000	729.17	253.47	0.00	351.39	3793.16	110.48	2790.00	6693.64	15826.49	0.00	276123.97	6342.25	305557.87
Jan-36	354316	47193	23723	283400	12.90	208.98	182.74	256.26	34.40	10.13	296.42	483.53	779.94	350000	982.63	499.11	0.00	296.42	4232.85	147.31	2790.00	7170.17	8952.74	0.00	269250.22	6873.75	298684.12
Feb-36	354316	47193	23723	283400	14.79	174.96	209.50	242.10	23.49	4.83	339.83	479.92	819.75	350000	1228.27	748.36	0.00	339.83	3543.72	133.06	2520.00	6196.78	3095.79	0.00	263393.28	5856.95	292827.18
Mar-36	354316	47193	23723	283400	20.74	132.19	293.82	354.42	54.09	8.78	476.60	711.10	1187.70	350000	1477.52	766.42	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	258254.97	5138.31	287688.87
Apr-36	354316	47193	23723	283400	45.12	78.05	639.29	989.63	207.10	18.27	1036.98	1854.29	2891.27	350000	1495.59	0.00	358.70	1395.68	1580.97	106.92	0.00	1687.89	0.00	0.00	257962.76	292.21	287396.66
May-36	354316	47193	23723	283400	122.23	52.80	1731.99	3383.23	1061.84	76.48	2809.44	6253.55	9063.00	350000	729.17	0.00	5524.39	8333.83	1069.50	110.48	0.00	1179.98	7153.85	0.00	265116.61	-7153.85	294550.51
Jun-36	354316	47193	23723	283400	161.25	40.40	2284.84	4928.79	1928.92	95.56	3706.22	9238.11	12944.33	350000	729.17	0.00	8508.94	12215.16	818.37	106.92	0.00	925.29	18443.73	0.00	276406.49	-11289.88	305840.39
Jul-36	354316	47193	23723	283400	177.34	41.79	2512.84	5592.32	2293.78	104.14	4076.05	10503.09	14579.14	350000	729.17	0.00	9773.92	13849.97	846.45	73.66	0.00	920.11	26697.00	5405.76	289336.35	-12929.86	318770.25
Aug-36	354316	47193	23723	283400	129.12	51.09	1829.68	3172.76	1407.01	47.87	2967.90	6457.32	9425.23	350000	729.17	0.00	5728.16	8696.06	1034.93	73.66	0.00	1108.58	26697.00	8316.64	296923.83	-7587.48	326357.73
Sep-36	354316	47193	23723	283400	99.14	65.41	1404.86	1676.28	601.62	21.40	2278.81	3704.15	5982.96	350000	729.17	0.00	2974.99	5253.79	1324.88	71.28	0.00	1396.16	26697.00	4586.79	300781.45	-3857.63	330215.35
Oct-36	354316	47193	23723	283400	54.61	94.65	773.84	506.85	88.96	5.88	1255.24	1375.54	2630.78	350000	729.17	0.00	646.37	1901.62	1917.20	110.48	0.00	2027.69	26570.93	603.09	300655.38	126.07	330089.28
Nov-36	354316	47193	23723	283400	34.82	126.64	493.40	382.73	18.74	3.84	800.34	898.72	1699.05	350000	729.17	0.00	169.55	969.89	2565.16	106.92	2700.00	5372.08	22168.74	0.00	296253.19	4402.19	325687.09
Dec-36	354316	47193	23723	283400	15.29	187.27	216.63	227.00	25.38	6.69	351.39	475.70	827.10	350000	729.17	253.47	0.00	351.39	3793.16	110.48	2790.00	6693.64	15826.49	0.00	289910.94	6342.25	319344.84
Jan-37	354316	47193	23723	283400	12.90	208.98	182.74	256.26	34.40	10.13	296.42	483.53	779.94	350000	982.63	499.11	0.00	296.42	4232.85	147.31	2790.00	7170.17	8952.74	0.00	283037.19	6873.75	312471.09
Feb-37	354316	47193	23723	283400	14.79	174.96	209.50	242.10	23.49	4.83	339.83	479.92	819.75	350000	1228.27	748.36	0.00	339.83	3543.72	133.06	2520.00	6196.78	3095.79	0.00	277180.25	5856.95	306614.15
Mar-37	354316	47193	23723	283400	20.74	132.19	293.82	354.42	54.09	8.78	476.60	711.10	1187.70	350000	1477.52	766.42	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	272041.93	5138.31	301475.84
Apr-37	354316	47193	23723	283400	45.12	78.05	639.29	989.63	207.10	18.27	1036.98	1854.29	2891.27	350000	1495.59	0.00	358.70	1395.68	1580.97	106.92	0.00	1687.89	0.00	0.00	271749.73	292.21	301183.63
May-37	354316	47193	23723	283400	122.23	52.80	1731.99	3383.23	1061.84	76.48	2809.44	6253.55	9063.00	350000	729.17	0.00	5524.39	8333.83	1069.50	110.48	0.00	1179.98	7153.85	0.00	278903.58	-7153.85	308337.48
Jun-37	354316	47193	23723	283400	161.25	40.40	2284.84	4928.79	1928.92	95.56	3706.22	9238.11	12944.33	350000	729.17	0.00	8508.94	12215.16	818.37	106.92	0.00	925.29	18443.73	0.00	290193.45	-11289.88	319627.35
Jul-37	379685	50755	45530	283400	177.34	41.79	2512.84	6014.52	4402.29	199.88	4076.05	13129.53	17205.58	350000	729.17	0.00	12400.37	16476.42	846.45	73.66	0.00	920.11	26697.00	8032.20	305749.76	-15556.31	335183.66
Aug-37	379685	50755	45530	283400	129.12	51.09	1829.68	3412.29	2700.38	91.88	2967.90	8034.23	11002.14	350000	729.17	0.00	7305.06	10272.97	1034.93	73.66	0.00	1108.58	26697.00	9893.55	314914.15	-9164.39	344348.05
Sep-37	379685	50755	45530	283400	99.14	65.41	1404.86	1802.83	1154.64	41.07	2278.81	4403.40	6682.21	350000	729.17	0.00	3674.23	5953.04	1324.88	71.28	0.00	1396.16	26697.00	5286.04	319471.02	-4556.88	348904.92
Oct-37	379685	50755	45530	283400	54.61	94.65	773.84	545.11	170.74	11.29	1255.24	1500.99	2756.23	350000	729.17	0.00	771.82	2027.07	1917.20	110.48	0.00	2027.69	26696.38	728.54	319470.40	0.62	348904.30
Nov-37	379685	50755	45530	283400	34.82	126.64	493.40	411.63	35.97	7.38	800.34	948.37	1748.71	350000	729.17	0.00	219.20	1019.54	2565.16	106.92	2700.00	5372.08	22343.84	0.00	315117.86	4352.54	344551.77
Dec-37	379685	50755	45530	283400	15.29	187.27	216.63	244.13	48.72	12.84	351.39	522.32	873.72	350000	729.17	206.85	0.00	351.39	3793.16	110.48	2790.00	6693.64	16001.59	0.00	308775.62	6342.25	338209.52
Jan-38	379685	50755	45530	283400	12.90	208.98	182.74	275.60	66.02	19.45	296.42	543.81	840.22	350000	936.01	392.20	0.00	296.42	4232.85	147.31	2790.00	7170.17	9127.84	0.00	301901.87	6873.75	331335.77
Feb-38	379685	50755	45530	283400	14.79	174.96	209.50	260.38	45.07	9.27	339.83	524.22	864.06	350000	1121.37	597.15	0.00	339.83	3543.72	133.06	2520.00	6196.78	3270.90	0.00	296044.92	5856.95	325478.82
Mar-38	379685	50755	45530	283400	20.74	132.19	293.82	381.17	103.81	16.85	476.60	795.65	1272.25	350000	1326.31	530.67	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	290906.61	5138.31	320340.51
Apr-38	379685	50755	45530	283400	45.12	78.05	639.29	1064.34	397.48	35.06	1036.98	2136.17	3173.15	350000	1259.83	0.00	876.33	1913.32	1580.97	106.92	0.00	1687.89	225.43	0.00	291132.04	-225.43	320565.94
May-38	379685	50755	45530	283400	122.23	52.80	1731.99	3638.66	2037.92	146.79	2809.44	7555.36	10364.80	350000	729.17	0.00	6826.19	9635.64	1069.50	110.48	0.00	1179.98	8681.08	0.00	299587.69	-8455.66	329021.59
Jun-38	379685	50755	45530	283400	161.25	40.40	2284.84	5300.90	3702.04	183.39	3706.22	11471.18	15177.40	350000	729.17	0.00	10742.01	14448.23	818.37	106.92	0.00	925.29	22204.03	0.00	313110.64	-13522.95	342544.54
Jul-38	379685	50755	45530	283400	177.34	41.79	2512.84	6014.52	4402.29	199.88	4076.05	13129.53	17205.58	350000	729.17	0.00	12400.37	16476.42	846.45	73.66	0.00	920.11	26697.00	11792.50	328666.95	-15556.31	358100.85
Aug-38	379685	50755	45530	283400	129.12	51.09	1829.68	3412.29	2700.38	91.88	2967.90	8034.23	11002.14	350000	729.17	0.00	7305.06	10272.97	1034.93	73.66	0.00	1108.58	26697.00	9893.55	337831.33	-9164.39	367265.23
Sep-38	379685	50755	45530	283400	99.14	65.41	1404.86	1802.83	1154.64	41.07	2278.81	4403.40	6682.21	350000	729.17	0.00	3674.23	5953.04	1324.88	71.28	0.00	1396.16	26697.00	5286.04	342388.21	-4556.88	371822.11
Oct-38	379685	50755	45530	283400	54.61	94.65	773.84	545.11	170.74	11.29	1255.24	1500.99	2756.23	350000	729.17	0.00	771.82	2027.07	1917.20	110.48	0.00	2027.69	26696.38	728.54	342387.59	0.62	371821.49
Nov-38	379685	50755	45530	283400	34.82	126.64	493.40	411.63	35.97	7.38	800.34	948.37	1748.71	350000	729.17	0.00	219.20	1019.54	2565.16	106.92	2700.00	5372.08	22343.84	0.00	338035.05	4352.54	367468.95
Dec-38	379685	50755	45530	283400	15.29	187.27	216.63	244.13	48.72	12.84	351.39	522.32	873.72	350000	729.17	206.85	0.00	351.39	3793.16	110.48	2790.00	6693.64	16001.59	0.00	331692.80	6342.25	361126.70
Jan-39	379685	50755	45530	283400	12.90	208.98	182.74	275.60	66.02	19.45	296.42	543.81	840.22	350000	936.01	392.20	0.00	296.42	4232.85	147.31	2790.00	7170.17	9127.84	0.00	324819.05	6873.75	354252.95
Feb-39	379685	50755	45530	283400	14.79	174.96	209.50	260.38	45.07	9.27	339.83	524.22	864.06	350000	1121.37	597.15	0.00	339.83	3543.72	133.06	2520.00	6196.78	3270.90	0.00	318962.11	5856.95	348396.01
Mar-39	379685	50755	45530	283400	20.74	132.19	293.82	381.17	103.81	16.85	476.60	795.65	1272.25	350000	1326.31	530.67	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	313823.80	5138.31	343257.70
Apr-39	379685	50755	45530	283400	45.12	78.05	639.29	1064.34	397.48	35.06	1036.98	2136.17	3173.15	350000	1259.83	0.00	876.33	1913.32	1580.97	106.92	0.00	1687.89	225.43	0.00	314049.22	-225.43	343483.12
May-39	379685	50755	45530	283400	122.23	52.80	1731.99	3638.66	2037.92	146.79	2809.44	7555.36	10364.80	350000	729.17	0.00	6826.19	9635.64	1069.50	110.48	0.00	1179.98	8681.08	0.00	322504.88	-8455.66	351938.78
Jun-39	379685	50755	45530	283400	161.25	40.40	2284.84	5300.90	3702.04	183.39	3706.22	11471.18	15177.40	350000	729.17	0.00	10742.01	14448.23	818.37	106.92	0.00	925.29	22204.03	0.00	336027.83	-13522.95	365461.73
Jul-39	379685	50755	45530	283400	177.34	41.79	2512.84	6014.52	4402.29	199.88	4076.05	13129.53	17205.58	350000	729.17	0.00	12400.37	16476.42	846.45	73.66	0.00	920.11	26697.00	11792.50	351584.13	-15556.31	381018.04
Aug-39	379685	50755	45530	283400	129.12	51.09	1829.68	3412.29	2700.38	91.88	2967.90	8034.23	11002.14	350000	729.17	0.00	7305.06	10272.97	1034.93	73.66	0.00	1108.58	26697.00	9893.55	360748.52	-9164.39	390182.42
Sep-39	379685	50755	45530	283400	99.14	65.41	1404.86	1802.83	1154.64	41.07	2278.81	4403.40	6682.21	350000	729.17	0.00	3674.23	5953.04	1324.88	71.28	0.00	1396.16	26697.00	5286.04	365305.40	-4556.88	394739.30
Oct-39	379685	50755	45530	283400	54.61	94.65	773.84	545.11	170.74	11.29	1255.24	1500.99	2756.23	350000	729.17	0.00	771.82	2027.07	1917.20	110.48	0.00	2027.69	26696.38	728.54	365304.77	0.62	394738.67
Nov-39	379685	50755	45530	283400	34.82	126.64	493.40	411.63	35.97	7.38	800.34	948.37	1748.71	350000	729.17	0.00	219.20	1019.54	2565.16	106.92	2700.00	5372.08	22343.84	0.00	360952.24	4352.54	390386.14
Dec-39	379685	50755	45530	283400	15.29	187.27	216.63	244.13	48.72	12.84	351.39	522.32	873.72	350000	729.17	206.85	0.00	351.39	3793.16	110.48	2790.00	6693.64	16001.59	0.00	354609.99	6342.25	384043.89
Jan-40	379685	50755	45530	283400	12.90	208.98	182.74	275.60	66.02	19.45	296.42	543.81	840.22	350000	936.01	392.20	0.00	296.42	4232.85	147.31	2790.00	7170.17	9127.84	0.00	347736.24	6873.75	377170.14
Feb-40	379685	50755	45530	283400	14.79	174.96	209.50	260.38	45.07	9.27	339.83	524.22	864.06	350000	1121.37	597.15	0.00	339.83	3543.72	133.06	2520.00	6196.78	3270.90	0.00	341879.29	5856.95	371313.19
Mar-40	379685	50755	45530	283400	20.74	132.19	293.82	381.17	103.81	16.85	476.60	795.65	1272.25	350000	1326.31	530.67	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	336740.98	5138.31	366174.88
Apr-40	379685	50755	45530	283400	45.12	78.05	639.29	1064.34	397.48	35.06	1036.98	2136.17	3173.15	350000	1259.83	0.00	876.33	1913.32	1580.97	106.92	0.00	1687.89	225.43	0.00	336966.41	-225.43	366400.31
May-40	379685	50755	45530	283400	122.23	52.80	1731.99	3638.66	2037.92	146.79	2809.44	7555.36	10364.80	350000	729.17	0.00	6826.19	9635.64	1069.50	110.48	0.00	1179.98	8681.08	0.00	345422.07	-8455.66	374855.97
Jun-40	379685	50755	45530	283400	161.25	40.40	2284.84	5300.90	3702.04	183.39	3706.22	11471.18	15177.40	350000	729.17	0.00	10742.01	14448.23	818.37	106.92	0.00	925.29	22204.03	0.00	358945.01	-13522.95	388378.91
Jul-40	379685	50755	45530	283400	177.34	41.79	2512.84	6014.52	4402.29	199.88	4076.05	13129.53	17205.58	350000	729.17	0.00	12400.37	16476.42	846.45	73.66	0.00	920.11	26697.00	11792.50	374501.32	-15556.31	403935.22
Aug-40	379685	50755	45530	283400	129.12	51.09	1829.68	3412.29	2700.38	91.88	2967.90	8034.23	11002.14	350000	729.17	0.00	7305.06	10272.97	1034.93	73.66	0.00	1108.58	26697.00	9893.55	383665.71	-9164.39	413099.61
Sep-40	379685	50755	45530	283400	99.14	65.41	1404.86	1802.83	1154.64	41.07	2278.81	4403.40	6682.21	350000	729.17	0.00	3674.23	5953.04	1324.88	71.28	0.00	1396.16	26697.00	5286.04	388222.58	-4556.88	417656.48
Oct-40	379685	50755	45530	283400	54.61	94.65	773.84	545.11	170.74	11.29	1255.24	1500.99	2756.23	350000	729.17	0.00	771.82	2027.07	1917.20	110.48	0.00	2027.69	26696.38	728.54	388221.96	0.62	417655.86
Nov-40	404852	50536	10916	343400	34.82	126.64	597.86	409.85	8.62	1.77	800.34	1018.10	1818.44	350000	729.17	0.00	288.93	1089.27	2565.16	106.92	2700.00	5372.08	22413.57	0.00	383939.15	4282.81	413373.05
Dec-40	404852	50536	10916	343400	15.29	187.27	262.49	243.08	11.68	3.08	351.39	520.33	871.73	350000	729.17	208.83	0.00	351.39	3793.16	110.48	2790.00	6693.64	16071.32	0.00	377596.90	6342.25	407030.81
Jan-41	404852	50536	10916	343400	12.90	208.98	221.43	274.41	15.83	4.66	296.42	516.33	812.74	350000	938.00	421.67	0.00	296.42	4232.85	147.31	2790.00	7170.17	9197.57	0.00	370723.15	6873.75	400157.06
Feb-41	404852	50536	10916	343400	14.79	174.96	253.86	259.25	10.81	2.22	339.83	526.14	865.97	350000	1150.84	624.70	0.00	339.83	3543.72	133.06	2520.00	6196.78	3340.63	0.00	364866.21	5856.95	394300.11
Mar-41	404852	50536	10916	343400	20.74	132.19	356.03	379.53	24.89	4.04	476.60	764.48	1241.08	350000	1353.87	589.39	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	359727.90	5138.31	389161.80
Apr-41	404852	50536	10916	343400	45.12	78.05	774.64	1059.74	95.29	8.41	1036.98	1938.08	2975.06	350000	1318.56	0.00	619.52	1656.51	1580.97	106.92	0.00	1687.89	0.00	0.00	359696.51	31.38	389130.42
May-41	404852	50536	10916	343400	122.23	52.80	2098.68	3622.94	488.58	35.19	2809.44	6245.40	9054.84	350000	729.17	0.00	5516.23	8325.67	1069.50	110.48	0.00	1179.98	7145.69	0.00	366842.21	-7145.69	396276.11
Jun-41	404852	50536	10916	343400	161.25	40.40	2768.58	5278.00	887.55	43.97	3706.22	8978.10	12684.32	350000	729.17	0.00	8248.93	11955.15	818.37	106.92	0.00	925.29	18175.56	0.00	377872.07	-11029.86	407305.97
Jul-41	404852	50536	10916	343400	177.34	41.79	3044.85	5988.54	1055.43	47.92	4076.05	10136.74	14212.79	350000	729.17	0.00	9407.57	13483.63	846.45	73.66	0.00	920.11	26697.00	4771.24	390435.59	-12563.52	419869.49
Aug-41	404852	50536	10916	343400	129.12	51.09	2217.05	3397.55	647.40	22.03	2967.90	6284.03	9251.94	350000	729.17	0.00	5554.87	8522.77	1034.93	73.66	0.00	1108.58	26697.00	8143.36	397849.78	-7414.19	427283.68
Sep-41	404852	50536	10916	343400	99.14	65.41	1702.29	1795.05	276.82	9.85	2278.81	3784.00	6062.81	350000	729.17	0.00	3054.83	5333.64	1324.88	71.28	0.00	1396.16	26697.00	4666.64	401787.25	-3937.48	431221.15
Oct-41	404852	50536	10916	343400	54.61	94.65	937.68	542.76	40.93	2.71	1255.24	1524.08	2779.32	350000	729.17	0.00	794.91	2050.16	1917.20	110.48	0.00	2027.69	26697.00	751.64	401809.72	-22.47	431243.62
Nov-41	404852	50536	10916	343400	34.82	126.64	597.86	409.85	8.62	1.77	800.34	1018.10	1818.44	350000	729.17	0.00	288.93	1089.27	2565.16	106.92	2700.00	5372.08	22414.19	0.00	397526.91	4282.81	426960.82
Dec-41	404852	50536	10916	343400	15.29	187.27	262.49	243.08	11.68	3.08	351.39	520.33	871.73	350000	729.17	208.83	0.00	351.39	3793.16	110.48	2790.00	6693.64	16071.95	0.00	391184.67	6342.25	420618.57
Jan-42	404852	50536	10916	343400	12.90	208.98	221.43	274.41	15.83	4.66	296.42	516.33	812.74	350000	938.00	421.67	0.00	296.42	4232.85	147.31	2790.00	7170.17	9198.20	0.00	384310.92	6873.75	413744.82
Feb-42	404852	50536	10916	343400	14.79	174.96	253.86	259.25	10.81	2.22	339.83	526.14	865.97	350000	1150.84	624.70	0.00	339.83	3543.72	133.06	2520.00	6196.78	3341.25	0.00	378453.97	5856.95	407887.87
Mar-42	404852	50536	10916	343400	20.74	132.19	356.03	379.53	24.89	4.04	476.60	764.48	1241.08	350000	1353.87	589.39	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	373315.66	5138.31	402749.56
Apr-42	404852	50536	10916	343400	45.12	78.05	774.64	1059.74	95.29	8.41	1036.98	1938.08	2975.06	350000	1318.56	0.00	619.52	1656.51	1580.97	106.92	0.00	1687.89	0.00	0.00	373284.28	31.38	402718.18
May-42	404852	50536	10916	343400	122.23	52.80	2098.68	3622.94	488.58	35.19	2809.44	6245.40	9054.84	350000	729.17	0.00	5516.23	8325.67	1069.50	110.48	0.00	1179.98	7145.69	0.00	380429.97	-7145.69	409863.87
Jun-42	404852	50536	10916	343400	161.25	40.40	2768.58	5278.00	887.55	43.97	3706.22	8978.10	12684.32	350000	729.17	0.00	8248.93	11955.15	818.37	106.92	0.00	925.29	18175.56	0.00	391459.83	-11029.86	420893.74
Jul-42	404852	50536	10916	343400	177.34	41.79	3044.85	5988.54	1055.43	47.92	4076.05	10136.74	14212.79	350000	729.17	0.00	9407.57	13483.63	846.45	73.66	0.00	920.11	26697.00	4771.24	404023.35	-12563.52	433457.25
Aug-42	404852	50536	10916	343400	129.12	51.09	2217.05	3397.55	647.40	22.03	2967.90	6284.03	9251.94	350000	729.17	0.00	5554.87	8522.77	1034.93	73.66	0.00	1108.58	26697.00	8143.36	411437.54	-7414.19	440871.44
Sep-42	404852	50536	10916	343400	99.14	65.41	1702.29	1795.05	276.82	9.85	2278.81	3784.00	6062.81	350000	729.17	0.00	3054.83	5333.64	1324.88	71.28	0.00	1396.16	26697.00	4666.64	415375.02	-3937.48	444808.92

Oct-42	404852	50536	10916	343400	54.61	94.65	937.68	542.76	40.93	2.71	1255.24	1524.08	2779.32	350000	729.17	0.00	794.91	2050.16	1917.20	110.48	0.00	2027.69	26697.00	751.64	415397.48	-22.47	444831.39
Nov-42	404852	50536	10916	343400	34.82	126.64	597.86	409.85	8.62	1.77	800.34	1018.10	1818.44	350000	729.17	0.00	288.93	1089.27	2565.16	106.92	2700.00	5372.08	22414.19	0.00	411114.68	4282.81	440548.58
Dec-42	404852	50536	10916	343400	15.29	187.27	262.49	243.08	11.68	3.08	351.39	520.33	871.73	350000	729.17	208.83	0.00	351.39	3793.16	110.48	2790.00	6693.64	16071.95	0.00	404772.43	6342.25	434206.33
Jan-43	404852	50536	10916	343400	12.90	208.98	221.43	274.41	15.83	4.66	296.42	516.33	812.74	350000	938.00	421.67	0.00	296.42	4232.85	147.31	2790.00	7170.17	9198.20	0.00	397898.68	6873.75	427332.58
Feb-43	404852	50536	10916	343400	14.79	174.96	253.86	259.25	10.81	2.22	339.83	526.14	865.97	350000	1150.84	624.70	0.00	339.83	3543.72	133.06	2520.00	6196.78	3341.25	0.00	392041.73	5856.95	421475.64
Mar-43	404852	50536	10916	343400	20.74	132.19	356.03	379.53	24.89	4.04	476.60	764.48	1241.08	350000	1353.87	589.39	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	386903.42	5138.31	416337.32
Apr-43	427274	47589	36285	343400	45.12	78.05	774.64	997.94	316.77	27.94	1036.98	2117.29	3154.27	350000	1318.56	0.00	798.73	1835.72	1580.97	106.92	0.00	1687.89	147.83	0.00	387051.25	-147.83	416485.15
May-43	427274	47589	36285	343400	122.23	52.80	2098.68	3411.66	1624.14	116.98	2809.44	7251.46	10060.90	350000	729.17	0.00	6522.29	9331.73	1069.50	110.48	0.00	1179.98	8299.58	0.00	395203.00	-8151.75	424636.91
Jun-43	427274	47589	36285	343400	161.25	40.40	2768.58	4970.20	2950.37	146.16	3706.22	10835.30	14541.52	350000	729.17	0.00	10106.14	13812.35	818.37	106.92	0.00	925.29	21186.65	0.00	408090.07	-12887.07	437523.97
Jul-43	427274	47589	36285	343400	177.34	41.79	3044.85	5639.30	3508.44	159.29	4076.05	12351.88	16427.93	350000	729.17	0.00	11622.71	15698.76	846.45	73.66	0.00	920.11	26697.00	9997.47	422868.73	-14778.66	452302.63
Aug-43	427274	47589	36285	343400	129.12	51.09	2217.05	3199.41	2152.09	73.22	2967.90	7641.77	10609.68	350000	729.17	0.00	6912.61	9880.51	1034.93	73.66	0.00	1108.58	26697.00	9501.10	431640.66	-8771.93	461074.56
Sep-43	427274	47589	36285	343400	99.14	65.41	1702.29	1690.36	920.20	32.73	2278.81	4345.58	6624.38	350000	729.17	0.00	3616.41	5895.22	1324.88	71.28	0.00	1396.16	26697.00	5228.22	436139.71	-4499.05	465573.61
Oct-43	427274	47589	36285	343400	54.61	94.65	937.68	511.11	136.07	9.00	1255.24	1593.85	2849.10	350000	729.17	0.00	864.69	2119.93	1917.20	110.48	0.00	2027.69	26697.00	821.41	436231.96	-92.25	465665.86
Nov-43	427274	47589	36285	343400	34.82	126.64	597.86	385.95	28.67	5.88	800.34	1018.35	1818.69	350000	729.17	0.00	289.18	1089.52	2565.16	106.92	2700.00	5372.08	22414.44	0.00	431949.40	4282.56	461383.30
Dec-43	427274	47589	36285	343400	15.29	187.27	262.49	228.90	38.83	10.23	351.39	540.46	891.85	350000	729.17	188.71	0.00	351.39	3793.16	110.48	2790.00	6693.64	16072.20	0.00	425607.15	6342.25	455041.05
Jan-44	427274	47589	36285	343400	12.90	208.98	221.43	258.41	52.61	15.50	296.42	547.95	844.37	350000	917.88	369.93	0.00	296.42	4232.85	147.31	2790.00	7170.17	9198.45	0.00	418733.40	6873.75	448167.30
Feb-44	427274	47589	36285	343400	14.79	174.96	253.86	244.13	35.92	7.39	339.83	541.30	881.13	350000	1099.09	557.79	0.00	339.83	3543.72	133.06	2520.00	6196.78	3341.50	0.00	412876.46	5856.95	442310.36
Mar-44	427274	47589	36285	343400	20.74	132.19	356.03	357.39	82.73	13.43	476.60	809.58	1286.18	350000	1286.96	477.39	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	407738.14	5138.31	437172.05
Apr-44	427274	47589	36285	343400	45.12	78.05	774.64	997.94	316.77	27.94	1036.98	2117.29	3154.27	350000	1206.55	0.00	910.74	1947.72	1580.97	106.92	0.00	1687.89	259.83	0.00	407997.98	-259.83	437431.88
May-44	427274	47589	36285	343400	122.23	52.80	2098.68	3411.66	1624.14	116.98	2809.44	7251.46	10060.90	350000	729.17	0.00	6522.29	9331.73	1069.50	110.48	0.00	1179.98	8411.58	0.00	416149.73	-8151.75	445583.63
Jun-44	427274	47589	36285	343400	161.25	40.40	2768.58	4970.20	2950.37	146.16	3706.22	10835.30	14541.52	350000	729.17	0.00	10106.14	13812.35	818.37	106.92	0.00	925.29	21298.65	0.00	429036.80	-12887.07	458470.70
Jul-44	427274	47589	36285	343400	177.34	41.79	3044.85	5639.30	3508.44	159.29	4076.05	12351.88	16427.93	350000	729.17	0.00	11622.71	15698.76	846.45	73.66	0.00	920.11	26697.00	10109.48	443815.45	-14778.66	473249.35
Aug-44	427274	47589	36285	343400	129.12	51.09	2217.05	3199.41	2152.09	73.22	2967.90	7641.77	10609.68	350000	729.17	0.00	6912.61	9880.51	1034.93	73.66	0.00	1108.58	26697.00	9501.10	452587.38	-8771.93	482021.28
Sep-44	427274	47589	36285	343400	99.14	65.41	1702.29	1690.36	920.20	32.73	2278.81	4345.58	6624.38	350000	729.17	0.00	3616.41	5895.22	1324.88	71.28	0.00	1396.16	26697.00	5228.22	457086.44	-4499.05	486520.34
Oct-44	427274	47589	36285	343400	54.61	94.65	937.68	511.11	136.07	9.00	1255.24	1593.85	2849.10	350000	729.17	0.00	864.69	2119.93	1917.20	110.48	0.00	2027.69	26697.00	821.41	457178.68	-92.25	486612.58
Nov-44	427274	47589	36285	343400	34.82	126.64	597.86	385.95	28.67	5.88	800.34	1018.35	1818.69	350000	729.17	0.00	289.18	1089.52	2565.16	106.92	2700.00	5372.08	22414.44	0.00	452896.12	4282.56	482330.02
Dec-44	427274	47589	36285	343400	15.29	187.27	262.49	228.90	38.83	10.23	351.39	540.46	891.85	350000	729.17	188.71	0.00	351.39	3793.16	110.48	2790.00	6693.64	16072.20	0.00	446553.88	6342.25	475987.78
Jan-45	427274	47589	36285	343400	12.90	208.98	221.43	258.41	52.61	15.50	296.42	547.95	844.37	350000	917.88	369.93	0.00	296.42	4232.85	147.31	2790.00	7170.17	9198.45	0.00	439680.13	6873.75	469114.03
Feb-45	427274	47589	36285	343400	14.79	174.96	253.86	244.13	35.92	7.39	339.83	541.30	881.13	350000	1099.09	557.79	0.00	339.83	3543.72	133.06	2520.00	6196.78	3341.50	0.00	433823.18	5856.95	463257.08
Mar-45	427274	22423	0	404852	20.74	132.19	419.74	168.39	0.00	0.00	476.60	588.13	1064.73	350000	1286.96	698.83	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	428684.87	5138.31	458118.77
Apr-45	427274	22423	0	404852	45.12	78.05	913.26	470.20	0.00	0.00	1036.98	1383.46	2420.44	350000	1428.00	44.54	0.00	1036.98	1580.97	106.92	0.00	1687.89	0.00	0.00	428033.96	650.91	457467.86
May-45	427274	22423	0	404852	122.23	52.80	2474.24	1607.48	0.00	0.00	2809.44	4081.72	6891.16	350000	773.70	0.00	3308.01	6117.46	1069.50	110.48	0.00	1179.98	4937.48	0.00	432971.44	-4937.48	462405.34
Jun-45	427274	22423	0	404852	161.25	40.40	3264.02	2341.82	0.00	0.00	3706.22	5605.84	9312.06	350000	729.17	0.00	4876.67	8582.89	818.37	106.92	0.00	925.29	12595.08	0.00	440629.04	-7657.60	470062.94
Jul-45	427274	22423	0	404852	177.34	41.79	3589.73	2657.08	0.00	0.00	4076.05	6246.81	10322.86	350000	729.17	0.00	5517.64	9593.69	846.45	73.66	0.00	920.11	21268.66	0.00	449302.63	-8673.58	478736.53
Aug-45	427274	22423	0	404852	129.12	51.09	2613.79	1507.47	0.00	0.00	2967.90	4121.27	7089.17	350000	729.17	0.00	3392.10	6360.01	1034.93	73.66	0.00	1108.58	26520.09	552.25	454554.05	-5251.42	483987.95
Sep-45	427274	22423	0	404852	99.14	65.41	2006.91	796.45	0.00	0.00	2278.81	2803.37	5082.17	350000	729.17	0.00	2074.20	4353.00	1324.88	71.28	0.00	1396.16	26697.00	3509.09	457510.89	-2956.84	486944.79
Oct-45	450282	45430	0	404852	54.61	94.65	1105.48	487.92	0.00	0.00	1255.24	1593.40	2848.64	350000	729.17	0.00	864.23	2119.47	1917.20	110.48	0.00	2027.69	26697.00	820.95	457602.68	-91.79	487036.58
Nov-45	450282	45430	0	404852	34.82	126.64	704.85	368.44	0.00	0.00	800.34	1073.28	1873.62	350000	729.17	0.00	344.12	1144.46	2565.16	106.92	2700.00	5372.08	22469.38	0.00	453375.05	4227.62	482808.95
Dec-45	450282	45430	0	404852	15.29	187.27	309.47	218.52	0.00	0.00	351.39	527.99	879.38	350000	729.17	201.18	0.00	351.39	3793.16	110.48	2790.00	6693.64	16127.13	0.00	447032.81	6342.25	476466.71
Jan-46	450282	45430	0	404852	12.90	208.98	261.05	246.68	0.00	0.00	296.42	507.73	804.15	350000	930.35	422.61	0.00	296.42	4232.85	147.31	2790.00	7170.17	9253.38	0.00	440159.06	6873.75	469592.96
Feb-46	450282	45430	0	404852	14.79	174.96	299.29	233.06	0.00	0.00	339.83	532.34	872.18	350000	1151.78	619.44	0.00	339.83	3543.72	133.06	2520.00	6196.78	3396.43	0.00	434302.11	5856.95	463736.01
Mar-46	450282	45430	0	404852	20.74	132.19	419.74	341.18	0.00	0.00	476.60	760.92	1237.52	350000	1348.60	587.69	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	429163.80	5138.31	458597.70
Apr-46	450282	45430	0	404852	45.12	78.05	913.26	952.67	0.00	0.00	1036.98	1865.93	2902.91	350000	1316.85	0.00	549.07	1586.06	1580.97	106.92	0.00	1687.89	0.00	0.00	429061.96	101.83	458495.87
May-46	450282	45430	0	404852	122.23	52.80	2474.24	3256.88	0.00	0.00	2809.44	5731.12	8540.56	350000	729.17	0.00	5001.95	7811.39	1069.50	110.48	0.00	1179.98	6631.41	0.00	435693.38	-6631.41	465127.28
Jun-46	450282	45430	0	404852	161.25	40.40	3264.02	4744.71	0.00	0.00	3706.22	8008.73	11714.94	350000	729.17	0.00	7279.56	10985.78	818.37	106.92	0.00	925.29	16691.90	0.00	445753.87	-10060.49	475187.77
Jul-46	450282	45430	0	404852	177.34	41.79	3589.73	5383.45	0.00	0.00	4076.05	8973.18	13049.23	350000	729.17	0.00	8244.01	12320.06	846.45	73.66	0.00	920.11	26697.00	2124.03	457153.82	-11399.96	486587.72
Aug-46	450282	45430	0	404852	129.12	51.09	2613.79	3054.26	0.00	0.00	2967.90	5668.05	8635.96	350000	729.17	0.00	4938.89	7906.79	1034.93	73.66	0.00	1108.58	26697.00	7527.37	463952.03	-6798.21	493385.93
Sep-46	450282	45430	0	404852	99.14	65.41	2006.91	1613.67	0.00	0.00	2278.81	3620.59	5899.39	350000	729.17	0.00	2891.42	5170.23	1324.88	71.28	0.00	1396.16	26697.00	4503.23	467726.09	-3774.06	497159.99
Oct-46	450282	45430	0	404852	54.61	94.65	1105.48	487.92	0.00	0.00	1255.24	1593.40	2848.64	350000	729.17	0.00	864.23	2119.47	1917.20	110.48	0.00	2027.69	26697.00	820.95	467817.88	-91.79	497251.78
Nov-46	450282	45430	0	404852	34.82	126.64	704.85	368.44	0.00	0.00	800.34	1073.28	1873.62	350000	729.17	0.00	344.12	1144.46	2565.16	106.92	2700.00	5372.08	22469.38	0.00	463590.26	4227.62	493024.16
Dec-46	450282	45430	0	404852	15.29	187.27	309.47	218.52	0.00	0.00	351.39	527.99	879.38	350000	729.17	201.18	0.00	351.39	3793.16	110.48	2790.00	6693.64	16127.13	0.00	457248.01	6342.25	486681.91
Jan-47	450282	45430	0	404852	12.90	208.98	261.05	246.68	0.00	0.00	296.42	507.73	804.15	350000	930.35	422.61	0.00	296.42	4232.85	147.31	2790.00	7170.17	9253.38	0.00	450374.26	6873.75	479808.16
Feb-47	450282	45430	0	404852	14.79	174.96	299.29	233.06	0.00	0.00	339.83	532.34	872.18	350000	1151.78	619.44	0.00	339.83	3543.72	133.06	2520.00	6196.78	3396.43	0.00	444517.31	5856.95	473951.21
Mar-47	450282	45430	0	404852	20.74	132.19	419.74	341.18	0.00	0.00	476.60	760.92	1237.52	350000	1348.60	587.69	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	439379.00	5138.31	468812.90
Apr-47	450282	45430	0	404852	45.12	78.05	913.26	952.67	0.00	0.00	1036.98	1865.93	2902.91	350000	1316.85	0.00	549.07	1586.06	1580.97	106.92	0.00	1687.89	0.00	0.00	439277.17	101.83	468711.07
May-47	450282	45430	0	404852	122.23	52.80	2474.24	3256.88	0.00	0.00	2809.44	5731.12	8540.56	350000	729.17	0.00	5001.95	7811.39	1069.50	110.48	0.00	1179.98	6631.41	0.00	445908.58	-6631.41	475342.48
Jun-47	450282	45430	0	404852	161.25	40.40	3264.02	4744.71	0.00	0.00	3706.22	8008.73	11714.94	350000	729.17	0.00	7279.56	10985.78	818.37	106.92	0.00	925.29	16691.90	0.00	455969.07	-10060.49	485402.97
Jul-47	450282	45430	0	404852	177.34	41.79	3589.73	5383.45	0.00	0.00	4076.05	8973.18	13049.23	350000	729.17	0.00	8244.01	12320.06	846.45	73.66	0.00	920.11	26697.00	2124.03	467369.03	-11399.96	496802.93
Aug-47	450282	45430	0	404852	129.12	51.09	2613.79	3054.26	0.00	0.00	2967.90	5668.05	8635.96	350000	729.17	0.00	4938.89	7906.79	1034.93	73.66	0.00	1108.58	26697.00	7527.37	474167.23	-6798.21	503601.13
Sep-47	450282	45430	0	404852	99.14	65.41	2006.91	1613.67	0.00	0.00	2278.81	3620.59	5899.39	350000	729.17	0.00	2891.42	5170.23	1324.88	71.28	0.00	1396.16	26697.00	4503.23	477941.30	-3774.06	507375.20
Oct-47	450282	45430	0	404852	54.61	94.65	1105.48	487.92	0.00	0.00	1255.24	1593.40	2848.64	350000	729.17	0.00	864.23	2119.47	1917.20	110.48	0.00	2027.69	26697.00	820.95	478033.08	-91.79	507466.98
Nov-47	450282	45430	0	404852	34.82	126.64	704.85	368.44	0.00	0.00	800.34	1073.28	1873.62	350000	729.17	0.00	344.12	1144.46	2565.16	106.92	2700.00	5372.08	22469.38	0.00	473805.46	4227.62	503239.36
Dec-47	450282	45430	0	404852	15.29	187.27	309.47	218.52	0.00	0.00	351.39	527.99	879.38	350000	729.17	201.18	0.00	351.39	3793.16	110.48	2790.00	6693.64	16127.13	0.00	467463.21	6342.25	496897.11
Jan-48	450282	45430	0	404852	12.90	208.98	261.05	246.68	0.00	0.00	296.42	507.73	804.15	350000	930.35	422.61	0.00	296.42	4232.85	147.31	2790.00	7170.17	9253.38	0.00	460589.46	6873.75	490023.36
Feb-48	450282	45430	0	404852	14.79	174.96	299.29	233.06	0.00	0.00	339.83	532.34	872.18	350000	1151.78	619.44	0.00	339.83	3543.72	133.06	2520.00	6196.78	3396.43	0.00	454732.52	5856.95	484166.42
Mar-48	450282	45430	0	404852	20.74	132.19	419.74	341.18	0.00	0.00	476.60	760.92	1237.52	350000	1348.60	587.69	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	449594.20	5138.31	479028.11
Apr-48	450282	45430	0	404852	45.12	78.05	913.26	952.67	0.00	0.00	1036.98	1865.93	2902.91	350000	1316.85	0.00	549.07	1586.06	1580.97	106.92	0.00	1687.89	0.00	0.00	449492.37	101.83	478926.27
May-48	476655	49381	22423	404852	122.23	52.80	2474.24	3540.12	1003.64	72.29	2809.44	7090.29	9899.73	350000	729.17	0.00	6361.12	9170.57	1069.50	110.48	0.00	1179.98	7990.59	0.00	457482.96	-7990.59	486916.86
Jun-48	476655	49381	22423	404852	161.25	40.40	3264.02	5157.35	1823.18	90.32	3706.22	10334.87	14041.09	350000	729.17	0.00	9605.70	13311.92	818.37	106.92	0.00	925.29	20377.22	0.00	469869.59	-12386.64	499303.49
Jul-48	476655	49381	22423	404852	177.34	41.79	3589.73	5851.65	2168.04	98.44	4076.05	11707.85	15783.90	350000	729.17	0.00	10978.68	15054.74	846.45	73.66	0.00	920.11	26697.00	8544.02	484004.22	-14134.63	513438.12
Aug-48	476655	49381	22423	404852	129.12	51.09	2613.79	3319.88	1329.89	45.25	2967.90	7308.81	10276.72	350000	729.17	0.00	6579.65	9547.55	1034.93	73.66	0.00	1108.58	26697.00	9168.13	492443.19	-8438.97	521877.09
Sep-48	476655	49381	22423	404852	99.14	65.41	2006.91	1754.01	568.64	20.23	2278.81	4349.79	6628.59	350000	729.17	0.00	3620.62	5899.43	1324.88	71.28	0.00	1396.16	26697.00	5232.43	496946.45	-4503.26	526380.35
Oct-48	476655	49381	22423	404852	54.61	94.65	1105.48	530.35	84.08	5.56	1255.24	1725.48	2980.72	350000	729.17	0.00	996.31	2251.55	1917.20	110.48	0.00	2027.69	26697.00	953.03	497170.32	-223.87	526604.22
Nov-48	476655	49381	22423	404852	34.82	126.64	704.85	400.48	17.71	3.63	800.34	1126.67	1927.01	350000	729.17	0.00	397.51	1197.84	2565.16	106.92	2700.00	5372.08	22522.77	0.00	492996.08	4174.23	522429.98
Dec-48	476655	49381	22423	404852	15.29	187.27	309.47	237.52	23.99	6.32	351.39	577.31	928.70	350000	729.17	151.86	0.00	351.39	3793.16	110.48	2790.00	6693.64	16180.52	0.00	486653.84	6342.25	516087.74
Jan-49	476655	49381	22423	404852	12.90	208.98	261.05	268.14	32.51	9.58	296.42	571.28	867.70	350000	881.03	309.75	0.00	296.42	4232.85	147.31	2790.00	7170.17	9306.77	0.00	479780.09	6873.75	509213.99
Feb-49	476655	49381	22423	404852	14.79	174.96	299.29	253.32	22.20	4.57	339.83	579.38	919.21	350000	1038.91	459.54	0.00	339.83	3543.72	133.06	2520.00	6196.78	3449.82	0.00	473923.14	5856.95	503357.04
Mar-49	476655	49381	22423	404852	20.74	132.19	419.74	370.85	51.12	8.30	476.60	850.01	1326.61	350000	1188.70	338.70	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	468784.83	5138.31	498218.73
Apr-49	476655	49381	22423	404852	45.12	78.05	913.26	1035.52	195.75	17.27	1036.98	2161.79	3198.78	350000	1067.86	0.00	1093.93	2130.91	1580.97	106.92	0.00	1687.89	443.02	0.00	469227.85	-443.02	498661.75
May-49	476655	49381	22423	404852	122.23	52.80	2474.24	3540.12	1003.64	72.29	2809.44	7090.29	9899.73	350000	729.17	0.00	6361.12	9170.57	1069.50	110.48	0.00	1179.98	8433.61	0.00	477218.44	-7990.59	506652.34
Jun-49	476655	49381	22423	404852	161.25	40.40	3264.02	5157.35	1823.18	90.32	3706.22	10334.87	14041.09	350000	729.17	0.00	9605.70	13311.92	818.37	106.92	0.00	925.29	20820.24	0.00	489605.07	-12386.64	519038.97
Jul-49	476655	49381	22423	404852	177.34	41.79	3589.73	5851.65	2168.04	98.44	4076.05	11707.85	15783.90	350000	729.17	0.00	10978.68	15054.74	846.45	73.66	0.00	920.11	26697.00	8987.04	503739.70	-14134.63	533173.60
Aug-49	476655	49381	22423	404852	129.12	51.09	2613.79	3319.88	1329.89	45.25	2967.90	7308.81	10276.72	350000	729.17	0.00	6579.65	9547.55	1034.93	73.66	0.00	1108.58	26697.00	9168.13	512178.67	-8438.97	541612.57
Sep-49	476655	49381	22423	404852	99.14	65.41	2006.91	1754.01	568.64	20.23	2278.81	4349.79	6628.59	350000	729.17	0.00	3620.62	5899.43	1324.88	71.28	0.00	1396.16	26697.00	5232.43	516681.93	-4503.26	546115.83
Oct-49	476655	49381	22423	404852	54.61	94.65	1105.48	530.35	84.08	5.56	1255.24	1725.48	2980.72	350000	729.17	0.00	996.31	2251.55	1917.20	110.48	0.00	2027.69	26697.00	953.03	516905.80	-223.87	546339.70
Nov-49	476655	49381	22423	404852	34.82	126.64	704.85	400.48	17.71	3.63	800.34	1126.67	1927.01	350000	729.17	0.00	397.51	1197.84	2565.16	106.92	2700.00	5372.08	22522.77	0.00	512731.56	4174.23	542165.46
Dec-49	476655	49381	22423	404852	15.29	187.27	309.47	237.52	23.99	6.32	351.39	577.31	928.70	350000	729.17	151.86	0.00	351.39	3793.16	110.48	2790.00	6693.64	16180.52	0.00	506389.32	6342.25	535823.22
Jan-50	476655	49381	22423	404852	12.90	208.98	261.05	268.14	32.51	9.58	296.42	571.28	867.70	350000	881.03	309.75	0.00	296.42	4232.85	147.31	2790.00	7170.17	9306.77	0.00	499515.57	6873.75	528949.47
Feb-50	476655	49381	22423	404852	14.79	174.96	299.29	253.32	22.20	4.57	339.83	579.38	919.21	350000	1038.91	459.54	0.00	339.83	3543.72	133.06	2520.00	6196.78	3449.82	0.00	493658.62	5856.95	523092.52
Mar-50	476655	49381	22423	404852	20.74	132.19	419.74	370.85	51.12	8.30	476.60	850.01	1326.61	350000	1188.70	338.70	0.00	476.60	2677.60	147.31	2790.00	5614.91	0.00	0.00	488520.31	5138.31	517954.21
Apr-50	476655	49381	22423	404852	45.12	78.05	913.26	1035.52	195.75	17.27	1036.98	2161.79	3198.78	350000	1067.86	0.00	1093.93	2130.91	1580.97	106.92	0.00	1687.89	443.02	0.00	488963.33	-443.02	518397.23
May-50	476655	49381	22423	404852	122.23	52.80	2474.24	3540.12	1003.64	72.29	2809.44	7090.29	9899.73	350000	729.17	0.00	6361.12	9170.57	1069.50	110.48	0.00	1179.98	8433.61	0.00	496953.92	-7990.59	526387.82
Jun-50	476655	49381	22423	404852	161.25	40.40	3264.02	5157.35	1823.18	90.32	3706.22	10334.87	14041.09	350000	729.17	0.00	9605.70	13311.92	818.37	106.92	0.00	925.29	20820.24	0.00	509340.55	-12386.64	538774.45
Jul-50	476655	49381	22423	404852	177.34	41.79	3589.73	5851.65	2168.04	98.44	4076.05	11707.85	15783.90	350000	729.17	0.00	10978.68	15054.74	846.45	73.66	0.00	920.11	26697.00	8987.04	523475.18	-14134.63	552909.08
Aug-50	476655	49381	22423	404852	129.12	51.09	2613.79	3319.88	1329.89	45.25	2967.90	7308.81	10276.72	350000	729.17	0.00	6579.65	9547.55	1034.93	73.66	0.00	1108.58	26697.00	9168.13	531914.15	-8438.97	561348.05
Sep-50	476655	49381	22423	404852	99.14	65.41	2006.91	1754.01	568.64	20.23	2278.81	4349.79	6628.59	0	0.00	0.00	4349.79	6628.59	1324.88	71.28	0.00	1396.16	26697.00	5232.43	537146.58	-5232.43	566580.48
Oct-50	476655	49381	22423	404852	54.61	94.65	1105.48	530.35	84.08	5.56	1255.24	1725.48	2980.72	0	0.00	0.00	1725.48	2980.72	1917.20	110.48	0.00	2027.69	26697.00	953.03	538099.61	-953.03	567533.51
Nov-50	476655	49381	22423	404852	34.82	126.64	704.85	400.48	17.71	3.63	800.34	1126.67	1927.01	0	0.00	0.00	1126.67	1927.01	2565.16	106.92	0.00	2672.08	25951.93	0.00	537354.54	745.07	566788.44
Dec-50	476655	49381	22423	404852	15.29	187.27	309.47	237.52	23.99	6.32	351.39	577.31	928.70	0	0.00	0.00	577.31	928.70	3793.16	110.48	0.00	3903.64	22976.99	0.00	534379.60	2974.94	563813.50
Jan-51	476655	49381	22423	404852	12.90	208.98	261.05	268.14	32.51	9.58	296.42	571.28	867.70	0	0.00	0.00	571.28	867.70	4232.85	147.31	0.00	4380.17	19464.52	0.00	530867.13	3512.47	560301.03
Feb-51	476655	49381	22423	404852	14.79	174.96	299.29	253.32	22.20	4.57	339.83	579.38	919.21	0	0.00	0.00	579.38	919.21	3543.72	133.06	0.00	3676.78	16706.95	0.00	528109.56	2757.57	557543.46

Mar-51	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	14852.82	0.00	526255.43	1854.13	555689.33
Apr-51	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	15277.15	0.00	526679.76	-424.33	556113.66
May-51	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	19819.67	0.00	531222.29	-4542.53	560656.19
Jun-51	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	26443.53	0.00	537846.14	-6623.85	567280.04
Jul-51	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	7128.86	545228.47	-7382.33	574662.37
Aug-51	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	550165.16	-4936.69	579599.06
Sep-51	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	553410.66	-3245.50	582844.56
Oct-51	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	553939.76	-529.10	583373.66
Nov-51	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	552897.88	1041.88	582331.78
Dec-51	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	549709.99	3187.89	579143.89
Jan-52	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	545933.59	3776.40	575367.49
Feb-52	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	542949.01	2984.58	572382.91
Mar-52	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	541094.88	1854.13	570528.78
Apr-52	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	541519.20	-424.33	570953.10
May-52	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	546061.73	-4542.53	575495.63
Jun-52	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	552685.58	-6623.85	582119.48
Jul-52	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	560067.92	-7382.33	589501.82
Aug-52	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	565004.61	-4936.69	594438.51
Sep-52	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	568250.11	-3245.50	597684.01
Oct-52	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	568779.21	-529.10	598213.11
Nov-52	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	567737.32	1041.88	597171.22
Dec-52	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	564549.43	3187.89	593983.33
Jan-53	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	560773.03	3776.40	590206.93
Feb-53	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	557788.45	2984.58	587222.35
Mar-53	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	555934.32	1854.13	585368.22
Apr-53	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	556358.65	-424.33	585792.55
May-53	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	560901.18	-4542.53	590335.08
Jun-53	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	567525.03	-6623.85	596958.93
Jul-53	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	574907.36	-7382.33	604341.26
Aug-53	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	579844.05	-4936.69	609277.95
Sep-53	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	583089.55	-3245.50	612523.45
Oct-53	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	583618.65	-529.10	613052.55
Nov-53	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	582576.77	1041.88	612010.67
Dec-53	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	579388.88	3187.89	608822.78
Jan-54	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	575612.48	3776.40	605046.38
Feb-54	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	572627.90	2984.58	602061.80
Mar-54	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	570773.77	1854.13	600207.67
Apr-54	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	571198.09	-424.33	600631.99
May-54	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	575740.62	-4542.53	605174.52
Jun-54	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	582364.47	-6623.85	611798.37
Jul-54	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	589746.81	-7382.33	619180.71
Aug-54	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	594683.50	-4936.69	624117.40
Sep-54	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	597929.00	-3245.50	627362.90
Oct-54	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	598458.10	-529.10	627892.00
Nov-54	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	597416.21	1041.88	626850.11
Dec-54	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	594228.32	3187.89	623662.22
Jan-55	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	590451.92	3776.40	619885.82
Feb-55	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	587467.34	2984.58	616901.24
Mar-55	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	585613.21	1854.13	615047.11
Apr-55	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	586037.54	-424.33	615471.44
May-55	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	590580.06	-4542.53	620013.97
Jun-55	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	597203.92	-6623.85	626637.82
Jul-55	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	604586.25	-7382.33	634020.15
Aug-55	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	609522.94	-4936.69	638956.84
Sep-55	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	612768.44	-3245.50	642202.34
Oct-55	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	613297.54	-529.10	642731.44
Nov-55	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	612255.66	1041.88	641689.56
Dec-55	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	609067.77	3187.89	638501.67
Jan-56	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	605291.36	3776.40	634725.27
Feb-56	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	602306.79	2984.58	631740.69
Mar-56	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	600452.65	1854.13	629886.56
Apr-56	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	600876.98	-424.33	630310.88
May-56	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	605419.51	-4542.53	634853.41
Jun-56	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	612043.36	-6623.85	641477.26
Jul-56	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	619425.70	-7382.33	648859.60
Aug-56	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	624362.39	-4936.69	653796.29
Sep-56	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	627607.89	-3245.50	657041.79
Oct-56	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	628136.99	-529.10	657570.89
Nov-56	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	627095.10	1041.88	656529.00
Dec-56	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	623907.21	3187.89	653341.11
Jan-57	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	620130.81	3776.40	649564.71
Feb-57	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	617146.23	2984.58	646580.13
Mar-57	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	615292.10	1854.13	644726.00
Apr-57	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	615716.43	-424.33	645150.33
May-57	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	620258.95	-4542.53	649692.86
Jun-57	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	626882.80	-6623.85	656316.71
Jul-57	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	634265.14	-7382.33	663699.04
Aug-57	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	639201.83	-4936.69	668635.73
Sep-57	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	642447.33	-3245.50	671881.23
Oct-57	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	642976.43	-529.10	672410.33
Nov-57	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	641934.55	1041.88	671368.45
Dec-57	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	638746.65	3187.89	668180.56
Jan-58	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	634970.25	3776.40	664404.16
Feb-58	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	631985.68	2984.58	661419.58
Mar-58	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	630131.54	1854.13	659565.45
Apr-58	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	630555.87	-424.33	659989.77
May-58	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	635098.40	-4542.53	664532.30
Jun-58	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	641722.25	-6623.85	671156.15
Jul-58	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	649104.58	-7382.33	678538.49
Aug-58	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	654041.28	-4936.69	683475.18
Sep-58	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	657286.77	-3245.50	686720.68
Oct-58	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	657815.87	-529.10	687249.78
Nov-58	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	656773.99	1041.88	686207.89
Dec-58	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	653586.10	3187.89	683020.00
Jan-59	476655	0	0	476655	12.90	208.98	307.35	0.00	0.00	0.00	296.42	307.35	603.77	0	0.00	0.00	307.35	603.77	4232.85	147.31	0.00	4380.17	18690.82	0.00	649809.70	3776.40	679243.60
Feb-59	476655	0	0	476655	14.79	174.96	352.37	0.00	0.00	0.00	339.83	352.37	692.20	0	0.00	0.00	352.37	692.20	3543.72	133.06	0.00	3676.78	15706.25	0.00	646825.12	2984.58	676259.02
Mar-59	476655	0	0	476655	20.74	132.19	494.18	0.00	0.00	0.00	476.60	494.18	970.78	0	0.00	0.00	494.18	970.78	2677.60	147.31	0.00	2824.91	13852.11	0.00	644970.99	1854.13	674404.89
Apr-59	476655	0	0	476655	45.12	78.05	1075.23	0.00	0.00	0.00	1036.98	1075.23	2112.22	0	0.00	0.00	1075.23	2112.22	1580.97	106.92	0.00	1687.89	14276.44	0.00	645395.31	-424.33	674829.22
May-59	476655	0	0	476655	122.23	52.80	2913.07	0.00	0.00	0.00	2809.44	2913.07	5722.51	0	0.00	0.00	2913.07	5722.51	1069.50	110.48	0.00	1179.98	18818.97	0.00	649937.84	-4542.53	679371.74
Jun-59	476655	0	0	476655	161.25	40.40	3842.92	0.00	0.00	0.00	3706.22	3842.92	7549.14	0	0.00	0.00	3842.92	7549.14	818.37	106.92	0.00	925.29	25442.82	0.00	656561.69	-6623.85	685995.60
Jul-59	476655	0	0	476655	177.34	41.79	4226.39	0.00	0.00	0.00	4076.05	4226.39	8302.44	0	0.00	0.00	4226.39	8302.44	846.45	73.66	0.00	920.11	26697.00	6128.15	663944.03	-7382.33	693377.93

Aug-59	476655	0	0	476655	129.12	51.09	3077.37	0.00	0.00	0.00	2967.90	3077.37	6045.28	0	0.00	0.00	3077.37	6045.28	1034.93	73.66	0.00	1108.58	26697.00	4936.69	668880.72	-4936.69	698314.62
Sep-59	476655	0	0	476655	99.14	65.41	2362.86	0.00	0.00	0.00	2278.81	2362.86	4641.66	0	0.00	0.00	2362.86	4641.66	1324.88	71.28	0.00	1396.16	26697.00	3245.50	672126.22	-3245.50	701560.12
Oct-59	476655	0	0	476655	54.61	94.65	1301.54	0.00	0.00	0.00	1255.24	1301.54	2556.79	0	0.00	0.00	1301.54	2556.79	1917.20	110.48	0.00	2027.69	26697.00	529.10	672655.32	-529.10	702089.22
Nov-59	476655	0	0	476655	34.82	126.64	829.86	0.00	0.00	0.00	800.34	829.86	1630.19	0	0.00	0.00	829.86	1630.19	2565.16	106.92	0.00	2672.08	25655.12	0.00	671613.44	1041.88	701047.34
Dec-59	476655	0	0	476655	15.29	187.27	364.36	0.00	0.00	0.00	351.39	364.36	715.75	0	0.00	0.00	364.36	715.75	3793.16	110.48	0.00	3903.64	22467.23	0.00	668425.54	3187.89	697859.45