

```
# Top level ESP Mission script for Gordon w/4km DWSM Deployment at Juan de Fuca
# Begins after Brent's in situ sample puck series test
```

```
$ctdPumpMode = :off #set to :duringSample, :beforeSample, or :off
$samplingCTDInterval = Delay.new "1:00" #rate during active sampling
$samplingCTDPeriod = Delay.new "30:00"
```

```
Heater.internal #use 48V for ball Heater
#Sample.absNoise=Resample.absNoise=8 #only for use with PISSER
```

```
$dwsMVol = Resample, 100, Sample, 5000 #default dwsM sampling
$dwsMDischargeVol = SampleBag, 100, ResampleBag, 100 #drawing from 22L sample
$preVol = 1000
$bacSampler.minRate = $habSampler.minRate #don't let bacSampler run forever
$bacVol = 2000, 1000
$larVol = nil, 4000
$mfbVol = $bacVol
```

```
$snap = "+0:30"
$swcrDelay = "01:00:00"
```

```
def bacPCRwcr
  dwsM {bacSHAMfb {hotBleachInternal}}
  dwsM {standAloneWCR($bacVol, $bac) {|wastes| noKill wastes}}
  delay $swcrDelay
  dwsM {standAloneWCR($bacVol, $bac) {|wastes| noKill wastes}}
  delay $swcrDelay
  dwsM {standAloneWCR($bacVol, $bac) {|wastes| noKill wastes}}
  delay $swcrDelay
  dwsM {standAloneWCR($bacVol, $bac) {hotBleachInternal}}
end
```

```
def internalPCRwcr
  mfb([nil, nil]) {hotBleachInternal}
  dwsM {bac {hotBleachInternal}}
  dwsM {standAloneWCR($bacVol, $bac) {|wastes| noKill wastes}}
  delay $swcrDelay
  dwsM {standAloneWCR($bacVol, $bac) {hotBleachInternal}}
end
```

```
def flushDWSM
  Log.record "Flushing Bags, changing sampling point"
  4.times {DWSM.rinse Resample, 300, Sample, 1500}
end
```

```
def coreNegative
  mfb [nil, nil], $mfb.dup.update(:templates=>[ASV, :elutionWater]) do
    hotBleachInternal
  end.finish
end
```

```
#StartTime = nil #wait for the first phase's specified start time
```

```
mission :startTube=>2, :until=>"12PM 7/19/2011" do
```

```
  Sleep.startBackground #don't shutdown between phases
```

```
  ElevatorPump.on #For sampling at the elevator
  Log.record "Sampling at Elevator"
```

```
  at "20:00 7/13/2011" do #Sampling at the elevator
    bacPCRwcr
  end
```

```
  at "14:00 7/14/2011" do #Sampling at the elevator
    bacPCRwcr
  end
```

```
#Change so the sampling is at the wand
ElevatorPump.off
WandPump.on
Log.record "Now sampling from WAND"
flushDWSM #DWSM moves do not have to be in at/end syntax
```

```
at "8:00 7/15/2011" do #In vent, sampling at the wand
  internalPCRwcr
end
```

```
at $snap do #In vent, sampling at the wand
  bacPCRwcr
end
```

```
at "16:30 7/16/2011" do #In vent, sampling at the wand
  bacPCRwcr
end
```

```
#Rotate the wand to above vent with ROV.
```

```
at "09:30 7/17/2011" do #Above vent, sampling at the wand
  flushDWSM
  internalPCRwcr
end
```

```
at $snap do #Above vent, sampling at the wand
  bacPCRwcr
end
```

```
at $snap do #Above vent, sampling at the wand
  bacPCRwcr
end
```

```
  Sleep.endBackground
end
```

