Sculpting notes January 8 & 15
Demonstration re: Waste Mold for a clay sculpture – Opening the Mold, Preparing the Mold for Fill and Filling the Mold.

Opening the mold

Put the mold in a tub of water. Using a mallet and a stiff wide spatula, open the mold along the seam, being careful not to disturb the registration points at the top. The mold walls should be clean all the way around. Since there is a registration at the centre top, go to the corner with the spatula and use the mallet to give it a sharp rap. Pour water over the crack to help loosen up the clay and break the suction holding the two pieces together. Again, be sure to avoid disturbing the registration marks. You will need to get a lot of water poured into the cracked mold.

Don't force it. You could break parts of the mold if you aren't careful. The ribs on the outside of the mold act as handles. Free up the armature. Use a wooden tool to dig out the clay then manually, being careful not to scratch or wreck the mold. Clean out manually eventually using a sponge until the inside of the mold is perfectly clean. You can also use a point brush when cleaning but be sure the brush handle does not scratch the mold. The clay goes into reclaim.

Preparing the mold for fill

The mold will be filled with gypsum cement. Two choices are densite or hydracal.

Make sure the mold is saturated with water and very clean. Use Sunlight dishwashing detergent – three coats act as the separator. Each coat is differently applied.

1. Work the detergent into the pores of the mold using a brush. This takes time to be absorbed before you can put the second coat on. You want no excessive bubbles. Put the mold inside down to absorb this coat of detergent for about an hour. It will have a dull sheen when dry.
2. Use less soap and rub it in with your hands. It will take on an increased sheen. If you can't reach an area with your fingers, use a brush but try to do it with your hands so you can feel it going into all parts of the mold. It absorbs fairly quickly – let it dry before applying a third coat.
3. Massage in the detergent again. It feels somewhat greasy if it is not ready. When absorbed, wrap the mold tightly using damp rags to help the mold stay moist. Use the rubber strapping to bind the two parts of the mold together.

Filling the mold

This comes after the mold has been prepared with 1 lather coat and t massage coats using dishwashing detergent. The fill is gypsum cement – densite is a little

denser and hydracal creamier, easier to do repairs with. In this demonstration, hydracal was used. Another material that is harder is hydrastone.

If this is a very large mold, you would only fill the tip then you would create a reinforced shell fill for the lower part of the mold. Before filling, it is important to prefill this lower area so that undercuts are filled and no air gets trapped. You also coat all of the surfaces that will be shell.

When mixing the hydracal, don't use warm water as this accelerates the hardening. Have a clean bucket of water and a sponge to use for cleaning the wall of the mold. Be careful that the hydracal does not set in the sponge. After the fill material has slaked, mix it carefully avoiding the trapping of air in the mix.

Use a rolling method of prefilling, again being careful not to get fill on the wall – use the sponge to keep it clean. You may need a supporting rod if part of the mold is very narrow (at the neck for example). Use aluminum so the rod won't rust. The reinforcing rod goes in the front side of the mold and doesn't need to be in the centre. Each mold will have its own particular requirements. You will not need a mounting bar at the base if the bottom is flat.

In using a brush with the hydracal, be careful to keep it clean and don't let the mix harden in the brush. You want a controlled thickness to the mix. Leave the fill textured if you will be pouring more into the shell. Clean the brush you are using and use the sponge to clean the wall. Any remnants of fill on the wall prevent a tight fitting when the two pieces go back together. The fill is only solid in the facial features. As the fill thickens, equalize the thickness. Clean your bowl after your finish. Use a small bowl one half filled for each side. Be sure to fill all details. The second coat if needed should be smooth to put burlap on. Burlap will be embedded in the fill. This material (the hydracal) can go out of doors but not in freezing weather. You may have further editions of your piece suing rubber or bronze. There are two artist proofs and no more than 12 in an edition.

You don't want to have any thin surface on the inside of the mold. Use small pieces of burlap shingle layering them. These pieces are impregnated with the hydracal mix before applying. You will want a double piece coming up to the wall on one side. This piece is a doubled burlap joint. Fill in all gaps completely, reinforcing the burlap.

Bind the two parts of the mold together tightly with rubber strapping. Put a double layer of burlap that is coated in plaster (not hydracal) all around the seam between the two pieces, smudging it over the strapping. Use folded large (3"wide) strips of burlap well drenched in plaster. Bury the burlap; smudge it over the crack to totally seal this.

In mixing the hydracal for the rest of the fill, better to mix in small portions so you do not have more than what is necessary. Place the mold upside down and pour in the mix, shaking the mold well after pouring. For the hollow areas, the wall needs to be at least ¾" thick using burlap and hydracal mix to build it up. As you are pouring the mix into the hollow sections of the mold, do one side and roll then the other side and roll to make sure it is evenly coated inside. Afterwards, scrape the bottom of them old so it will be flat.

You can continue to reinforce and build up the inner fill make sure there are no gaps and so that the wall of the fill inside the mold is consistently thick enough. It is on the base of the piece that you can date and sign the piece.