SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
WELL GROUTING/ABANDONMENT FORM

GROUTING _____  ABANDONMENT _____

Permit No. ____________________ Drilling Contractor ______________________________________ License No. ____________

1/4 _______ 1/4 ______ SEC. ______ TWP. _______ RGE. _______ Latitude _______________ Longitude ______________

Data obtained from: GPS ________ or Map ________ or Survey ________ : Datum NAD 27 ________ NAD 83 ________

Property Owner __________________________________________

Address of Well __________________________________________________________________________________________

County _______________________________________ QWIP No. ____________ WUP No. ________ DID No. ____________________

WELL SPECIFICATIONS

T.D. of Well (to be verified by inspector) ___________________________________________ Water Level ________________

Casing: Double ____ or Single ____ ; Diameters ________ ; Depth ______ : Measured ____ , Estimated ____ , Logged ____

Material: (check) Black Steel ___ , Galv. ___ , PVC ___ , Other _______________________________________________________

Was well information verified from driller's log? Yes ___ No ___ (Explain in comments)

Special Construction Stipulation?  No ____ Yes ____ , Stipulation No. ___________ Was Special Condition met? Yes ___ No ___

Old Permit?  No ___ Yes ___ Permit No. ____________ Well Depth _______ Casing Depth _______ Diameter ________

(For public supply) Approved Public Supply Plan match location? Yes ____ No ____

(For 62-524) Yes ____ No ____ Well location same as surveyed location? Yes ____ No ____

GROUT SPECIFICATIONS AND INSPECTION

Date _______________          _____________          _____________          ____________

BENTONITE INTERVAL

Type (check) : chips ___ , pellets/tablets ____ : Size: 3/4 ____ , 1/2 ____ , 3/8 ___ ; Bentonite Slurry____

Estimated Bags of Bentonite _______________          _____________          _____________          ____________

Actual Bags of Bentonite _______________          _____________          _____________          ____________

** Special additives _______________          _____________          _____________          ____________

% of water with slurry _______________          _____________          _____________          ____________

CEMENT INTERVAL

Cement Type (check): Type I ____ Type II ____ Type I / II _______________          _____________          ____________

* Estimated No. of sacks ___ /yards ___ _______________          _____________          _____________          ____________

Actual No. of sacks ___ /yards ___ _______________          _____________          _____________          ____________

% Bentonite added _______________          _____________          _____________          ____________

Gallons water per sack ___ /yard ___ _______________          _____________          _____________          ____________

Grout Method (types) _______________          _____________          _____________          ____________

Total Time on Site _______________          _____________          _____________          ____________

COMMENTS

_________________________________________________________________________________________________________

_________________________________________________________________________________________________________

_________________________________________________________________________________________________________

____ Driller or ___ Contractor Signature __________________________ Date ______________

Observer Signature __________________________ Date ______________

Work was satisfactorily completed in accordance with 40D-3, F.A.C.? Yes ___ No ____ Water samples taken? Yes ___ No ____

Compliance Tracking No. __________________________

Authorized Signature __________________________ Date ______________

(Not official unless signed by SWFWMD Supervisor or designated representative) LEG-R.041.00 (4/09) RULE 40D-3.531(5), F.A.C.
The following grouting techniques and procedures shall be adhered to. Failure to do so could jeopardize the approval of the well abandonment due to the grouting technique used.

1. The field representative should measure the annulus to insure that the 20 ft. (for top grouting) or the total depth of the casing is exact. If a tremie is introduced, then the annulus should be checked by rotating the tremie pipe clockwise around the casing.

2. The District representative must calculate a theoretical amount of cement needed prior to the beginning of the grouting operation.

3. The cement and water shall be mixed at a ratio of 5.2 to 5.5 gallons of water to one 94 lb. bag of Portland cement. No other mix will be accepted unless approved by the Well Permitting Manager.

4. Should the cement return to the surface with less than the acceptable amount, then the tremie pipe should be moved to clear the annulus.

The following table is the minimum acceptable amount of cement per ft. at 5.2 gallons of water per 94 lb. sack of cement (yields 8.82 gallons of slurry/sack) for neat cement slurry to be used in grouting wells. Table assumes no formation loss. Quantity actually used may be rounded up to the nearest 1/4 sack.

<table>
<thead>
<tr>
<th>CEMENT ONLY (No Bentonite) TABLE</th>
<th>ANNULUS / ONE FT. INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hole Diameter</strong></td>
<td><strong>Gallons/one ft.</strong></td>
</tr>
<tr>
<td>2&quot;</td>
<td>.16</td>
</tr>
<tr>
<td>3&quot;</td>
<td>.37</td>
</tr>
<tr>
<td>4&quot;</td>
<td>.65</td>
</tr>
<tr>
<td>5&quot;</td>
<td>1.02</td>
</tr>
<tr>
<td>6&quot;</td>
<td>1.47</td>
</tr>
<tr>
<td>8&quot;</td>
<td>2.61</td>
</tr>
<tr>
<td>10&quot;</td>
<td>4.08</td>
</tr>
<tr>
<td>12&quot;</td>
<td>5.87</td>
</tr>
<tr>
<td>14&quot;</td>
<td>8.00</td>
</tr>
<tr>
<td>16&quot;</td>
<td>10.44</td>
</tr>
<tr>
<td>18&quot;</td>
<td>13.22</td>
</tr>
<tr>
<td>20&quot;</td>
<td>16.32</td>
</tr>
<tr>
<td>12&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>12&quot;</td>
<td>18&quot;</td>
</tr>
<tr>
<td>16&quot; (O.D.)</td>
<td>20&quot;</td>
</tr>
</tbody>
</table>

**BENTONITE ADDITIVE TO CEMENT TABLE**

<table>
<thead>
<tr>
<th><strong>Percent Bentonite</strong></th>
<th><strong>Gallons of water/sack of cement</strong></th>
<th><strong>Slurry Yield gallons/sack of cement</strong></th>
<th><strong>Multiply for sacks of Bentonite required</strong></th>
<th><strong>Multiply for sacks of cement required</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>11.7</td>
<td>15.78</td>
<td>0.103</td>
<td>.56</td>
</tr>
<tr>
<td>8</td>
<td>10.4</td>
<td>14.36</td>
<td>0.092</td>
<td>.61</td>
</tr>
<tr>
<td>6</td>
<td>9.1</td>
<td>12.94</td>
<td>0.077</td>
<td>.68</td>
</tr>
<tr>
<td>4</td>
<td>7.8</td>
<td>11.59</td>
<td>0.057</td>
<td>.76</td>
</tr>
<tr>
<td>2</td>
<td>6.5</td>
<td>10.17</td>
<td>0.032</td>
<td>.87</td>
</tr>
<tr>
<td>0</td>
<td>5.2</td>
<td>8.82</td>
<td>0.000</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* Gallons of water required per 94 lb. sack of cement when dry mixed with Bentonite.
** Multiply the theoretical number of (Cement Only Table) sacks required by the corresponding decimal values for the sacks of cement and Bentonite mixture desired. A dispersant may be added if slurry becomes difficult to pump.

**DRY BENTONITE**

One 50 lb. bag (granular/chips) is equivalent to approximately 5.5 gal. (+10%). In order to determine a theoretical estimate of number of bags required, determine total hole volume in gallons from the Cement Only Table and divide by 5.5 gal./bag to obtain the number of bags of dry (granular/chips) Bentonite.

**EXAMPLE:**

100 ft., 4 inch diameter hole - 100 x .65 = 65. gal. 65.5 = 12 bags dry Bentonite.

**GROUT METHOD TYPES**

Grout Methods (please check one):

___ Tremie  ___ Dump Bailer  ___ Other

(Explain other)