UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

MEMORANDUM

Subject: Final Work Product from the National UIC Technical Workgroup: Injection Well Plugging and Abandonment Checklist

From: Kurt Hildebrandt, Workgroup Chair

Mike Frazier, Workgroup Co-Chair

Thru: Mr. Roy Simon, Acting Chief
Drinking Water Prevention Branch (4606M)

To: Mr. Steven F. Heare, Director
Drinking Water Protection Division (4606M)

Please find attached for your review and approval a work product recently completed by the UIC National Technical Workgroup (NTW). This completed work product is a plugging and abandonment checklist which can be utilized by the Regions (and perhaps States) to assist them in the calculation of injection well plugging and abandonment costs. This checklist was developed by the NTW as a method of providing some measure of consistency between Environmental Protection Agency(EPA) Regions when calculating these costs. The checklist should prove useful in a variety of situations as it not only considers the many factors associated with routine well plugging but also addresses factors which may only be relevant for certain well classes or well constructions.

The regulatory basis for operators of Class I, II, and III wells to submit costs and plans for closing their injection facilities appears at 40 CFR §144.28(d) for wells authorized by rule and at §144.52(a)(7) for permitted wells. These requirements also allow for the director of an EPA implemented program to request updated financial assurance information if it has been determined that the original cost estimates are no longer adequate to cover the costs of closing, plugging, or abandoning the well. The checklist should prove useful to program staff in making that determination.

RECYCLE
PAPER CONTAINS RECYCLED FIBERS

Upon your approval, the NTW would appreciate your distribution of this checklist to each of the EPA Regions and to the Ground Water Protection Council for distribution to their State members. When distributing of this document, it will be important to note that the checklist is not required to be used and simply provides a tool to assist regional or state UIC programs in the calculation of plugging and abandonment costs.

Thank you for your attention on this issue. Please direct any questions that you may have on this work product to Steve Platt in Region 3 at (215) 814-5464 who served as the lead for the NTW on this effort. You may also contact the NTW chairs: Kurt Hildebrandt in Region 7 at (913) 551-7413 or Mike Frazier in Region 6 at (214) 665-7236 to answer questions about the work product or the NTW in general.

Attachment

cc: Bruce Kobelski (4606M)
Robert E. Smith (4104M)
Steve Platt - R3

UIC NATIONAL TECHNICAL WORKGROUP
PRODUCT COVER SHEET

1. Title:

Injection Well Plugging and Abandonment Checklist

2. Date of Finalization:

February 11, 2005

3. Background/Brief Reason for its Need:

To provide for consistency between EPA Regions and possibly States when calculating injection well plugging and abandonment costs.

4. Author(s):

Steve Platt - Region 3

5. Background Information Location (where the supporting documents are):

Supporting documentation rests in EPA Region 3. Contact Steve Platt at (215) 814-5464

P&A CHECKLIST
For Financial Responsibility Cost Determination

Facility Name:

EPA Well ID:

Well Location:

Well Class:

Type of Well:

List USDWs:

Formation Name	Formation Top	Formation Bottom

Is well construction information current? Y/N

Current Well Construction Information
(Attach a well bore diagram):

Well Construction Information	Hole Size	Casing Size	Depth Set	Sacks of Cement
Surface				
Intermediate				
Long String (Production)				
Liner				
Tubing				
Other (additional casing string)				

Describe the weight and grade of the material casing strings and tubing are constructed:

Surface:

Intermediate:

Long String:

Additional string(s):

Tubing:

List all perforation(s) past and present:

Perforations	**Depth to Top of Perf**	**Dept to Bottom of Perf**	**Active or Plugged**	**Formation**
1				
2				
3				
4				
5				
6				

If the perforation has been plugged, list the date and describe the procedure, including cement used, cement tops, etc.:

Total Well Depth:_____
Packer Type:_____
Packer Depth:_____

Additional packer information:

Perforations: 1)_____ 4)_____

2)_____ 5)_____

3)_____ 6)_____

Plug Locations Required for Proper P&A:

Plug Identifier*	**Plug Top**	**Plug Bottom**	**Resource Being Protected (USDW, gas, coal, etc.)**

*Plug Identifier: Examples, 7"casing shoe 2700'-2600', surface, perforations 2100'-1900

Have any intervals/sections of the wellbore been plugged previously? If so, give the location of the plugs, the circumstances that required the plug and how the plug was set.

Plugging and Abandonment
Normal Costs

1. **Rig Costs**

Travel:_____miles @ $_____ =_____

Labor:_____hrs @_____ =_____
(Super & Crew)

Equipment Costs_____hrs @ $_____ =_____
(Rig cost, drilling package, etc.)

Miscellaneous Site Costs (Tubing work string rental, water storage, flow tanks, mud pit, etc.)
_____hrs. @ $_____ =_____

Well Head Cutting =_____

Cement Tagging$_____per#_____ =_____

Pulling Casing/Tubing
_____hrs.@ $_____ =_____

2. **Cement Costs**

Pump Truck & Operator (Including Set Up)
_____hrs.@ $_____ =_____

Tank Truck & Operator
_____hrs @ $_____ =_____

Cement
_____sacks @ _____/sk =_____

Type Cement_____

_____sacks @ _____/sk =_____

Type Cement_____

Cement Retainer(s) $_____each =_____
List Retainers:

Cement Additives (high temperature/pressure) =_____

Balance Plug inc. fluids and testing
$_____ per plug x _____count =_____
List Plugs:

Surface Plug inc. fluids and testing
$_____ =_____

3. **Wireline Service**

Transportation _____hrs. @ $_____ =_____

Labor:_____hrs @_____ =_____

Service Charges =_____

Perf/Squeeze_____shots @ $_____/shot =_____

Cut Casing _____event(s) @ $_____ =_____

Cement Retainer(s) $_____each =_____
List Retainers:

TOC Log =_____

Depth charge for gage rings, junk basket
_____ft @ $ _____ =_____

Specialized tools for fluid sampling =_____

4. **Site Preparations & Costs**

General Site Engineering & Plan Development =_____

Owner/Operator Site Supervisor =_____

Backhoe & Operator
_____hrs @ $_____ =_____

Dozer & Operator
_____hrs @ $_____ =_____

Road Construction and Improvement Costs =_____

Pit Liner =_____

5. **Transportation & Miscellaneous**

Special Land Use Costs (Zoning & Permits) =_____

Winch truck w/driver (wages & mileage)
_____hrs @ $_____ =_____

Water truck w/ driver (wages & mileage)
_____hrs @ $_____ =_____

Vacuum Truck w/ driver (wages & mileage)
_____hrs @ $_____ =_____

2 axle rig-up truck driver& crew wages & mileage)
_____hrs @ $_____ =_____

1 axle truck w/ driver (wages & mileage)
_____hrs @ $_____ =_____

Hot oiler (equip, labor & mileage)
_____hrs @ $_____ =_____

Welder (equip, labor & mileage)
_____hrs @ $_____ =_____

Packer Fluid per specs.
$_____per _____bbl =_____

Hydraulic Jacks_____hrs @ $_____ =_____

Bridge Plug =_____

Waste Disposal Costs =_____

Tool Rental (Ex: Casing Ripper, Collar Buster, etc.)
List:
a.
b.
c. =_____

6. **Land Reclamation** (State Delegated Programs)

Please provide comments and language

7. **Remediation Costs** (mostly shallow wells)

Sample Analysis (fluid or soil) = _____

Soil Removal = _____

Site Assessment Study Costs = _____

System Removal Costs = _____

Disposal System Modification Costs = _____

Installation of Monitoring Well Costs = _____
Wells
Type
Depth
Construction

Subtotal _____

TOTAL _____

Contingency ____% = _____

Inflation Costs = _____
(% Cost x yrs since plan developed)

TOTAL AMOUNT
Rounded to $100.00 = _____