



Energetics Manufacturing Department

Presented to:

**NSWC Indian Head Division
Industry Day**

Presented by:

Laura McDonald

MP Project Office Director

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**CAPT Eric Correll, USN
Commanding Officer**

**Mr. Ashley G. Johnson, SES
Technical Director**

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Energetics Manufacturing (M) Department

Lines of Operation

- Energetic development, scale-up and qualification
- Design, development and low-rate initial production/full-scale production of energetic materials and ordnance end-items
- Flexibility to make products from mortars to rockets through the same processing line: from 5 grams to more than 1 million pounds
- Maintains in-house energetics processing capabilities and engineering expertise to:
 - Act as sole source, second source and emergency supplier
 - Provide expertise allowing program offices to act as “smart buyers” for the DoD, foreign military sales and other customers



Warfighting Impact

- IHD is the Navy’s only public surge energetics manufacturing site with the capabilities and expertise needed for wartime mobilization
- Provider of Otto Fuel II torpedo fuel
- CAD/PAD manufacturing and centralized stock point
 - Sole stock point of all Navy CAD/PADs
 - Able to ship parts anywhere around the globe

Capabilities and Facilities

- Cast-composite propellant and polymer-bonded explosive mixing/casting
- Chemical manufacturing and scale up
- Pressed explosives and warheads
- Kitting facilities
- Cartridge igniter and CAD/PAD assembly
- Solventless extrusion
- Decon and disposal



Manufacturing (M) Department

- M Department Contracts for:
 - Services
 - Engineering support
 - Project engineer support
 - Project management
 - Technical research and documentation
 - Operations support
 - Energetic materials operations support
 - Functional and administrative support
 - Quality assurance support
 - Logistics and ordnance inventory management support
 - Equipment design and start up
 - Wastewater treatment



Manufacturing (M) Department

- M Department Contracts for:
 - Materials
 - Metal Parts
 - Large scale rocket motor components
 - » Large diameter tubes
 - » Tooling
 - » Carts and dollies
 - Shipping Containers
 - Kitting components
 - Components/Assemblies for Cartridge Actuated and Propellant Actuated Devices - Aircrew Escape Systems – Stores release
 - » Small, high tolerance, small volume typically lathe parts
 - » Large L/D precision tubes
 - » Small caliber, high tolerance, thin wall cups



Manufacturing (M) Department

- M Department Contracts for:

- Materials (cont.)

- Chemicals

- **Acids**

- » Nitric Acid/White Fuming Nitric Acid
 - » Concentrated Sulfuric Acid
 - » Oleum

- **Bases**

- » Sodium Hydroxide, aqueous
 - » Sodium/Potassium Carbonate/Bicarbonate

- **Oxidizers**

- » Ammonium Nitrate
 - » Ammonium Perchlorate
 - » Sodium Nitrate

- **Solvents**

- » Ethyl Acetate
 - » Acetone
 - » Methanol/Ethanol
 - » Acetonitrile

- **Amines**

- » Diethenolamine
 - » N-(n-methyl/ethyl/butyl)ethanolamine

- **Polyols**

- » 1,2 Propylene glycol USP grade
 - » 1,2,4 Butanetriol



Manufacturing (M) Department

- M Dept. – Current Service/Materials Contracts (over \$250K)

Brief Description	Dollar value	Incumbent	Concludes (QTR, FY)
Wastewater Treatment	\$4.5 million	Potomac Environmental	1 st QTR, FY 23
Operations Support Contract	\$49 million	CRUZ	2 nd QTR, FY 24
Analytical, Engineering and Technical Support Services	\$38.5 million	Eastern Research Group (ERG)	4 th QTR, FY 25
Decontamination, Demilitarization and Demolition Analytical, Technical and Management Support	\$22 million	VSE Corporation	3 rd QTR, FY 24
Solidworks CAD Software and Training	\$0.5 million	Tri-Mech Solutions	3 rd QTR, FY25



Manufacturing (M) Department

- M Dept. - Projected Contracts (FY23-FY25)

Brief Description	Anticipated Announcement Date (QTR / FY)	Estimated Dollar Value
Operations Support	3 rd QTR / FY 23	\$75 million
Mk 70 Fin Kits	2 nd QTR / FY 23	\$1-7 million
Chemicals	3 rd QTR / FY 23	\$1-7 million
Engineering Support	3 rd QTR / FY23	\$75 million
Shipping Containers	2 nd QTR / FY 23	\$1-7 million
Mk 85 Nozzles	3 rd QTR / FY 23	\$1-7 million