

Appendix 3
Red Flag Calculations for Impact Analysis

PLAINTIFF TRIAL
EXHIBIT

P-04746_00001

**Red Flag Calculations for Impact Analysis - 14 Red Flags and 7 SOMs
San Francisco County, CA**

Year	Defendant Dispensers Share of Total MMEs (ARCOS)	Defendant Dispensers Non-Recurrent Red Flag Percent of MMEs	Defendant Dispensers Recurrent Red Flag Percent of MMEs	Distributors Share of Total MMEs (ARCOS)	Distributors Non-Recurrent Red Flag Percent of MMEs (ARCOS & Defendant Data)	Distributors Recurrent Red Flag Percent of MMEs (ARCOS & Defendant Data)	Manufacturers Share of Total MMEs (ARCOS)	Manufacturers Non-Recurrent Red Flag Percent of MMEs (ARCOS & Other Distribution Data)*	Manufacturers Recurrent Red Flag Percent of MMEs (ARCOS)
1996					0.00%	51.28%		16.58%	
1997					6.56%	81.76%		19.73%	
1998					29.65%	95.87%		22.64%	
1999					26.11%	98.67%		30.49%	
2000					23.35%	99.66%		25.86%	
2001					25.58%	97.06%		32.60%	
2002					36.14%	96.61%		11.20%	
2003					24.30%	86.89%		17.67%	
2004					7.81%	73.52%		29.01%	
2005					13.54%	42.04%		17.32%	
2006	40.01%	83.58%	96.71%	44.54%	7.73%	71.94%	42.79%	15.37%	36.93%
2007	41.74%	85.78%	99.36%	53.69%	29.77%	88.69%	52.59%	37.72%	82.91%
2008	40.86%	86.14%	99.71%	41.65%	19.19%	89.99%	34.80%	22.53%	76.10%
2009	48.24%	87.24%	99.80%	44.29%	23.27%	90.65%	37.51%	22.57%	64.88%
2010	54.73%	88.62%	99.86%	48.06%	34.16%	92.55%	41.90%	26.69%	65.08%
2011	59.24%	87.20%	99.89%	50.65%	32.79%	92.60%	43.77%	27.44%	73.20%
2012	57.88%	87.20%	99.91%	49.15%	31.98%	93.84%	43.65%	31.56%	77.05%
2013	56.68%	85.73%	99.90%	25.90%	26.23%	94.75%	42.08%	21.48%	78.75%
2014	55.88%	83.32%	99.87%	1.65%	6.89%	96.57%	33.63%	26.38%	72.07%
2015		82.50%	99.89%					27.56%	
2016		82.26%	99.90%					26.54%	
2017		81.50%	99.90%					23.27%	
2018		80.25%	99.90%					20.56%	
2019		84.64%	99.93%						
2020		82.35%	99.90%						
1996-2010	45.51%	86.91%	99.49%	46.35%	23.93%	87.47%	41.61%	25.27%	66.07%
2006-2010	45.51%	86.91%	99.49%	46.35%	23.94%	87.50%	41.61%	25.74%	66.07%
1996-2020	50.65%	85.21%	99.76%	41.00%	26.38%	89.58%	41.42%	25.95%	70.06%
2006-2020	50.65%	85.21%	99.76%	41.00%	26.40%	89.60%	41.42%	26.20%	70.06%

Note: Total MME includes MMEs sold by non-defendants.

*1/1/2006 - 12/31/2014 is based on ARCOS data produced by DEA. Any data outside of those dates is based on transactional data produced by AmerisourceBergen (6/2002-12/2017), Anda Inc (12/1996-1/2015), Cardinal Health (1/1996-5/2018), McKesson Corporation (10/2004-12/2018), and Walgreens (1/2006-3/2014).

**Red Flagged Opioid Prescriptions in the Dispensing Data - 14 Flags
San Francisco County, CA**

Year	Defendant Dispensers Total Number of Opioid Prescriptions	Defendant Dispensers Non- Recurrent Red Flagged Opioid Prescriptions	Defendant Dispensers Recurrent Red Flagged Opioid Prescriptions
1996			
1997			
1998			
1999			
2000			
2001			
2002			
2003			
2004			
2005			
2006	77,260	41,809	68,301
2007	180,670	103,353	175,432
2008	194,543	110,957	191,542
2009	212,331	122,892	209,937
2010	230,318	137,973	228,438
2011	239,767	143,437	238,296
2012	217,328	131,679	216,108
2013	210,989	124,596	209,770
2014	187,900	105,422	186,473
2015	168,725	94,169	167,578
2016	157,527	88,640	156,535
2017	142,345	79,958	141,450
2018	118,425	65,189	117,661
2019	99,132	56,225	98,566
2020	40,843	22,094	40,612
1996-2010	895,122	516,984	873,650
2006-2010	895,122	516,984	873,650
1996-2020	2,478,103	1,428,393	2,446,699
2006-2020	2,478,103	1,428,393	2,446,699