Use of liquid metals offers a potential avenue for next-generation plasma-facing components (PFCs). These systems offer a self-healing surface upon transient events, have the capability to handle much larger heat fluxes than solid materials, and could potentially aid in the pumping of plasma impurities. One liquid metal under consideration is tin due to its low vapor pressure. However, being a high-Z material, it is imperative that tin not enter the core plasma, as this could extinguish it. Free surface stability is therefore a major consideration, since the surface must be able to handle large transient particle fluxes, such as those produced during edge-localized modes, without tin ejection. However, anisotropic micro-droplet ejection has been observed from molten tin surfaces exposed to hydrogen plasmas under some conditions. At the Center for Plasma-Materials Interactions, a system has been set up to study the droplet ejection from molten tin surfaces. The system utilizes a radio-frequency (13.56 MHz) antenna to generate a hydrogen plasma. Electron temperature, electron density, and radical density are measured over a range of neutral gas pressures, radio-frequency powers, and sample biases. Sweeps over tin thickness, ion energy, plasma fluence, and liquid temperature will be performed. Emitted droplets are collected onto a smooth substrate. Scanning electron microscopy and optical profilometry allow for determination of droplet size distributions. Ablation calculations yield droplet penetration depth into the plasma based on droplet size and energy upon emission. Preliminary results of the parameters affecting tin droplet emission and the impact they will have on the plasma are presented.