

NGSP Plan Analysis																								
Fund Name	2010 Assets	2011 Assets	2012 Assets	2013 Assets	2014 Assets	2015 Assets	2016 Assets	2017 Assets	4Q2010 Performance	2011 Performance	2012 Performance	2013 Performance	2014 Performance	2015 Performance	2016 Performance	2017 Performance	2010 Asset Allocation	2011 Asset Allocation	2012 Asset Allocation	2013 Asset Allocation	2014 Asset Allocation	2015 Asset Allocation	2016 Asset Allocation	2017 Asset Allocation
Retirement Path Retirement Fund	\$ 140,020,554	\$ 153,603,351	\$ 203,000,000	\$ 208,032,827	\$ 264,000,000	\$ 242,000,000	\$ 244,284,174	\$ 251,000,000	3.12%	3.81%	9.25%	7.72%	5.79%	-0.30%	5.89%	10.51%	0.91%	1.24%	1.58%	1.24%	1.55%	1.38%	1.24%	1.13%
Retirement Path 2015	\$ 269,577,523	\$ 296,319,884	\$ 417,000,000	\$ 467,536,009	\$ 510,000,000	\$ 493,000,000	\$ 554,585,177	\$ 624,000,000	5.36%	1.24%	11.64%	11.37%	6.21%	-0.47%	6.27%	11.67%	1.75%	2.38%	3.24%	2.80%	2.98%	2.81%	2.81%	2.81%
Retirement Path 2025	\$ 80,060,422	\$ 122,000,000	\$ 151,000,000	\$ 206,020,239	\$ 291,000,000	\$ 296,305,134	\$ 291,000,000	\$ 291,000,000	7.01%	-0.82%	13.94%	11.97%	6.47%	-0.54%	6.74%	13.37%	0.48%	0.72%	0.80%	0.80%	1.05%	1.05%	1.31%	1.31%
Retirement Path 2030	\$ 235,250,096	\$ 269,678,737	\$ 383,000,000	\$ 446,281,466	\$ 505,000,000	\$ 522,000,000	\$ 506,305,134	\$ 716,000,000	15.17%	13.94%	13.94%	13.94%	6.69%	-0.59%	7.15%	14.82%	1.53%	2.17%	2.97%	2.67%	2.96%	2.97%	3.03%	3.23%
Retirement Path 2035	\$ 222,892,973	\$ 237,582,259	\$ 325,000,000	\$ 402,071,933	\$ 456,000,000	\$ 461,000,000	\$ 527,632,990	\$ 650,000,000	8.36%	-2.59%	15.88%	18.80%	7.17%	-0.69%	7.82%	17.27%	1.43%	1.91%	2.53%	2.41%	2.67%	2.63%	2.68%	2.93%
Retirement Path 2040	\$ 35,787,585	\$ 38,000,000	\$ 73,000,000	\$ 105,145,860	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	18.08%	18.08%	18.08%	18.08%	7.34%	-0.74%	8.07%	18.34%	0.21%	0.34%	0.42%	0.53%	0.73%	0.73%	0.73%	0.73%
Retirement Path 2045	\$ 35,787,585	\$ 38,000,000	\$ 73,000,000	\$ 105,145,860	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	18.08%	18.08%	18.08%	18.08%	7.34%	-0.74%	8.07%	18.34%	0.21%	0.34%	0.42%	0.53%	0.73%	0.73%	0.73%	0.73%
Retirement Path 2050	\$ 35,787,585	\$ 38,000,000	\$ 73,000,000	\$ 105,145,860	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	18.08%	18.08%	18.08%	18.08%	7.34%	-0.74%	8.07%	18.34%	0.21%	0.34%	0.42%	0.53%	0.73%	0.73%	0.73%	0.73%
Retirement Path 2055	\$ 35,787,585	\$ 38,000,000	\$ 73,000,000	\$ 105,145,860	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	18.08%	18.08%	18.08%	18.08%	7.34%	-0.74%	8.07%	18.34%	0.21%	0.34%	0.42%	0.53%	0.73%	0.73%	0.73%	0.73%
Retirement Path 2060	\$ 35,787,585	\$ 38,000,000	\$ 73,000,000	\$ 105,145,860	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	\$ 166,000,000	18.08%	18.08%	18.08%	18.08%	7.34%	-0.74%	8.07%	18.34%	0.21%	0.34%	0.42%	0.53%	0.73%	0.73%	0.73%	0.73%
Suble Value Fund	\$ 4,301,590,760	\$ 3,667,696,689	\$ 3,588,000,000	\$ 3,646,702,044	\$ 3,285,000,000	\$ 3,401,000,000	\$ 3,586,486,971	\$ 3,262,000,000	0.92%	5.57%	3.03%	2.52%	2.19%	2.19%	2.18%	2.35%	27.90%	29.51%	27.88%	21.82%	19.21%	19.37%	18.20%	14.60%
US Fixed Income Fund	\$ 1,454,562,124	\$ 1,390,796,884	\$ 1,577,000,000	\$ 1,271,785,883	\$ 1,447,000,000	\$ 1,457,000,000	\$ 1,605,603,780	\$ 1,586,000,000	-1.42%	7.77%	4.21%	-2.22%	6.02%	0.53%	2.66%	3.59%	9.43%	11.19%	12.25%	7.61%	8.46%	8.30%	8.15%	7.81%
Global Bond Fund	\$ 1,397,588,227	\$ 658,227,649	\$ 1,577,000,000	\$ 1,311,590,493	\$ 1,147,000,000	\$ 1,140,000,000	\$ 1,388,585,822	\$ 1,352,000,000	5.57%	0.09%	12.44%	17.84%	6.56%	0.58%	7.08%	15.50%	9.07%	5.30%	7.85%	6.71%	6.49%	7.65%	6.09%	
US Equity Fund	\$ 2,023,545,554	\$ 2,436,643,660	\$ 2,748,000,000	\$ 3,805,535,593	\$ 4,076,000,000	\$ 3,941,000,000	\$ 4,337,847,590	\$ 4,990,000,000	11.02%	2.26%	16.02%	32.27%	13.60%	1.32%	11.92%	21.84%	18.96%	19.61%	21.35%	22.77%	23.83%	22.44%	22.01%	22.48%
Int'l Equity Fund	\$ 635,675,000	\$ 471,780,030	\$ 724,000,000	\$ 1,060,233,989	\$ 1,070,000,000	\$ 1,128,000,000	\$ 1,440,029,594	\$ 1,471,000,000	6.78%	-12.08%	18.50%	21.89%	-5.41%	-0.54%	1.85%	25.46%	6.78%	3.80%	5.63%	6.34%	6.26%	6.43%	5.79%	6.63%
Small Cap Fund	\$ 1,080,016,381	\$ 840,009,000	\$ 945,000,000	\$ 1,489,773,618	\$ 1,365,000,000	\$ 1,262,000,000	\$ 1,498,290,845	\$ 1,662,000,000	16.44%	-3.86%	16.21%	38.72%	4.86%	-4.48%	21.30%	14.72%	6.51%	6.77%	7.34%	8.92%	7.98%	7.19%	7.60%	7.49%
Emerging Markets Equity Fund	\$ 1,386,116,465	\$ 748,664,862	\$ 778,000,000	\$ 621,233,694	\$ 530,000,000	\$ 496,000,000	\$ 509,200,881	\$ 824,000,000	7.57%	-19.62%	18.63%	-3.12%	-4.85%	-15.29%	11.22%	57.30%	8.99%	6.02%	6.04%	3.72%	3.10%	2.83%	2.78%	3.71%
Norshorp Grnmanm Fund w/o Indirect Dividends	\$ 1,410,767,477	\$ 1,102,538,189	\$ 1,058,000,000	\$ 1,611,799,254	\$ 1,973,000,000	\$ 2,454,000,000	\$ 2,931,471,819	\$ 3,690,000,000	6.77%	-0.56%	15.27%	69.07%	28.36%	27.92%	23.07%	31.85%	9.15%	8.87%	8.22%	9.65%	11.53%	13.98%	14.88%	16.62%
HII Stock Fund	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	\$ 86,689,767	28.39%								0.70%							
Totals	\$15,418,027,578	\$12,426,681,359	\$12,871,000,000	\$16,710,364,363	\$17,103,000,000	\$17,546,000,000	\$19,706,616,082	\$22,199,000,000	5.74%	0.65%	10.91%	22.17%	8.64%	5.84%	10.17%	18.23%	100.00%	100.00%	100.00%	99.99%	100.01%	99.96%	100.00%	100.00%
								For Fees Paid in:	2010	2011	2012	2013	2014	2015	2016	2017								
								PV to 12/31/17/18	2.004	1.991	1.795	1.669	1.553	1.503	1.182									
Source:																								
CALLAN0011750																								
NGO102145																								
NGO103684																								
NGO1010332																								
NGO1037457																								
NGO1023104																								
CALLAN0013662																								
NGO1037007																								
NGO1017758																								
NGO10100336																								
CALLAN0013366																								
NGO1017750																								

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Northrop Grumman Corp. (*)	\$ 2,140,932	\$ 1,660,302	\$ 1,758,661	\$ 1,803,009	\$ 236,768	\$ 16,586				
ITA Reasonable Fee (^)	\$ 122,505	\$ 122,505	\$ 122,505	\$ 122,505						
Benefits Staff Reasonable Fee	\$ 228,000	\$ 231,840	\$ 236,360	\$ 239,280						
Excess	\$ 554,297	\$ 1,305,957	\$ 1,399,796	\$ 1,441,224	\$ 236,768	\$ 16,586	\$ -	\$ -	\$ -	
Disgorgement Compounded (VIIIIX)	\$ 662,809	\$ 2,337,163	\$ 4,469,770	\$ 7,719,643	\$ 9,012,458	\$ 9,154,317	\$ 10,248,258	\$ 12,484,428	\$ 13,722,884	\$ 13,722,884
Disgorgement Compounded (Plan Return)	\$ 662,809	\$ 2,327,413	\$ 4,339,896	\$ 7,105,060	\$ 7,955,705	\$ 8,277,857	\$ 9,119,784	\$ 10,782,320		\$ 10,782,320
Excess Compounded (VIIIIX)	\$ 554,297	\$ 1,872,005	\$ 3,571,321	\$ 6,168,582	\$ 7,249,212	\$ 7,366,562	\$ 8,246,866	\$ 10,046,333	\$ 11,042,929	\$ 11,042,929
Excess Compounded (Plan Return)	\$ 554,297	\$ 1,863,851	\$ 3,466,914	\$ 5,676,753	\$ 6,403,993	\$ 6,666,546	\$ 7,344,589	\$ 8,683,507		\$ 8,683,507
Excess Compounded (2010 – 2013) (VIIIIX)	\$ 554,297	\$ 1,872,005	\$ 3,571,321	\$ 6,168,582	\$ 7,012,444	\$ 7,109,917	\$ 7,959,552	\$ 9,696,327	\$ 10,658,202	\$ 10,658,202
Excess Compounded (2010 – 2013) (Plan Return)	\$ 554,297	\$ 1,863,851	\$ 3,466,914	\$ 5,676,753	\$ 6,167,225	\$ 6,404,098	\$ 7,055,448	\$ 8,341,656		\$ 8,341,656
									*as of 8/31/2018	
Vanguard Institutional Index (VIIIIX)		2.12%	16%	32.37%	13.68%	1.39%	11.95%	21.82%	9.92%	
Plan Return		0.65%	10.91%	22.17%	8.64%	3.84%	10.17%	18.23%		

*Form 5500

^ Average of median salaries for similar services.

	Original Calc.	Revised Calc.	Diff.	%
Disgorgement Compounded (Plan Return)	\$ 10,830,922.79	\$ 10,782,320.49	\$ (48,602.30)	-0.45%
Excess Compounded (Plan Return)	\$ 8,722,518.26	\$ 8,683,507.39	\$ (39,010.87)	-0.45%
Excess Compounded (2010 – 2013) (Plan Return)	\$ 8,379,776.50	\$ 8,341,655.98	\$ (38,120.52)	-0.45%

	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	2010 (Sept. – Dec.)	2011	2012	2013	2014	2015	2016 (1Q)	2017	2018
Expected Administrative Fee PPY								\$ 34.00	\$ 34.00	\$ 34.00	\$ 28.00	\$ 24.00	\$ 24.00	\$ 26.00		
Total Participants (*)								\$ 132,399	\$ 109,215	\$ 105,611	\$ 102,780	\$ 101,455	\$ 102,565	\$ 103,692		
Total Expected Recordkeeping Fee								\$ 1,393,636	\$ 3,713,310	\$ 3,590,774	\$ 2,877,840	\$ 2,434,920	\$ 2,461,560	\$ 673,998		
Base Recordkeeping Compensation (*)	\$ 412,395	\$ 412,395	\$ 412,395	\$ 412,395	\$ 412,395	\$ 412,395	\$ 412,395	\$ 1,525,861	\$ 4,923,191	\$ 4,752,495	\$ 4,625,100	\$ 4,565,475	\$ 4,615,425	\$ 1,166,535		
Recordkeeping Damages								\$ (132,225)	\$ (1,209,881)	\$ (1,161,721)	\$ (1,747,260)	\$ (2,130,555)	\$ (2,153,865)	\$ (492,537)		
Sept. 9, 2010 – April 1, 2016:																
Compounded Recordkeeping Damages (VIII)								\$ (132,225)	\$ (1,344,909)	\$ (2,721,815)	\$ (5,350,127)	\$ (8,212,579)	\$ (10,480,599)	\$ (12,225,567)	\$ (14,893,186)	\$ (16,370,590)
Compounded Recordkeeping Damages (Plan Return)								\$ (132,225)	\$ (1,342,964)	\$ (2,651,145)	\$ (4,986,164)	\$ (7,547,524)	\$ (9,991,277)	\$ (11,500,010)	\$ (13,596,462)	
April 1, 2011 – April 1, 2016:																
Compounded Recordkeeping Damages (VIII)								\$ (901,024)	\$ (2,206,909)	\$ (4,668,545)	\$ (7,437,757)	\$ (9,695,007)	\$ (11,346,097)	\$ (13,821,815)	\$ (15,192,939)	
Compounded Recordkeeping Damages (Plan Return)								\$ (901,024)	\$ (2,161,008)	\$ (4,387,364)	\$ (6,896,987)	\$ (9,315,755)	\$ (10,755,781)	\$ (12,716,560)		
Sources	NGC0096958	NGC0096960	NGC0096960	NGC0096960	NGC0100900	NGC0100900	NGC0100900									

* Forms 5500
^ From April 1, 2011, Hewitt compensation determined based on \$45 annual base recordkeeping fee. Prior amounts determined based on Northrop's internal record

Vanguard Institutional Index (VIII)	2.12%	16%	32.37%	13.68%	1.39%	11.95%	21.82%	9.92%
Plan Return (**)	0.65%	10.91%	22.17%	8.64%	3.84%	10.17%	18.23%	

**Plan returns calculated by Plaintiffs' expert Dr. Pomerantz

	Original Calc.	Revised Calc.	Diff.	%
Compounded Recordkeeping Damages (Plan Return) (Sept. 2010 – Apr. 2016)	\$ (13,646,233.43)	\$ (13,596,461.72)	\$ 49,771.70	-0.36%
Compounded Recordkeeping Damages (Plan Return) (Apr. 2011 – Apr. 2016)	\$ (12,762,297.69)	\$ (12,716,559.81)	\$ 45,737.88	-0.36%