

APPENDIX 1  
 Diesel Fuel Oil EN590 SPECIFICATIONS Kazakhstan  
 (Guaranteed Quality) to be delivered under this agreement

| COMPONENT                                                  | METHODS OF ANALYSIS                     | UNIT       | RESULT      |                |
|------------------------------------------------------------|-----------------------------------------|------------|-------------|----------------|
|                                                            |                                         |            | MIN.        | MAX.           |
| WATER AND SEDIMENT                                         | EN ISO 12937                            | MG/KG      | 0.05        | 200            |
| KINEMATIC VISCOSITY                                        | ASTM D445                               | CST@40C    | 1.3         | 4.1            |
| FLASH POINT                                                | EN ISO 2719                             | C°         | >55         |                |
| ASH                                                        | EN ISO 6245                             | %M/M       |             | 0.010          |
| LUBRICATING POWER, AVERAGE WEAR DIAMETER (WWSD 1,4) AT 60° | EN ISO 12156-1                          | M          |             | REPORT 460     |
| CETANE NUMBER                                              | EN ISO 5165- EN 15195- EN 16144         |            | 51.0        |                |
| DISTILLATION                                               | EN ISO 3405-EN ISO                      | %V/V       |             |                |
| RECOVERED AT 250° C<br>RECOVERED AT 350° C<br>95% POINT    | 3924                                    | %V/V<br>C° | 85          | <65<br><br>360 |
| CETANE INDEX                                               | EN ISO 4264                             |            | 46.0        |                |
| POLYCYCLIC AROMATIC HYDROCARBONS                           | EN ISO 12916                            | %M/M       |             | 8              |
| VISCOSITY AT 40°                                           | EN ISO 3104                             | MM2/s      | 2.000       | 4.500          |
| FOG POINT (SUMMER)<br>FOG POINT (WINTER)                   | EN ISO 23015                            | C°<br>C°   | REPORT<br>0 |                |
| SUMMER CFPP<br>CFPP WINTER                                 | EN ISO 116- EN 16329                    | C°         | 0<br>-10    |                |
| OXIDATION STABILITY<br>ACID NUMBER                         | EN ISO 12205<br>EN 15751                | G/M3<br>H  | 20          | 25             |
| TOTAL SULFUR                                               | EN ISO 20846- EN ISO 20884- ENISO 13032 | MG/KG      |             | 10             |
| CORROSION ON COPPER FOIL (3H AT 50° C)                     | EN ISO 2160                             | INDICE     | CLASS 1     |                |
| RESIDUOCARBONIOSO                                          | EN ISO 10370                            | %M/M       |             | 0.30           |
| ALKALINE METALS (MG+Ca)                                    | EN 14108                                | PPM        |             | Nd             |
| BLEND FRACTION                                             | EN 14078                                | VOL. %2    | 1000        | +/-2%          |
| DENSITY                                                    | EN ISO 3675-EN ISO 12185                | KG/M3      | 820.0       | 845.0          |
| CONTENT OF F.A.M.E.                                        | EN 14078                                | %v/v       |             | 7.0            |
| MANGANESE CONTENT                                          | Pr EN 16576                             | MG/l       |             | 2.0            |