DAVID L. ANDERSON (CABN 149604)
United States Attorney

HALLIE HOFFMAN (CABN 210020)
Chief, Criminal Division

LAURA VARTAIN HORN (CABN 258485)
Assistant United States Attorney

    450 Golden Gate Avenue, Box 36055
    San Francisco, California 94102-3495
    Telephone: (415) 436-7200
    Laura.Vartain@usdoj.gov

NICHOLAS O. HUNTER (DCBN 1022355)
STEPHEN MARZEN (NYBN 2007094)
Trial Attorney, National Security Division

    950 Pennsylvania Ave., NW
    Washington, DC 20530
    Tel: (202) 353-3434
    Fax: (202) 233-2146
    Nicholas.Hunter@usdoj.gov

Attorneys for United States of America

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

UNITED STATES OF AMERICA,
 	
    Plaintiff,
 	
  v.
 	
UNITED MICROELECTRONICS CORPORATION, INC.
 	
    Defendant.
	Case No. 18-CR-465 MMC
	
	UNITED STATES'
	SENTENCING MEMORANDUM

I.   INTRODUCTION

The United States respectfully requests that the Court impose a sentence consistent with the Rule 11(c)(1)(C) plea agreement, which has been submitted to the Court for review. The key terms of the plea agreement are: (1) defendant United Microelectronics Corporation Inc. ("UMC") will plead guilty to a superseding information, which charges UMC with 18 U.S.C. § 1832(a)(3), theft of trade secrets;

1 (2) the parties agree that a fine of $60 million and a three-year unsupervised probationary period is an

2 appropriate disposition for this case; and (3) UMC agrees to provide substantial assistance. The parties

3 jointly recommend proceeding without a written Presentence Report, and accordingly notified United

4 States Probation of the request to proceed with plea and sentencing on the same date. Probation will be

5 present at sentencing to assist with the Judgment and Commitment Order and any related matters.

6 **II.   CHARGE AND CONVICTION**

7 **A.   Criminal Conduct**

8 The facts are detailed in the Plea Agreement, and the United States will not repeat them in detail

9 here. In brief, UMC is a semiconductor foundry company headquartered in Taiwan. In the fall of 2015,

10 UMC began having discussions with potential business partners in China to jointly develop Dynamic

11 Random Access Memory ("DRAM"). DRAM is a type of digital memory used in computers and

12 electronics. UMC's efforts led to the negotiation of a Cooperation Agreement between UMC and

13 defendant Fujian Jinhua Integrated Circuit Co., Ltd. ("Jinhua"), a Chinese state-owned entity created to

14 develop DRAM. UMC and Jinhua executed the Cooperation Agreement in May 2016, after approval by

15 the appropriate Taiwan authorities. The agreement called for UMC and Jinhua to jointly develop two

16 generations of DRAM technology, and for Jinhua to make payments to UMC for the development.

17 Jinhua made $160M in payments to UMC pursuant to the Cooperation Agreement.

18 UMC hired a number of employees from Micron Memory Taiwan Co., Ltd. ("MMT")—a

19 subsidiary of Micron Technology, Inc. ("Micron"), one of the world's three leading DRAM

20 manufacturers headquartered in Boise, Idaho—who ultimately worked on the DRAM project at UMC.

21 At least two of those employees—defendants Kenny Wang and JT Ho—brought Micron's confidential

22 information with them to UMC without authorization and referenced that information during their work

23 at UMC. Defendant Stephen Chen was a Senior Vice President at UMC who came to lead the

24 negotiation of the Cooperation Agreement and the DRAM project, before becoming President of Jinhua

25 in February 2017. In early 2015, UMC's IT Department provided Chen with information showing that

26 Micron-labeled files were found on UMC devices used by JT Ho and another UMC employee who

27 previously worked for MMT. In response, Chen authorized those employees' applications for two

28 laptops that could be used to access information without detection by UMC's information-technology

1   department. Those laptops were subsequently used by employees including Ho and Wang to view

2   Micron confidential information while working on the UMC/Jinhua DRAM project.

3   One of the files Wang brought to UMC from MMT was an Excel spreadsheet named

4   "[DR25nmS] Design rules Periphery_EES_2012000023-013) Rev.13," which is referred to in the

5   Indictment as "Trade Secret 5." Trade Secret 5 contained Micron "design rules" for DRAM circuit

6   layouts that UMC acknowledges in the plea agreement is a Micron trade secret under 18 U.S.C.

7   § 1839(3). In August 2016, Wang used the Micron trade-secret design rules to develop UMC's design

8   rules for the DRAM project with Jinhua.

9   **B.   Indictment and Information**

10   A grand jury returned the indictment charging UMC, Jinhua, Wang, Ho, and Chen on September

11   27, 2018. *See* Dkt No. 1.   The indictment was unsealed on November 1, 2018. Dkt No. 10. The

12   indictment charged UMC with one count of conspiracy to commit economic espionage under 18 U.S.C.

13   § 1831(a)(5) (count one), one count of conspiracy to commit theft of trade secrets under 18 U.S.C.

14   § 1832(a)(5) (count two), and one count of economic espionage (receiving and possessing stolen trade

15   secrets) under 18 U.S.C. §§ 1831(a)(3) and 2 (count seven). The individual defendants (Chen, Ho, and

16   Wang) have never appeared in Court, and have outstanding warrants.

17   Before October 28, 2020, the United States will file a one-count Superseding Information

18   charging UMC with one count of theft of trade secrets under 18 U.S.C. § 1832(a)(3).

19   **III.   UNITED STATES' SENTENCING RECOMMENDATION**

20   **A.   The Sentencing Guidelines Calculation**

21   As set out in more detail below, the United States recommends the Court adopt the Sentencing

22   Guidelines calculations, which find (1) the Total Offense Level is 32; and (2) a corresponding fine range

23   of $42M to $84M results from applying the relevant Chapter 8 culpability multipliers to Total Offense

24   Level 32. The recommended $60M fine is in the middle of that range. In addition, the Court should

25   impose the recommended unsupervised probationary term of three years and a $100 special assessment.

26   **1.   Calculation of the Total Offense Level (U.S.S.G. §2B1.1)**

27   U.S.S.G. Chapters 2 and Chapter 8 overlap in the below calculation: the Chapter 2 calculation

28   turns on the fine resulting from application of Chapter 8. Because the Guidelines generally are applied

1   in sequential chapter order, U.S.S.G. §1B1.1, the below calculation starts with Chapter 2, while

2   recognizing the circular interplay between the chapters in this case. Regardless, whether starting with

3   Chapter 2 or 8, the result is the same.

4   As set out in Table A, below, the starting point for calculation of the offense level for theft of

5   trade secrets is U.S.S.G. § 2B1.1, and specific offense characteristics apply here for loss (here, assessed

6   as gain) and the benefit accruing to a foreign instrumentality (Jinhua) apply.

7   For the purposes of the calculations, the United States uses gain, rather than loss because on the

8   record developed in the case thus far, loss "reasonably cannot be determined" and so gain is appropriate.

9   *See* U.S.S.G. § 2B1.1 cmt. 3(B). Chapter 8 defines pecuniary gain: "[P]ecuniary gain" is "the additional

10 before-tax profit to the defendant resulting from the relevant conduct of the offense." U.S.S.G. § 8C2.4

11 (cross-referencing "pecuniary gain" at U.S.S.G. § 8A1.2 cmt. 3(H).

12 To calculate UMC's pecuniary gain, the United States uses the $160M payment made by Jinhua

13 to UMC under the Cooperation Agreement and multiplied it by UMC's profit margin as detailed in

14 United States Securities and Exchange Forms 20-F during 2016-2018, when UMC developed the

15 DRAM technology and transferred it to Jinhua. *See* Table B. By multiplying Jinhua's payment to UMC

16 by UMC's profit margin, we reach the profit attributable to UMC from the UMC/Jinhua Cooperation

17 Agreement, which results in $28.8M net profit. Accordingly, the pecuniary gain is $ 28.8M, which is

18 reflected as 22 additional offense levels. Next, UMC is responsible for actions that benefitted Jinhua, a

19 PRC-owned enterprise. The resulting offense level is 32.

Table A: U.S.S.G. Offense Level Calculation Pursuant to U.S.S.G. § 2B1.1			
Guidelines Component	**U.S.S.G. Points**	**U.S.S.G. Reference**	**Explanation**
Base offense level	6	U.S.S.G. § 2B1.1(a)(2)	Opening entry prescribed by Guidelines
Loss (gain)	22	U.S.S.G. § 2B1.1(b)(1)	Gain used if loss "reasonably cannot be determined" U.S.S.G. § 2B1.1 cmt. 3(B). "[P]ecuniary gain" is "the additional before-tax profit to the defendant resulting from the relevant conduct of the offense." U.S.S.G. § 8C2.4 on "pecuniary gain" cross-references to U.S.S.G. § 8A1.2 cmt. 3(H) (see Table B for further discussion).
To benefit foreign instrumentality	4	U.S.S.G. § 2B1.1(b)(14)	Foreign instrumentality beneficiary adds 4 points
Total points	32		

27

28 After applying Chapter 2 to reaching the total offense level, application of Chapter 8 is necessary

to determine the appropriate corporate fine.[1]

2.   Calculation of Base Fine Pursuant to U.S.S.G. § 8A1.2 and § 8C2.1

Chapter 8 of the Guidelines calculates corporate fines in multiple steps. The first step is determination of a base fine, which is the *greater* of (1) a total offense level fine based on Total Offense Level and a table at U.S.S.G. § 8C2.4(d) (referred to   here as the "offense level fine," (2) UMC's gain, or (3) the victim's loss.

Here, the total offense level fine is the greatest. That fine is assessed by taking the Total Offense Level from Chapter 2 and applying the table at U.S.S.G. § 8C2.4(d). This results in $30M. UMC's gain was $28.8M. Further, given the complexities of calculating the loss to Micron, the United States does not use the victim's loss in applying Chapter 8. Under these three methods, as set out at Table B, the total offense level fine yields the highest number.

TABLE B: U.S.S.G. 8C2.4 – Base Fine Calculation			
Measure	**US$**	**U.S.S.G. Reference**	**Explanation**
1. U.S.S.G 8C2.4(a)(1) and (d) ("total offense level")	30,000,000	U.S.S.G. § 8C2.4(a)(1) and (d)	Fine corresponding for offense level 32 (See Table A) when assessed using the table at U.S.S.G.§ 8C2.4(d)
2. UMC's gain	28,800,000	U.S.S.G. § 8C2.4(a)(2)	UMC's Cooperation Agreement revenue of $160m * 18% gross profit margin = $28.8m gain
3. Victim's loss	Restitution deferred	U.S.S.G. § 8C2.4(a)(3)	Complexity of calculation

Accordingly, the base fine is $30M. The next step is to apply the culpability multipliers to the base fine.

//

//

//

---

[1] As set out in the Plea Agreement, the United States recommends deferring restitution to the pending civil action, *Micron Technology, Inc. v. United Microelectronics Corporation, Fujian Integrated Circuit Co., LTD., and Does 1-10,* captioned 17-CV-06932. Complex issues of fact relate to the amount of loss to Micron, and resolving those complexities would complicate or prolong the sentencing process to such a degree that the need to fashion a restitution order is outweighed by the burden on the sentencing process. 18 U.S.C. § 3663A(c)(3)(B).

3.   Culpability Score (U.S.S.G. § 8C2.5) and Multipliers (U.S.S.G. §8C2.6)

(i)   Culpability Score

The base culpability prescribed by the Guidelines is five points. Two adjustments apply. First, an upward adjustment or increase in culpability of three points for defendant Stephen Chen's role as senior vice president of a unit between 200 and 1,000 employees. U.S.S.G. § 8C2.5(b)(3)(B). Second, UMC is entitled to a downward adjustment or reduction in culpability of one point for UMC's acceptance of responsibility. *See* U.S.S.G. § 8C2.5(g).

TABLE C: U.S.S.G. MULTIPLIER CALCULATION

Guidelines Component	U.S.S.G. Points	U.S.S.G. Reference	Explanation
Base culpability score	5	U.S.S.G. § 8C2.5(a)	Opening entry prescribed by Guidelines
Unit head participated in offense	+ 3	U.S.S.G. § 8C2.5(b)(3)(B)(1)	Stephen Chen, SVP of New Business Development, led corporate unit of between 200 and 1,000 persons
Acceptance of responsibility	- 1	U.S.S.G. § 8C2.5(g)	
Resulting Culpability score	= 7		

(ii)   Culpability Multipliers

Based on a culpability score of 7, the Guidelines culpability multipliers are a minimum of 1.40 and a maximum of 2.80. *See* U.S.S.G. § 8C2.6.

Table D: U.S.S.G. Fine Range: Minimum / Maximum Matrix			
		Minimum Multiplier: 1.40	**Maximum Multiplier: 2.80**
Base Fine	$30m	$42 million	$84 million

Accordingly, the appropriate fine range is $42M-$84M. For the reasons below, the proposed $60M fine appropriately addresses the considerations of 18 U.S.C. § 3553(a) and the policy statement factors that overlap with it from U.S.S.G. § 8C2.8.

4. Alternative Fine Statute As a Reference Point

Although the indictment does not plead the Alternative Fines Act, 18 U.S.C. § 3571(d), UMC's alternative fine under the Act is of $57.6 million is close to the $60 million proposed fine in the plea agreement and the middle of the Guidelines range and therefore supports the government's sentencing recommendation. The alternative fine is "the greater of twice the gross gain or twice the gross loss, unless imposition of a fine under this subsection would unduly complicate or prolong the sentencing process." *Id*. Twice UMC's gross gain (*i.e.*, profit, *see United States v. Sanford Ltd.*, 88 F. Supp. 2d 137, 148-50 (D.D.C. 2012)) of $28.8 million is $57.6 million. Because the alternative fine falls in the middle of the Guidelines range and is close to the fine proposed under the plea agreement, it does not alter the government's sentencing recommendation but supports the fine proposed under the plea agreement.

B. The Recommended Sentence Set Out in the Plea Agreement is Appropriate

A $60 million fine, three years of probation, a $100 special assessment is a reasonable sentence under 18 U.S.C. 3553(a) and U.S.S.G. § 8C2.8. The substantial fine reflects the seriousness of the theft undertaken by UMC's employees and for UMC and Jinhua's benefit, but appropriately accounts for UMC's acceptance of responsibility well before trial and its promise to provide substantial assistance to the government's continued prosecution of the remaining defendants.

As illustrated above, the $60 million fine falls roughly at the midpoint of the proposed Guidelines fine calculation. The fine appropriately addresses UMC's culpability for the acts of its employees, including Stephen Chen, a senior manager at UMC. Defendant Wang and Ho's thefts from Micron involved a large amount of valuable confidential information, including trade secrets. Wang and Ho took Micron's confidential information to UMC and sought to use it for the benefit of UMC and Jinhua—and at Micron's expense. Although the theft occurred by Wang and Ho initially, others facilitated it as discussed in the Plea Agreement and briefly here. UMC, however, has shown a willingness to cooperate with the United States and accept responsibility for the acts of its employees prior to trial in this case. A $60 million fine at roughly the midpoint of the proposed Guidelines calculation is reasonable and serves to punish and deter, while appropriately recognizing UMC's willingness to resolve the case.

Pursuant to U.S.S.G. §§ 8D1.1 and 8D1.2, the parties jointly request a three year probationary

term. The probationary term buttresses the cooperation terms of the agreement. It is within the one to five year range that the Court may impose pursuant to U.S.S.G. § 8D1.2.

IV.   CONCLUSION

UMC will plead guilty for a serious crime, which deprived Micron of exclusive use and control of its valuable intellectual property in a competitive industry. For those reasons, the government respectfully asserts that a sentence of a $60 million fine is sufficient but not greater than necessary to comply with the considerations set out in 18 U.S.C. § 3553(a) and respectfully requests the Court to impose that sentence.

DATED: October 21, 2020

Respectfully submitted,

DAVID L. ANDERSON
United States Attorney

Laura Vartain Horn

_____
LAURA VARTAIN HORN
Assistant United States Attorney
NICHOLAS O. HUNTER
STEPHEN MARZEN
Trial Attorneys, National Security Division