(HE, order) Reference

NOT DRAFT

OPERATION OF MACHINE TOOLS

I. SCOPE

This SOP governs the use of machine tools. Special instructions when required for specific operations will be given in SMIs.

II. LOCATION

HE machining bays, Building TA-16-260

III. LIMITS

A. Personnel

See Group WX-3 SOP 8.2.0

B. Explosives

See WX-3 SOP 8.3.0

IV. ALLOWABLE EXPLOSIVES

A. Established Explosives

1. Operator-Attended Machining

Any of the explosives listed below, or combinations of them, may be machined with an operator in attendance. The use of coolant is required.

Baratol (see Note 1)	TATB or TATB formulations of which TATB is the only explosive component (see Note 1)
Boracitol (see Note 1)	
Composition B and B-3	
75/25 Cyclotol	
TNT	PBX 9502
Octol (with no more than 75% HMX)	

Note 1: When these explosives are to be machined dry, they shall be machined in accordance with WX-3 SOP 8.8.0.

*Indicates change

9456

IV. A.

2. Remotely Controlled Machining

Any of the explosives listed below, or any combinations of them, shall be machined by remote control. The use of coolant is required, except as noted.

XTX 8003	PBX 9206	LX-04
PBX 9001	PBX 9401	DATB
PBX 9007	PBX 9404	NQ (See Note 1)
PBX 9010	PBX 9405	RDX (See Note 2)
PBX 9011	PBX 9407	Detasheet C and D
PBX 9205	PBX 9501	Composition A-3
	PBX 9503	Pentolite
		Tritonal

Note 1: If NQ (or NQ formulations of which NQ is the only explosive component) is to be machined dry, it shall be machined in accordance with WX-3 SOP 8.8.0.

Note 2: To be machined in accordance with WX-3 SOP 8.9.4.

B. Developmental Explosives

Materials bearing an experimental code number, a four-digit number prefixed by the letter X, have been approved for development and may be processed, but only to the extent permitted by the associated High Explosives Development proposal (HED). Developmental explosives, their weight limits, and associated HED numbers are listed in WX-3 SOP 1.1.0, Table 2.

* C. Any barium containing material requiring coolant shall be processed using dry sump procedures as stated in SOP 8.4.0.

V. ALLOWABLE EXPLOSIVE-INERT COMPOSITES

A. Explosive-Inert Composites

1. Operator-Attended Machining

Any combination of the established explosives in Item IV.A.1, above, may be machined as a composite with the following inert materials by operator-attended procedures. Coolant requirements are defined in Item VII.E, below.

V. A. 1.

Foamed plastics
Solid plastics
Plastics filled with inerts listed here
Adhesives
Graphite
Calcium sulfate casting powder
Inert HE mockup materials
Fiberglass

2. Remotely Controlled Machining

Any combination of the allowable explosives described in Item IV and inert materials described in V.A.1 above, may be machined with the following metals but only by remote control.

Aluminum and its alloys
Copper
Constantan
Lead
Tantalum and its alloys
Tungsten and its alloys
Steel

3. Tu/Nb Composites

All combinations of HE and Tu/Nb shall be machined in accordance with SOP 8.9.3.

4. Coolant Requirements

* Coolant requirements are specified in Item VII.E of this SOP. Special restrictions for barium containing materials also apply (reference SOP 8.4.0).

VI. EQUIPMENT

A. Machine Tools

Those machine tools designed or modified for machining HE.

B. Ancillary Equipment

Approved equipment as defined in WX-3 SOP 8.4.0.