Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy											Date: February 2016	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305239M *I (U)RQ-21A*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	58.247	7.782	6.251	9.497	-	9.497	9.295	8.736	8.911	9.107	Continuing	Continuing
2298: *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	58.247	7.782	6.251	9.497	-	9.497	9.295	8.736	8.911	9.107	Continuing	Continuing

A. Mission Description and Budget Item Justification

The RQ-21A program will provide persistent maritime and land-based tactical Reconnaissance, Surveillance and Target Acquisition (RSTA) data collection and dissemination capability to the war fighter. For the United States Marine Corps (USMC), RQ-21A will provide the Marine Expeditionary Force and subordinate commands (divisions and regiments) with a dedicated, organic Intelligence, Surveillance, and Reconnaissance (ISR) capability delivering intelligence products directly to the tactical commander in real time. For the United States Navy (USN) RQ-21A will provide persistent RSTA support for tactical maneuver decisions and unit-level force defense/force protection for Navy Ships, Marine Corps land forces, Navy Expeditionary Combat Command forces, and Navy Special Warfare Units. This is a combined development program between Navy and Marine Corps. This submission is the Marine Corps portion of the program and has been coordinated with the Navy budget submission under PE 0305234N RQ-21A BLACKJACK.

B. Program Change Summary ($ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	8.192	6.435	9.608	-	9.608
Current President's Budget	7.782	6.251	9.497	-	9.497
Total Adjustments	-0.410	-0.184	-0.111	-	-0.111
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.184			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.410	0.000			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.111	-	-0.111

Change Summary Explanation

Schedule: Requirements for training changes identified during IOT&E delayed the declaration of Marine Corps Initial Operational Capability (IOC) from 3QFY15 to 2QFY16. Limited Low Rate Initial Production (LRIP) procurements in prior years resulted in an immature production line and the need for additional LRIP lots to incorporate correction actions and stabilize the supplier base, pushing Full Rate Production Decision (FRPD) from 4QFY15 to 4QFY16.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy	Date: February 2016
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305239M *I (U)RQ-21A*

Funding: The increase in funding from FY 2016 to FY 2017 of $3.173M supports the RQ-21A product improvement program specifically targeting improvements to the fuel tank, maximum gross takeoff weight, recovery system, avionics module, cyclic turret refresh, flight dynamic, and flight envelope development onboard the LHD/LHA class ship.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305239M / *(U)RQ-21A*	Project (Number/Name) 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
2298: *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	58.247	7.782	6.251	9.497	-	9.497	9.295	8.736	8.911	9.107	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The RQ-21A program will provide persistent maritime and land-based tactical Reconnaissance, Surveillance and Target Acquisition (RSTA) data collection and dissemination capability to the Warfighter. For the United States Marine Corps (USMC), RQ-21A will provide the Marine Expeditionary Force and subordinate commands (divisions and regiments) with a dedicated, organic Intelligence, Surveillance, and Reconnaissance (ISR) capability delivering intelligence products directly to the tactical commander in real time. For the United States Navy (USN) RQ-21A will provide persistent RSTA support for tactical maneuver decisions and unit-level force defense/force protection for Navy Ships, Marine Corps land forces, Navy Expeditionary Combat Command forces, and Navy Special Warfare Units. This is a combined development program between Navy and Marine Corps. This submission is the Marine Corps portion of the program and has been coordinated with the Navy budget submission PE 0305234N RQ-21A BLACKJACK.

The RQ-21A system will continue to evolve addressing capability shortfalls, new requirements, obsolescence equipment, reliability, maintainability, and safety issues. Additional capabilities and/or system upgrades may include Navy Command and Control integration, Weapons Integration, Heavy Fuel Engine, Laser Designator, Frequency Agile Communications Relay, Digital Common Data link, and cyclic refresh of the Electro-optical/Infrared (EO/IR) camera.

The increase in funding from FY 2016 to FY 2017 of $3.173M supports the RQ-21A product improvement program specifically targeting improvements to the fuel tank, maximum gross takeoff weight, recovery system, avionics module, along with testing associated with the cyclic turret refresh.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Product Development	3.337	4.177	6.500	0.000	6.500
Articles:	-	-	-	-	-
FY 2015 Accomplishments: -Continued correction of software deficiencies from IOT&E. -Continued software engineering and development for software block updates. -Continued Mission Training Device Development. -Initiated advanced heavy fuel engine development. -Initiated ALTICAM upgrade in response to IOT&E report.					
FY 2016 Plans: -Continue correction of deficiencies from IOT&E, including ALTICAM (product name) turret upgrade.					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
-Continue software engineering and development for software block updates. -Continue advanced heavy fuel engine development. -Initiate cyclic technology refresh for EO/IR camera, Communications Relay Package, and Automated Identification System. -Initiate product improvement program to assess and address improvements to the fuel tank, maximum gross takeoff weight, recovery system, avionics module, and other components. -Complete Mission Training Device Development. -Initiate flight dynamic and envelope testing onboard the LHD/LHA class ship. ***FY 2017 Base Plans:*** -Continue correction of deficiencies from IOT&E. -Continue software engineering and development for software block updates. -Continue product improvement program to assess and address improvements to the fuel tank, maximum gross takeoff weight, recovery system, avionics module, and other components. -Complete advanced heavy fuel engine development. -Complete cyclic technology refresh for EO/IR camera, Communications Relay Package, and Automated Identification System. -Complete flight dynamic and envelope testing onboard the LHD/LHA class ship. ***FY 2017 OCO Plans:*** N/A					
Title: Support	1.992	1.366	1.602	0.000	1.602
Articles:	-	-	-	-	-
FY 2015 Accomplishments: -Continued Government Engineering Technical Support, Logistics Support, Test and Evaluation, other Government Support, Contractor Support Services, Program Management Support efforts, and program related travel via NAWC Pax River in support of IOT&E, upgrades, correction of deficiencies, and advanced engine development efforts. ***FY 2016 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
-Continue Government Engineering Technical Support, Test and Evaluation, other Government Support, Contractor Support Services, Program Management Support efforts, and program related travel via NAWCAD Pax River in support of upgrades and technology refresh. ***FY 2017 Base Plans:*** -Continue Government Engineering Technical Support, Test and Evaluation, other Government Support, Contractor Support Services, Program Management Support efforts, and program related travel via NAWCAD Pax River in support of upgrades and technology refresh. ***FY 2017 OCO Plans:*** N/A					
Title: Test and Evaluation	2.453	0.708	1.395	0.000	1.395
Articles:	-	-	-	-	-
FY 2015 Accomplishments: -Completed ship based IOT&E -Completed contractor support for IOT&E test system. -Completed testing of autopilot and differential GPS software updates. ***FY 2016 Plans:*** -Initiate follow-on test and evaluation for Software 7.5.2 testing ***FY 2017 Base Plans:*** -Initiate follow-on test and evaluation for cyclic turret refresh. -Initiate follow-on test and evaluation for recovery system upgrades. ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	7.782	6.251	9.497	0.000	9.497

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• RDTEN/0305234N: *(U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)*	4.813	4.647	5.071	-	5.071	5.218	5.208	5.317	5.430	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• PMC/4737: *RQ-21 UAS*	69.315	77.916	80.217	-	80.217	73.004	72.067	82.777	84.379	Continuing	Continuing
• PMC/7000: *Spares and Repair Parts*	7.241	4.111	5.812	-	5.812	5.718	5.415	5.530	5.638	Continuing	Continuing
• APN/0444: *STUASLO*	45.000	57.298	0.000	70.000	70.000	1.950	0.000	0.000	0.000	0.000	202.448
• APN/0605: *Spares and Repair Parts*	10.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.000

Remarks

D. Acquisition Strategy

The program office utilized a competitive acquisition approach to award the Engineering and Manufacturing Development effort to field a capability that meets threshold requirements. The Low Rate Initial Production (LRIP) test article was utilized to successfully complete Initial Operational Test and Evaluation. LRIP production continues through FY16 to demonstrate production line maturity. Initial Operational Capability will be assessed in 2Q FY16 with entry into full rate production being assessed in 4Q FY16. Future payload upgrades and development shall be competitively sourced or procured via Government Laboratories with Insitu, the prime contractor, performing integration efforts as required.

E. Performance Metrics

Attainment of Full Rate Production (FRP), correction of Deficiencies from the IOT&E Report, and attainment of USMC Initial Operational Capability (IOC) and Full Operational Capability (FOC) in accordance with the approved schedule.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development/ Upgrades	C/BOA	Insitu, Inc : Bingen, WA	6.200	2.767	Dec 2014	3.136	Jan 2016	5.500	Jan 2017	-		5.500	Continuing	Continuing	Continuing
Product Development/ Upgrades	WR	NAWCAD : Patuxent River, MD	0.000	0.000		1.041	Feb 2016	1.000	Feb 2017	-		1.000	Continuing	Continuing	Continuing
Prior Years Cumulative Total	C/FPIF	Insitu, Inc : Bingen, WA	28.492	0.000		0.000		0.000		-		0.000	0.000	28.492	28.492
Product Development/ Mission Training Device	MIPR	J/SIL : Not Specified	0.000	0.570	Nov 2014	0.000		0.000		-		0.000	0.000	0.570	-
		Subtotal	34.692	3.337		4.177		6.500		-		6.500	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD : Patuxent River, MD	0.000	1.992	Dec 2014	1.366	Dec 2015	1.602	Dec 2016	-		1.602	Continuing	Continuing	Continuing
		Subtotal	0.000	1.992		1.366		1.602		-		1.602	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test and Evaluation	WR	NAWCAD : Patuxent River, MD	0.000	0.665	Dec 2014	0.708	Dec 2015	1.395	Dec 2016	-		1.395	Continuing	Continuing	Continuing
Contractor Test System Support	C/FFP	Insitu, Inc : Bingen, WA	0.000	1.788	Nov 2014	0.000		0.000		-		0.000	0.000	1.788	-
		Subtotal	0.000	2.453		0.708		1.395		-		1.395	-	-	-

Remarks

Test and Evaluation corresponds to R-2A Engineering and Technical Services.
FOT&E planned in FY16 and out to provide test periods for product updates and cyclic technology refresh and component improvement.
Increases in funding from FY16 to FY17 supports the RQ-21A product improvement program.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative	Various	Various : Various	23.555	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	23.555	0.000		0.000		0.000		-		0.000	-	-	-

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	58.247	7.782		6.251		9.497		-		9.497	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

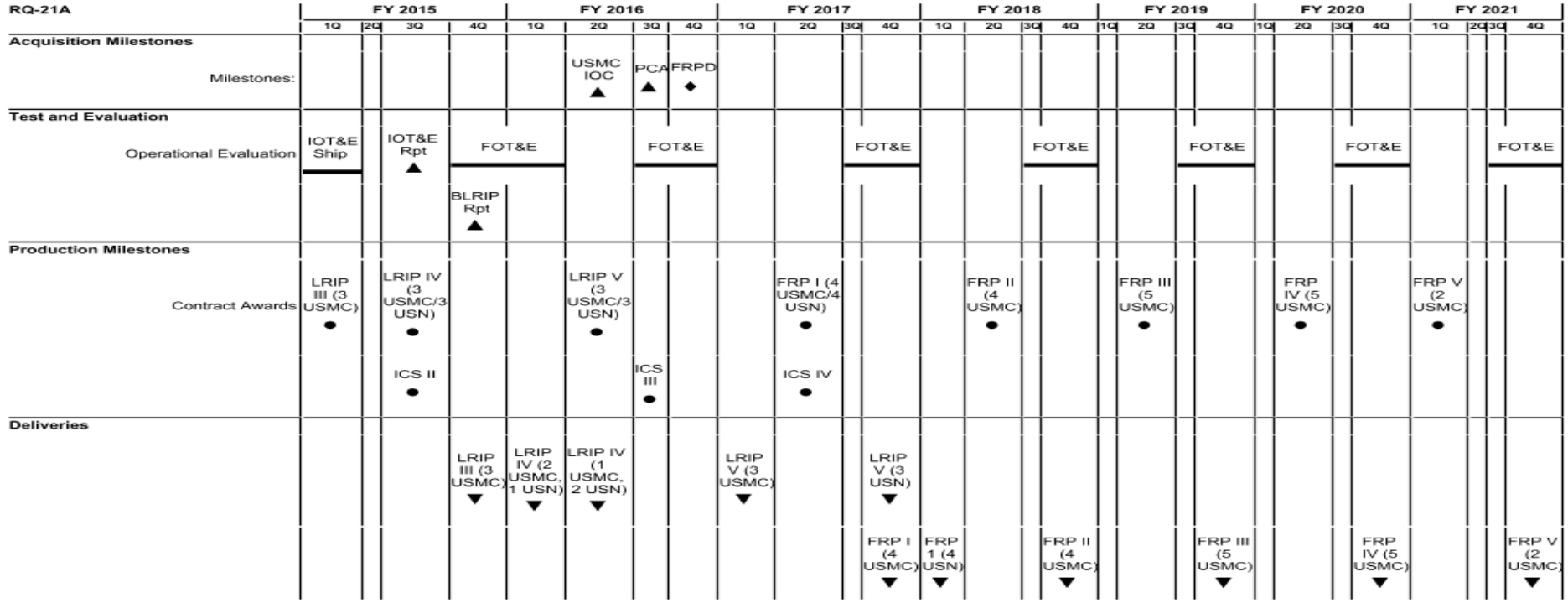

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
RQ-21A				
Acquisition Milestones: Milestones:: USMC Initial Operational Capability (IOC)	2	2016	2	2016
Acquisition Milestones: Milestones:: Full Rate Production Decision	4	2016	4	2016
Acquisition Milestones: Milestones:: Physical Configuration Audit	3	2016	3	2016
Test and Evaluation: Operational Evaluation: Initial Operational Test & Evaluation (IOT&E) Ship	1	2015	1	2015
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 1	4	2015	1	2016
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 2	3	2016	4	2016
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 3	3	2017	4	2017
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 4	3	2018	4	2018
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 5	3	2019	4	2019
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 6	3	2020	4	2020
Test and Evaluation: Operational Evaluation: Follow-On Test and Evaluation 7	3	2021	4	2021
Test and Evaluation: Operational Evaluation: IOT&E Report	3	2015	3	2015
Test and Evaluation: Operational Evaluation: Beyond LRIP Report (BLRIP)	4	2015	4	2015
Production Milestones: Contract Awards: LRIP Lot 3	1	2015	1	2015
Production Milestones: Contract Awards: LRIP Lot 4	3	2015	3	2015
Production Milestones: Contract Awards: LRIP Lot 5	2	2016	2	2016
Production Milestones: Contract Awards: Full-Rate Production Contract Award 1	2	2017	2	2017
Production Milestones: Contract Awards: Full-Rate Production Contract Award 2	2	2018	2	2018
Production Milestones: Contract Awards: Full-Rated Production Contract Award 3	2	2019	2	2019
Production Milestones: Contract Awards: Full-Rate Production Contract Award 4	2	2020	2	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305239M / *(U)RQ-21A*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Contract Awards: Full-Rate Production Contract Award 5	1	2021	1	2021
Production Milestones: Contract Awards: ICS Contract Award 2	3	2015	3	2015
Production Milestones: Contract Awards: ICS Contract Award 3	3	2016	3	2016
Production Milestones: Contract Awards: ICS Contract Award 4	2	2017	2	2017
Deliveries: LRIP Lot 3 USMC	4	2015	4	2015
Deliveries: LRIP Lot 4 USMC	1	2016	1	2016
Deliveries: LRIP Lot 4 USN	2	2016	2	2016
Deliveries: LRIP Lot 5 USMC	1	2017	1	2017
Deliveries: LRIP Lot 5 USN	4	2017	4	2017
Deliveries: FRP Lot 1 USMC	4	2017	4	2017
Deliveries: FRP Lot 1 USN	1	2018	1	2018
Deliveries: FRP Lot 2	4	2018	4	2018
Deliveries: FRP Lot 3	4	2019	4	2019
Deliveries: FRP Lot 4	4	2020	4	2020
Deliveries: FRP Lot 5	4	2021	4	2021

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