

[illegible]

[illegible]

|                                 |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
|---------------------------------|-------------------|---|------------|-----------------------------------|---------------|--|----------|---|---------------------------|--|------------------|----------------------|------------|----------------------|----------------------|----------------|------|---------|-----------------|-----------------|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |   |            | PROJECT & LEG<br>DY-17-07 Leg I   |               |  |          | STATION DESIGNATION                                     |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| CONSC<br>CAST #                 | LATITUDE          |   | LONGITUDE  |                                   | DATE JD=      |  |          | TIME<br>(GMT)   | DRY BULB<br>(AIR<br>TEMP) | RELATIVE<br>HUMIDITY                             | PRESSURE         | SEA STATE            | VISIBILITY | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD. | CLOUD (amt)    | TYPE | WEATHER | BOTTOM<br>DEPTH | STA.<br>NAME/ID |
|                                 | DEG               | MIN   | DEG        | MIN                               | DAY           | MO   | YR       | HR  | MIN                       | (°C)   | (%)              | (mb)                 | *          | *                    | (deg)                | (kts)          | *    | *       | (m)             |                 |
| 003                             | 53                | 31.41 N   | 134        | 46.64 W                           | 26            | 08   | 17       | 20  | 44                        | 11.8   | 09%              | 1002                 |            |                      | 232                  | 6              |      |         | 211             | FOX 56          |
| CTD                             |                   | TIMES   |            | JD/TIME                           |               | DATA LOCATION  |          |   |                           |  |                  |                      |            |                      |                      | REMARKS        |      |         |                 |                 |
| TYPE & SN                       |                   | DATA ON   |            |                                   |               | Tape/Diskette/DVD ID                                 |          |   |                           |  | File Name/Header |                      |            |                      |                      | MAX. DEPTH = m |      |         |                 |                 |
| PRESS SN 9+ S/N 0772            |                   | START DOWN  |            |                                   |               |  |          |   |                           |  | CTD              |                      |            |                      |                      |                |      |         |                 |                 |
| PRI COND SN 4C S/N 2985         |                   | AT DEPTH  |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| PRI TEMP SN 3+ S/N 2376         |                   | AT SURFACE  |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| SEC COND SN 4C S/N 3127         |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| SEC TEMP SN 3+ S/N 4379         |                   | <input checked="" type="checkbox"/> PAR S/N 70296   |            | <input type="checkbox"/> pH S/N   |               | <input checked="" type="checkbox"/> O2 S/N 1961 (1°) |          | <input checked="" type="checkbox"/> Trans S/N           |                           | <input type="checkbox"/> Cleaned air bleed valve |                  |                      |            |                      |                      |                |      |         |                 |                 |
|                                 |                   | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            | <input type="checkbox"/> ISUS S/N |               | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |          | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES                        |            |                                   |               |  |          |   |                           |  |                  | SAMPLE BOTTLE NUMBER |            |                      |                      |                |      |         |                 |                 |
|                                 |                   | PRESSURE  | PRI. TEMP. | nutrients<br>SEC. TEMP.           | PRI. SALINITY | SEC. SALINITY  | SAL. NO. | OXYGEN NO.  | Chlorophyll<br>CHL (ml)   | APPROX.<br>FLUORO<br>LEVEL                       |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 1                               | 200               |   |            | 688 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 2                               | 150               |   |            | 689 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 3                               | 100               |   |            | 687 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 4                               | 75                |   |            | 690 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 5                               | 50                |   |            | 691 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 6                               | 40                |   |            | 692 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 7                               | 30                |   |            | 692 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 8                               | 20                |   |            | 700 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 9                               | 10                |   |            | 703 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 10                              | 0                 |   |            | 706 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 11                              |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |
| 12                              |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                |      |         |                 |                 |

Sorry for out of sequence!

\*J. Gann

|                                 |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
|---------------------------------|-------------------|---|------------|-----------------------------------|---------------|--|----------|---|---------------------------|--|------------------|----------------------|------------|----------------------|----------------------|----------------------|------|---------|-----------------|-----------------|--|--|-----|-------|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |   |            | PROJECT & LEG<br>DY-17-07 Leg I   |               |  |          | STATION DESIGNATION                                     |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| CONSC<br>CAST #                 | LATITUDE          |   | LONGITUDE  |                                   | DATE JD=      |  |          | TIME<br>(GMT)   | DRY BULB<br>(AIR<br>TEMP) | RELATIVE<br>HUMIDITY                             | PRESSURE         | SEA STATE            | VISIBILITY | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD. | CLOUD (amt)          | TYPE | WEATHER | BOTTOM<br>DEPTH | STA.<br>NAME/ID |  |  |     |       |
|                                 | DEG               | MIN   | DEG        | MIN                               | DAY           | MO   | YR       | HR  | MIN                       | (°C)   | (%)              | (mb)                 | *          | *                    | (deg)                | (kts)                | *    | *       | (m)             |                 |  |  |     |       |
| 004                             | 57                | 32.77   | N          | 154                               | 53            | 29   | W        | 26  | AUG                       | 17   | 21               | 54                   | 12         | .6                   | 90.0                 | 102                  |      |         | 293.9           | 7.4             |  |  | 227 | FOX57 |
| CTD                             |                   | TIMES   |            | JD/TIME                           |               | DATA LOCATION  |          |   |                           |  |                  |                      |            |                      |                      | REMARKS              |      |         |                 |                 |  |  |     |       |
| TYPE & SN                       |                   | DATA ON   |            |                                   |               | Tape/Diskette/DVD ID                                 |          |   |                           |  | File Name/Header |                      |            |                      |                      | MAX. DEPTH = 217.6 m |      |         |                 |                 |  |  |     |       |
| PRESS SN 9+ S/N 0772            |                   | START DOWN  |            |                                   |               |  |          |   |                           |  | CTD              |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| PRI COND SN 4C S/N 2985         |                   | AT DEPTH  |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| PRI TEMP SN 3+ S/N 2376         |                   | AT SURFACE  |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| SEC COND SN 4C S/N 3127         |                   | <input checked="" type="checkbox"/> PAR S/N 70296   |            | <input type="checkbox"/> pH S/N   |               | <input checked="" type="checkbox"/> O2 S/N 1961(1°)  |          | <input checked="" type="checkbox"/> Trans S/N           |                           | <input type="checkbox"/> Cleaned air bleed valve |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| SEC TEMP SN 3+ S/N 4379         |                   | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            | <input type="checkbox"/> ISUS S/N |               | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |          | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES                        |            |                                   |               |  |          |   |                           |  |                  | SAMPLE BOTTLE NUMBER |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
|                                 |                   | PRESSURE  | PRI. TEMP. | nutrients<br>SEC. TEMP.           | PRI. SALINITY | SEC. SALINITY  | SAL. NO. | OXYGEN NO.  | chlorophyll<br>CHL (mg)   | APPROX.<br>FLUORO<br>LEVEL                       |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 1                               | 217.6             |   |            | 692 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 2                               | 200               |   |            | 693 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 3                               | 150               |   |            | 695 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 4                               | 100               |   |            | 696 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 5                               | 75                |   |            | 698 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 6                               | 50                |   |            | 699 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 7                               | 40                |   |            | 701 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 8                               | 30                |   |            | 702 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 9                               | 20                |   |            | 704 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 10                              | 10                |   |            | 705 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 11                              | Surface           |   |            | 707 ✓                             |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |
| 12                              |                   |   |            |                                   |               |  |          |   |                           |  |                  |                      |            |                      |                      |                      |      |         |                 |                 |  |  |     |       |

\* J. Gann

|                                 |                   |   |            |                                   |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
|---------------------------------|-------------------|---|------------|-----------------------------------|---------------|--|---------------|---------------------------|-------------------------|---|-----------|------------|----------------------|--|-------------|-------|---------|-----------------|-----------------|--|--|-----|--------|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |   |            | PROJECT & LEG<br>DY-17-07 Leg I   |               |  |               | STATION DESIGNATION       |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| CONSC<br>CAST #                 | LATITUDE          |   | LONGITUDE  |                                   | DATE JD=      |  | TIME<br>(GMT) | DRY BULB<br>(AIR<br>TEMP) | RELATIVE<br>HUMIDITY    | PRESSURE  | SEA STATE | VISIBILITY | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD.                             | CLOUD (amt) | TYPE  | WEATHER | BOTTOM<br>DEPTH | STA.<br>NAME/ID |  |  |     |        |
|                                 | DEG               | MIN   | DEG        | MIN                               | DAY           | MO   | YR            | HR                        | MIN                     | (°C)  | (%)       | (mb)       | *                    | *  | (deg)       | (kts) | *       | *               | (m)             |  |  |     |        |
| 005                             | 57                | 36.56   | N          | 155                               | 0             | 80   | W             | 26                        | 08                      | 17  | 20        | 03         | 12.7                 | 83.  | 2.3         |       |         | 309             | 15              |  |  | 237 | FOX 58 |
| CTD                             |                   | TIMES   |            | JD/TIME                           |               | DATA LOCATION  |               |                           |                         | REMARKS   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| TYPE & SN                       |                   | DATA ON   |            |                                   |               | Tape/Diskette/DVD ID                                 |               |                           |                         | File Name/Header  |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| PRESS SN 9+ S/N 0772            |                   | START DOWN  |            |                                   |               |  |               |                           |                         | CTD   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| PRI COND SN 4C S/N 2985         |                   | AT DEPTH  |            |                                   |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| PRI TEMP SN 3+ S/N 2376         |                   | AT SURFACE  |            |                                   |               |  |               |                           |                         | MAX. DEPTH = m  |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| SEC COND SN 4C S/N 3127         |                   |   |            |                                   |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| SEC TEMP SN 3+ S/N 4379         |                   |   |            |                                   |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
|                                 |                   | <input checked="" type="checkbox"/> PAR S/N 70296   |            | <input type="checkbox"/> pH S/N   |               | <input checked="" type="checkbox"/> O2 S/N 1961(1°)  |               |                           |                         | <input checked="" type="checkbox"/> Trans S/N           |           |            |                      | <input type="checkbox"/> Cleaned air bleed valve |             |       |         |                 |                 |  |  |     |        |
|                                 |                   | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            | <input type="checkbox"/> ISUS S/N |               | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |               |                           |                         | <input checked="" type="checkbox"/> Altimeter S/N 47408 |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES                        |            |                                   |               |  |               |                           |                         | SAMPLE BOTTLE NUMBER                                    |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
|                                 |                   | PRESSURE  | PRI. TEMP. | nutrients<br>SEC TEMP.            | PRI. SALINITY | SEC. SALINITY  | SAL. NO.      | OXYGEN NO.                | chlorophyll<br>CHL (mg) | APPROX.<br>FLUORO<br>LEVEL                              |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 1                               | 227               |   |            | 208 ✓                             |               | 208  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 2                               | 200               |   |            | 210 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 3                               | 150               |   |            | 211 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 4                               | 100               |   |            | 212 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 5                               | 75                |   |            | 213 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 6                               | 50                |   |            | 214 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 7                               | 40                |   |            | 215 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 8                               | 30                |   |            | 216 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 9                               | 20                |   |            | 217 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 10                              | 10                |   |            | 218 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 11                              | Surface           |   |            | 219 ✓                             |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |
| 12                              |                   |   |            |                                   |               |  |               |                           |                         |   |           |            |                      |  |             |       |         |                 |                 |  |  |     |        |

\* J. Gann

|                                 |                   |                              |   |                                 |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
|---------------------------------|-------------------|------------------------------|---|---------------------------------|---------------|-----------------------------------|----------|------------|--|----------------------------|-----|---|----------------------|----------------------|--|------------|----------------------|----------------------|----------------|------|---------|-----------------|-----------------|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |                              |   | PROJECT & LEG<br>DY-17-07 Leg I |               |                                   |          |            |  |                            |     |   |                      | STATION DESIGNATION  |  |            |                      |                      |                |      |         |                 |                 |
| CONSC<br>CAST #                 | LATITUDE          |                              |   | LONGITUDE                       |               |                                   | DATE JD= |            |  | TIME<br>(GMT)              |     | DRY BULB<br>(AIR<br>TEMP)                               | RELATIVE<br>HUMIDITY | PRESSURE             | SEA STATE  | VISIBILITY | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD. | CLOUD (amt)    | TYPE | WEATHER | BOTTOM<br>DEPTH | STA.<br>NAME/ID |
|                                 | DEG               | MIN                          |   | DEG                             | MIN           |                                   | DAY      | MO         | YR   | HR                         | MIN | (°C)  | (%)                  | (mb)                 | *  | *          | (deg)                | (kts)                | *              | *    | *       | (m)             |                 |
| 006                             | 57                | 38.40                        | N   | 155                             | 5             | 30                                | W        | 27         | 08   | 17                         | 00  | 7   | 13.0                 | 82.                  | 2.3  |            | 299                  | 15                   |                |      |         | 257             | FOX 59          |
| CTD                             |                   |                              | TIMES   |                                 |               | JD/TIME                           |          |            | DATA LOCATION  |                            |     |   |                      |                      |  |            |                      |                      | REMARKS        |      |         |                 |                 |
| TYPE & SN                       |                   |                              | DATA ON   |                                 |               |                                   |          |            | Tape/Diskette/DVD ID                                 |                            |     |   |                      | File Name/Header     |  |            |                      |                      | MAX. DEPTH = m |      |         |                 |                 |
| PRESS SN 9+ S/N 0772            |                   |                              | START DOWN  |                                 |               |                                   |          |            |  |                            |     |   |                      | CTD                  |  |            |                      |                      |                |      |         |                 |                 |
| PRI COND SN 4C S/N 2985         |                   |                              | AT DEPTH  |                                 |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| PRI TEMP SN 3+ S/N 2376         |                   |                              | AT SURFACE  |                                 |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| SEC COND SN 4C S/N 3127         |                   |                              |   |                                 |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| SEC TEMP SN 3+ S/N 4379         |                   |                              | <input checked="" type="checkbox"/> PAR S/N 70296   |                                 |               | <input type="checkbox"/> pH S/N   |          |            | <input checked="" type="checkbox"/> O2 S/N 1961(1°)  |                            |     | <input checked="" type="checkbox"/> Trans S/N           |                      |                      | <input type="checkbox"/> Cleaned air bleed valve |            |                      |                      |                |      |         |                 |                 |
|                                 |                   |                              | <input checked="" type="checkbox"/> FLUORO S/N 2057 |                                 |               | <input type="checkbox"/> ISUS S/N |          |            | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |                            |     | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES |   |                                 |               |                                   |          |            |  |                            |     |   |                      | SAMPLE BOTTLE NUMBER |  |            |                      |                      |                |      |         |                 |                 |
|                                 |                   | PRESSURE                     | PRI. TEMP.  | nutrients<br>SEC. TEMP.         | PRI. SALINITY | SEC. SALINITY                     | SAL. NO. | OXYGEN NO. | chlorophyll<br>CHL (mg)                              | APPROX.<br>FLUORO<br>LEVEL |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 1                               | 245               |                              |   | 720 ✓                           |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 2                               | 200               |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 3                               | 150               |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 4                               | 100               |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 5                               | 75                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 6                               | 50                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 7                               | 40                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 8                               | 30                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 9                               | 20                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 10                              | 10                |                              |   | ✓                               |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 11                              | Surf              |                              |   | 730 ✓                           |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |
| 12                              |                   |                              |   |                                 |               |                                   |          |            |  |                            |     |   |                      |                      |  |            |                      |                      |                |      |         |                 |                 |

\*  
J. Gann

|                                 |                   |                              |                         |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
|---------------------------------|-------------------|------------------------------|-------------------------|---|------------|---------------|---------------|-----------------------------------|------------|------------------------|---------------------------|--|----------|--------------------------------------|------------|---|----------------------|--------------------|------|--|-----------------|-----------------|--|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |                              |                         | PROJECT & LEG<br>DY-17-07 Leg I                     |            |               |               |                                   |            |                        |                           |  |          | STATION DESIGNATION<br>STN 37 Haul 1 |            |   |                      |                    |      |  |                 |                 |  |
| CONSC<br>CAST #                 | LATITUDE          |                              |                         | LONGITUDE   |            |               | DATE JD=      |                                   |            | TIME<br>(GMT)          | DRY BULB<br>(AIR<br>TEMP) | RELATIVE<br>HUMIDITY                                 | PRESSURE | SEA STATE                            | VISIBILITY | TRUE<br>WIND<br>DIR.                                    | TRUE<br>WIND<br>SPD. | CLOUD (amt)        | TYPE | WEATHER  | BOTTOM<br>DEPTH | STA.<br>NAME/ID |  |
|                                 | DEG               | MIN                          |                         | DEG   | MIN        |               | DAY           | MO                                | YR         | HR                     | MIN                       | (°C)   | (%)      | (mb)                                 | *          | *   | (deg)                | (kts)              | *    | *  | (m)             |                 |  |
| 007                             | 52                | 40.57                        | N                       | 153   | 10.21      | W             | 27            | 08                                | 17         | 01                     | 07                        | 12.7   | 81.      | 2.5                                  |            |   | 299                  | 17                 |      |  | 288             | FOX60           |  |
| CTD                             |                   |                              |                         | TIMES   |            |               |               | JD/TIME                           |            |                        |                           | DATA LOCATION  |          |                                      |            |   |                      | REMARKS            |      |  |                 |                 |  |
| TYPE & SN                       |                   |                              |                         | DATA ON   |            |               |               | Tape/Diskette/DVD ID              |            |                        |                           | File Name/Header                                     |          |                                      |            |   |                      | MAX. DEPTH = 279 m |      |  |                 |                 |  |
| PRESS SN 9+ S/N 0772            |                   |                              |                         | START DOWN  |            |               |               |                                   |            |                        |                           | CTD  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| PRI COND SN 4C S/N 2985         |                   |                              |                         | AT DEPTH  |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| PRI TEMP SN 3+ S/N 2376         |                   |                              |                         | AT SURFACE  |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| SEC COND SN 4C S/N 3127         |                   |                              |                         |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| SEC TEMP SN 3+ S/N 4379         |                   |                              |                         | <input checked="" type="checkbox"/> PAR S/N 70296   |            |               |               | <input type="checkbox"/> pH S/N   |            |                        |                           | <input checked="" type="checkbox"/> O2 S/N 1961 (1°) |          |                                      |            | <input checked="" type="checkbox"/> Trans S/N           |                      |                    |      | <input type="checkbox"/> Cleaned air bleed valve |                 |                 |  |
|                                 |                   |                              |                         | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            |               |               | <input type="checkbox"/> ISUS S/N |            |                        |                           | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |          |                                      |            | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                      |                    |      |  |                 |                 |  |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES |                         |   |            |               |               |                                   |            |                        |                           | SAMPLE BOTTLE NUMBER                                 |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
|                                 |                   | PRESSURE                     | nutrients<br>PRI. TEMP. |   | SEC. TEMP. | PRI. SALINITY | SEC. SALINITY | SAL. NO.                          | OXYGEN NO. | chlorophyll<br>CHL (m) |                           | APPROX.<br>FLUORO<br>LEVEL                           |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 1                               | 250               |                              | 731                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 2                               | 200               |                              | 732                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 3                               | 150               |                              | 733                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 4                               | 100               |                              | 734                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 5                               | 75                |                              | 735                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 6                               | 50                |                              | 736                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 7                               | 40                |                              | 737                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 8                               | 30                |                              | 738                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 9                               | 20                |                              | 739                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 10                              | 10                |                              | 740                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 11                              | Surface           |                              | 741                     |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |
| 12                              |                   |                              |                         |   |            |               |               |                                   |            |                        |                           |  |          |                                      |            |   |                      |                    |      |  |                 |                 |  |

\*  
J. Gann

|                                 |                   |   |            |                                   |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
|---------------------------------|-------------------|---|------------|-----------------------------------|---------------|--|----------|---|------------------------|--|----------------------|----------------------|-----------|---------------------|----------------------|----------------------|-------------|------|---------|-----------------|-----------------|
| VESSEL<br>NOAA Ship Oscar Dyson |                   |   |            | PROJECT & LEG<br>DY-17-07 Leg I   |               |  |          |   |                        |  |                      |                      |           | STATION DESIGNATION |                      |                      |             |      |         |                 |                 |
| CONSC<br>CAST #                 | LATITUDE          |   | LONGITUDE  |                                   | DATE JD=      |  |          | TIME<br>(GMT)   |                        | DRY BULB<br>(AIR<br>TEMP)                        | RELATIVE<br>HUMIDITY | PRESSURE             | SEA STATE | VISIBILITY          | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD. | CLOUD (amt) | TYPE | WEATHER | BOTTOM<br>DEPTH | STA.<br>NAME/ID |
|                                 | DEG               | MIN   | DEG        | MIN                               | DAY           | MO   | YR       | HR  | MIN                    | (°C)   | (%)                  | (mb)                 | *         | *                   | (deg)                | (kts)                | *           | *    | *       | (m)             |                 |
| 008                             | 57                | 42.66   | N          | 155                               | 14            | 51   | W        | 27  | AUG                    | 17   | 02                   | 21                   | 12.9      | 79.                 | 3.1                  |                      | 293         | 15   |         | 295             | FOX 61          |
| CTD                             |                   | TIMES   |            | JD/TIME                           |               | DATA LOCATION  |          |   |                        |  |                      |                      |           |                     |                      | REMARKS              |             |      |         |                 |                 |
| TYPE & SN                       |                   | DATA ON   |            |                                   |               | Tape/Diskette/DVD ID                                 |          |   |                        |  | File Name/Header     |                      |           |                     |                      | MAX. DEPTH = 288 m   |             |      |         |                 |                 |
| PRESS SN 9+ S/N 0772            |                   | START DOWN  |            |                                   |               |  |          |   |                        |  | CTD                  |                      |           |                     |                      |                      |             |      |         |                 |                 |
| PRI COND SN 4C S/N 2985         |                   | AT DEPTH  |            |                                   |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| PRI TEMP SN 3+ S/N 2376         |                   | AT SURFACE  |            |                                   |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| SEC COND SN 4C S/N 3127         |                   |   |            |                                   |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| SEC TEMP SN 3+ S/N 4379         |                   | <input checked="" type="checkbox"/> PAR S/N 70296   |            | <input type="checkbox"/> pH S/N   |               | <input checked="" type="checkbox"/> O2 S/N 1961(1°)  |          | <input checked="" type="checkbox"/> Trans S/N           |                        | <input type="checkbox"/> Cleaned air bleed valve |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
|                                 |                   | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            | <input type="checkbox"/> ISUS S/N |               | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |          | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| POS.                            | TRIP<br>DEPTH (m) | CTD CONVERTED MONITOR VALUES                        |            |                                   |               |  |          |   |                        |  |                      | SAMPLE BOTTLE NUMBER |           |                     |                      |                      |             |      |         |                 |                 |
|                                 |                   | PRESSURE  | PRI. TEMP. | nutrients<br>SEC. TEMP.           | PRI. SALINITY | SEC. SALINITY  | SAL. NO. | OXYGEN NO.  | chlrophyll<br>CHL (mg) | APPROX.<br>FLUORO<br>LEVEL                       |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 1                               | 287               |   |            | 742 ✓                             |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 2                               | 200               |   |            | 73 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 3                               | 150               |   |            | 74 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 4                               | 100               |   |            | 75 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 5                               | 75                |   |            | 76 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 6                               | 50                |   |            | 77 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 7                               | 40                |   |            | 78 ✓                              |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 8                               | 30                |   |            | 749 ✓                             |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 9                               | 20                |   |            | 750 ✓                             |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 10                              | 10                |   |            | 751 ✓                             |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 11                              | surface           |   |            | 752 ✓                             |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |
| 12                              |                   |   |            |                                   |               |  |          |   |                        |  |                      |                      |           |                     |                      |                      |             |      |         |                 |                 |

\*J.Gann



| VESSEL<br>NOAA Ship Oscar Dyson |                   |       |   | PROJECT & LEG<br>DY-17-07 Leg I                     |            |   |          |                                   |    |               |               |  |                      | STATION DESIGNATION<br>STN 39 Kani I |           |   |                      |                      |             |  |          |                 |                            |
|---------------------------------|-------------------|-------|---|---|------------|---|----------|-----------------------------------|----|---------------|---------------|--|----------------------|--------------------------------------|-----------|---|----------------------|----------------------|-------------|--|----------|-----------------|----------------------------|
| CONSC<br>CAST #                 | LATITUDE          |       |   | LONGITUDE   |            |   | DATE JD= |                                   |    | TIME<br>(GMT) |               | DRY BULB<br>(AIR<br>TEMP)                            | RELATIVE<br>HUMIDITY | PRESSURE                             | SEA STATE | VISIBILITY  | TRUE<br>WIND<br>DIR. | TRUE<br>WIND<br>SPD. | CLOUD (amt) | TYPE   | WEATHER  | BOTTOM<br>DEPTH | STA.<br>NAME/ID            |
|                                 | DEG               | MIN   |   | DEG   | MIN        |   | DAY      | MO                                | YR | HR            | MIN           | (°C)   | (%)                  | (mb)                                 | *         | *   | (deg)                | (kts)                | *           | *  | *        | (m)             |                            |
| 009                             | 57                | 43.38 | N | 155   | 01.74      | W | 27       | AUG                               | 17 | 03            | 35            | 12.2   | 84.                  | 3.7                                  |           |   | 294                  | 14                   |             |  |          |                 | 9V177                      |
| CTD                             |                   |       |   | TIMES   |            |   |          | JD/TIME                           |    |               |               | DATA LOCATION  |                      |                                      |           |   |                      |                      |             | REMARKS  |          |                 |                            |
| TYPE & SN                       |                   |       |   | DATA ON   |            |   |          |                                   |    |               |               | Tape/Diskette/DVD ID                                 |                      |                                      |           | File Name/Header  |                      |                      |             |  |          |                 |                            |
| PRESS SN 9+ S/N 0772            |                   |       |   | START DOWN  |            |   |          |                                   |    |               |               |  |                      |                                      |           | CTD   |                      |                      |             |  |          |                 |                            |
| PRI COND SN 4C S/N 2985         |                   |       |   | AT DEPTH  |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| PRI TEMP SN 3+ S/N 2376         |                   |       |   | AT SURFACE  |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             | MAX. DEPTH = 202 m                               |          |                 |                            |
| SEC COND SN 4C S/N 3127         |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| SEC TEMP SN 3+ S/N 4379         |                   |       |   | <input checked="" type="checkbox"/> PAR S/N 70296   |            |   |          | <input type="checkbox"/> pH S/N   |    |               |               | <input checked="" type="checkbox"/> O2 S/N 1961(1°)  |                      |                                      |           | <input checked="" type="checkbox"/> Trans S/N           |                      |                      |             | <input type="checkbox"/> Cleaned air bleed valve |          |                 |                            |
|                                 |                   |       |   | <input checked="" type="checkbox"/> FLUORO S/N 2057 |            |   |          | <input type="checkbox"/> ISUS S/N |    |               |               | <input checked="" type="checkbox"/> O2 S/N 1875 (2°) |                      |                                      |           | <input checked="" type="checkbox"/> Altimeter S/N 47408 |                      |                      |             |  |          |                 |                            |
| POS.                            | TRIP<br>DEPTH (m) |       |   | CTD CONVERTED MONITOR VALUES                        |            |   |          |                                   |    |               |               |  |                      | SAMPLE BOTTLE NUMBER                 |           |   |                      |                      |             |  |          |                 |                            |
|                                 |                   |       |   | PRESSURE  | PRI. TEMP. |   |          | SEC. TEMP.                        |    |               | PRI. SALINITY |  |                      | SEC. SALINITY                        |           |   | SAL. NO.             |                      | OXYGEN NO.  |  | CHL (ml) |                 | APPROX.<br>FLUORO<br>LEVEL |
| 1                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 2                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 3                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 4                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 5                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 6                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 7                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 8                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 9                               |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 10                              |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 11                              |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |
| 12                              |                   |       |   |   |            |   |          |                                   |    |               |               |  |                      |                                      |           |   |                      |                      |             |  |          |                 |                            |

[illegible]