| **Source** | **Emissions Unit** | **Source Test Results** | **Potential Control Equipment[[1]](#endnote-1)** | **Range of costs** | **Feedback from sources** | **DEQ Comment** |
| --- | --- | --- | --- | --- | --- | --- |
| **Pre-1970 Boilers > 0.10 gr/dscf** | | | | | | |
| Boise Cascade (Pilot Rock)  30-0016 | 3 Dutch-oven boilers (Babcock & Wilcox, early 1940s), 2 @ 20,000 lb steam/hr, 1 @ 8,000 lb steam/hr;  Backup to NG fired boiler. | Boiler 1: 0.08-0.17 and 0.4% (6 tests);  Boiler 3: 0.08-0.19 and 0-1% (8 tests); Boiler 4: 0.06-0.10 (4 tests) | Need uniform, dry fuel; steady load. |  | Company indicated concern about control device which requires an air flow system that is incompatible with natural draft stacks. Because boilers are backup, company could decide to stop using the boilers rather than control. | Different from other Dutch oven boilers with multiclones? |
| Collins (Fremont Sawmill)  19-0002 | ’53 installed ’75 Dutch oven, 18,000 lb/yr, multiclone;  ’74 installed ’89 Dutch oven, 24,000 lb/hr multiclone | Boiler 1: 0.13  Boiler 2: 0.09 | Needs controls |  | Already does a lot of maintenance, cannot meet 0.10 consistently | 0.1 gr/dscf permit limit |
| Columbia Forest Products  18-0014 | 1944 C& E Dutch oven BLR-S w/multiclone, 35,000 lb steam/hr  1939 EF Huffman Dutch oven BLR-N at 12,500 lb steam/hr) | BLR-S: 0.08 – 0.19 (11 tests); 5 – 17% (10 tests);  BLR-N: 0.09 – 0.14 (3 tests); 1 – 5% (3 tests) | Need controls |  |  |  |
| Frank Lumber  22-2525 | 1969 Wyatt & Kipper spreader stoker boiler, 30,000 lb/hr steam, w/multiclone | ’89 - 0.19  ’97- 0.178  ‘04 -0.137  ’09 - 0.137 | Need controls |  | Already tuned well |  |
| Interfor Pacific  18-0005 | 2 Dutch oven boilers (Wickes 1939), 50,000 lb/hr ea, multiclones, economizer | Common stack – can comply with 0.1 during normal operations. Boiler 1 – 6% and 0.11; Boiler 2 – 2% and 0.15 | Looking at ESP |  | Already does a lot of maintenance and tuning, | Could run boiler harder, thinking of boiler changes to comply with boiler MACT, don’t want to be a synthetic minor |
| Pacific Pellet  09-9509 | Rotary drum multiclone |  |  |  |  | 0.1 gr/dscf permit limit |
| Prineville Sawmill  07-0021 | ? | 0.16 |  |  |  |  |
| Swanson Group Roseburg  10-0030 | 1968 Kipper boilers, pin hole grate, mechanical stoker, 31,800 lb steam/hr | 0.17 at 26,800 #/hr steam | Looking for used ESP |  |  | > 26,800 then NG boiler starts up. |
| **Post-1970 Boilers > 0.10 gr/dscf** | | | | | | |
| Blue Mountain Lumber  30-0056 | 1979 Wellons boiler w/multiclone | 0.09, 0.08, 0.07, 0.15 |  |  |  |  |
| Grant Western | Wood fuel boilers |  |  | major renovation of multiclones including complete cone replacement | tired of failing source tests and being issued civil penalties |  |
| Hampton Lumber Mills Warrenton  04-0041 | 1978 Wellons double cell furnace (fuel cell) boiler, 40,000 lbs steam/hr |  | multiclone |  |  | PATTY? |
| Marvin Wood Products  01-0035 |  |  | new blower system to help control additional sawdust created by a new finger joint system |  | Proactive | Grain loading? |
| Murphy (GP) same as below? |  |  | WESP |  | compliance order | 0.10 |
| Murphy Plywood (Formerly owned by GP)  LRAPA  203102 | heat cell |  | Dry ESP |  | emissions greater than the 0.1 gr/dscf; SFO with LRAPA to install dry ESP | 20%/0.1 |
| Umpqua Lumber  10-0027 | 1975 Wellons boiler w/multiclone, 20,000 lb/hr | 0.12 gr/dscf |  |  |  | 0.1 gr/dscf permit limit |
| Weyerhaeuser NR, Warrenton  04-0041 | 1978 Wellons double cell furnace (fuel cell), 40,000 lb steam/hr w/NG | .14 - 04  .18 - 06  .20 - 06  .13 - 06 |  |  |  | 0.1, 20% |
| Wallowa Forest Products | Wood fuel boilers |  | major renovation of multiclones including complete cone replacement |  | tired of failing source tests and being issued civil penalties |  |
| **Pre-1970 Boilers < 0.10 gr/dscf** | | | | | | |
| Roseburg Forest Product facilities Riddle  10-0078 | 1968 Wyatt-Kipper spreader-stoker HFB, 110,000 lb steam/hr  1978 Kipper spreader-stoker HFB, 70,000 lb/hr, | 0.017 lb/M lb steam  0.184 lb/M lb steam (BACT) | Western Pacific multiclone w/110 cyclones; 2006 dry ESP  Zurn multiclone (12 cyclones) with Ducon Spray tower wet scrubber |  | in anticipation of the original Boiler MACT | 0.2? 20%  0.1; 20% |
| Roseburg Forest Product facilities Coquille  06-0010 | 1958 Garrett & Schafer bentwood tube spreader-stoker HFB, 80,000 lb steam/hr; | 0.038 lb/M lb steam | 2006 dry ESPs added after the existing multiclone controls |  | in anticipation of the original Boiler MACT | 0.2? 20% |
| Swanson Group Glendale  10-0045 | 1951 Babcock & Wilcox Dutch oven HFB, 125 MMBtu/hr | 0.025 lb/M lbs steam at 58,000 lb/hr | Multiclone and dry ESP |  |  | 0.2? |
|  |  |  |  |  |  |  |
| Harney Rock and Paving  13-0010 | Asphalt plant | 19% and **0.22** (‘99) | Wet scrubber | ~$32,000 |  |  |
| Humberg Asphalt  37-0112 | Asphalt plant |  |  |  |  |  |
| Rogers Asphalt Paving  31-0001 | Asphalt plant | 0.11 | Wet scrubber | ~$32,000 |  |  |
| Valley Paving  23-0031 |  | 0.231 |  |  |  | Violation of 0.1 |

1. Initial estimates, company needs to do an engineering assessment to confirm. Cost range for the different types of equipment = [↑](#endnote-ref-1)