

Appendix 4

MANNING STUDY FOR ARR V					
POSITION	ARRV QUANTITY		ALPHA HELIX QUANTITY	REGULATORY REFERENCES	INTERPRETATIONS / ASSUMPTIONS
	MIN ¹	MAX ²			
Master	1	1	1	46 CFR 15.805(a)(1) & 815(a)	'Every self-propelled, seagoing documented vessel of 200 gross tons and over.'
Mate	3	3	1	46 CFR 15.810(b)(1) & 815(a)	'Vessels of 1000 gross tons or more - three licensed mates.'
Able Seaman	4	4	4	46 CFR 15.840 and Marine Safety Manual Vol. 3, Chapter 23.D.1	65% of deck crew must be AB's. Each watch will have helmsman and lookout based on mission requirements.
Ordinary Seaman	2	2	0	46 CFR 12.25-1 and Marine Safety Manual Vol. 3, Chapter 23.D.1	65% of deck crew must be AB's, therefore remaining compliment can be Ordinary Seamen
Chief Engineer	1	1	1	46 CFR 15.820(a)(1)	'Seagoing or Great Lakes vessels of 200 gross tons and over.'
Assistant Engineer	2	3	0	46 CFR 15.825	Licensed Assistant Engineer(s) required; OCMI determines quantity based on level of automation. (over 200 GT)
Oiler (QMED)	1	1	1	Marine Safety Manual Vol. 3, Chapter 23.E.4	Billet not specifically required by CFR. No unlicensed watchstander required in engine room with "deadman" alarm.
Wiper	0	1	0	Marine Safety Manual Vol. 3, Chapter 23.E.4	Billet not specifically required by CFR. No unlicensed watchstander required in engine room with "deadman" alarm.
Chief Steward	1	1	0	46 CFR 12.25-1 & -2	Billet not specifically required by CFR. Must be food handler endorsed.
Cook	1	2	1	46 CFR 12.25-1 & -2	Billet not specifically required by CFR. Must be food handler endorsed.
Mess Assistant	1	1	0	46 CFR 12.25-1 & -2	Billet not specifically required by CFR. Must be food handler endorsed.
Total Crew	17	20	9		
Scientist	24 ³	24	12		

1. Minimum crew size based on minimum requirements by regulations and emergency squad capabilities
2. Maximum crew size based on predictions of maintenance and extended mission requirements
3. Two electrician/techs will be part of scientific compliment and will have lifeboatman/MMD certification.