



June 11, 2010

Mr. Scott Surovchak
US Department of Energy,
Office of Legacy Management
11025 Dover Street Suite 1000
Westminster, Colorado 80021

RE: Abandonment of Groundwater Monitoring Wells – Great Western Reservoir Open Space

Dear Mr. Surovchak:

The City and County of Broomfield (Broomfield) has reviewed your correspondence dated May 13, 2010 regarding the proposed abandonment of three groundwater monitoring wells within Broomfield's Great Western Reservoir Open Space area. Broomfield, as the property owner where the existing wells are located, objects to the abandonment of the wells due to the limited amount of information provided with your correspondence.

However, Broomfield will allow the abandonment to proceed subject to the Department of Energy, Office of Legacy Management obtaining a Public/Private Improvement Permit. A copy of the required permit is enclosed for your reference and can also be downloaded from the Broomfield website at <http://www.broomfield.org/engineering/> under the forms heading.

Although no fee will be assessed for the permit, the following information needs to accompany the permit application:

1. Provide a map of entire project area, including all wells to be abandoned, wells labeled/named and GPS coordinates in UTM format for each location.
2. Methods and materials that will be used to abandon, plug, or seal the wells.
3. Typical details showing vertical cross section of abandoned well.
4. List of vehicles and equipment that will be used.
5. Construction schedule which includes mobilization, de-mobilization, anticipated start date, and total duration.
6. Estimated area of disturbance for each well.
7. A re-vegetation plan in the event disturbed areas need to be seeded.
8. An environmental report that covers potential effects to vegetation and wildlife. (If prairie dogs are located within the construction area, *Broomfield Policies for Prairie Dog Conservation and Management* will apply.)

Mr. Scott Surovchak

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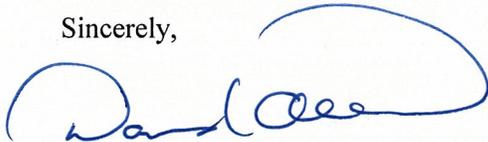
For your advance information, the following minimum additional requirements will be added as permit approval conditions:

- The contractor shall contact Red Grenemyer at (303) 464-5615 at least 48 hours prior to commencing work on the site.
- All excess materials, debris, or stock piles shall be removed and disposed off-site upon completion of the work.
- DOE shall submit a Well Abandonment Report to the Colorado Office of the State Engineer following completion of the work. (A blank copy of the report is enclosed.)
- In accordance with Rule 17.6 of the Colorado Water Well Construction Rules, DOE shall provide Broomfield with a copy of Well Abandonment Report submitted to the State for each of the three wells.
- Based on the vehicles and equipment that will be used, addition requirements on the access locations to the well sites may be imposed.
- Since Xcel Energy is planning to work in the same general area within the next one or two months, additional requirements and/or restrictions may be required to support concurrent activities.

Finally, we would like to request that you collect one final sample from each of the wells before they are abandoned. If your budget does not include the necessary funds, Broomfield would be willing to pay a contract lab to perform the analysis. A written response on this request would be greatly appreciated.

Please complete the enclosed permit application form and provide the requested information at your convenience. Please contact me (303) 438-6348 if you have any questions regarding our requirements.

Sincerely,



David Allen
Deputy Director of Public Works – Operations
City and County of Broomfield

Enclosures

Public/Private Improvement Permit Application
Well Abandonment Report

c: Ray Plieness, DOE-LM
Burt Knight, Broomfield City Engineer
Kristan Pritz, Broomfield Director of Open Space and Trails
Alan King, Broomfield Director of Public Works
Shirley Garcia, Broomfield Environmental Services Coordinator
Michael Wallingford, Broomfield Environmental Health Services Administrator



CITY AND COUNTY OF BROOMFIELD

Engineering Division 303-438-6380

One DesCombes Drive, Broomfield, CO 80020

Fax: 303-438-6297

PUBLIC/PRIVATE IMPROVEMENT PERMIT

Applicant Information

Estimated Construction Cost:

Permit Number:

Name of Applicant (include contact person)

Address:

24 hour emergency phone:

Date:

(Office Use Only)

New:

Renew:

Warranty:

Dry Utilities:

Contractor Information

24 hour emergency phone:

Company:

Phone:

Project Manager:

License #:

Contractor Address:

Proposed Construction or Work Activity

Address (include subdivision name):

Description of Work:

Temporary Construction Equipment to be located in R.O.W.

CALL ENGINEERING INSPECTOR BEFORE ANY WORK BEGINS

Inspector:

PERMIT APPROVAL CONDITIONS

- All work must be done per approved engineering plans and Broomfield Standards and Specifications.
- Contractor shall provide certification in accordance with Ord. No. 1698: Oil and Gas Wells Production Site Abandonment.
- No work shall proceed beyond the end date specified on the permit without approval from the City.
- The Public/Private Improvement Permit must be on the job site at all times.
- All disturbed areas including landscape must be restored to original or better conditions within two weeks of job completion. (weather permitting)
- All exploratory potholing excavations shall be repaired per Broomfield Standards and Specifications.
- All traffic control must be in place before work begins.
- Traffic Control plan must meet MUTCD Standards.
- All work shall be limited to Mon. - Fri. 7:00 AM to 7:00 PM unless written authorization from City Engineer is obtained.
- Preconstruction Meeting is required before work may start. Call (303) 438-6378
- Sidewalk removal area needs to be cold patched if concrete is not immediate.
- Bore only. Do not cut street pavement.
- Bikepath/sidewalk cannot be closed during construction
- Maintain 10' horizontal separation from existing utilities and 18" at all crossings.
- Street pavement is less than 5 years old. Special requirements apply:
- Use #57 or #67 (3/4" - 1 1/2") fractured rock or flow-fill.
- Flow-fill required. Mix design must be approved prior to use.
- Infra-red heat treatment of patch required.
- Certificate of Tapability required before tapping main.
- Other:
- Other:



**PUBLIC/PRIVATE IMPROVEMENT PERMIT
PERMIT QUANTITIES AND FEES**

Sanitary Sewer	Unit Fee	Quantity	Fee	Concrete	Unit Fee	Quantity	Fee
Pipe:	\$0.26/L.F.	_____	\$ _____	Sidewalks:	\$0.19/L.F.	_____	\$ _____
Pipe w/underdrain:	No Fee/L.F.	_____	\$ _____	Cross Pans:	\$0.19/L.F.	_____	\$ _____
Manholes:	\$16.00/EA	_____	\$ _____	Drive Cuts:	\$0.19/L.F.	_____	\$ _____
Services:	No Fee/EA	_____	\$ _____	Curb/Gutter:	\$0.19/L.F.	_____	\$ _____
Water Mains	Unit Fee			Street Surface			
Pipe:	\$0.26/L.F.	_____	\$ _____	Asphalt:	\$0.16/S.Y.	_____	\$ _____
Valves:	\$3.20/EA	_____	\$ _____	Concrete:	\$0.16/S.Y.	_____	\$ _____
Fire Hydrants:	\$3.20/EA	_____	\$ _____	Base Prep:	No Fee/S.Y.	_____	\$ _____
Blow Offs:	\$3.20/EA	_____	\$ _____	Edge Drains:	No Fee/L.F.	_____	\$ _____
Services:	No Fee	_____	\$ _____				
				Parks			
				Parks	\$0.03/S.Y.	_____	\$ _____
Storm Drainage							
Pipe:	\$0.26/L.F.	_____	\$ _____				
Inlet Structures:	\$16.00/EA	_____	\$ _____				
Earth Channels:	\$0.19/L.F.	_____	\$ _____				
Detention Ponds:	\$0.08/S.Y.	_____	\$ _____				
Manholes:	\$16.00/EA	_____	\$ _____				

(Office Use Only)

No Fee: <input type="checkbox"/>	Area 80 Acres+: <input type="checkbox"/>
Inspection Total (\$15 min):	
Contract Inspection Fee (area 80 acres +):	
Plan Review Fee (50% of Insp., \$5min):	
Street Cut fee:	
Other fee:	Total:

The following are attached with this Permit Application for Review

- | | | |
|---|---|---|
| Construction Drawings: <input type="checkbox"/> | Drainage Plan: <input type="checkbox"/> | State Highway Utility Permit: <input type="checkbox"/> |
| Grading Plan: <input type="checkbox"/> | Geotechnical Report: <input type="checkbox"/> | State Highway Access Permit: <input type="checkbox"/> |
| Traffic Control Plan: <input type="checkbox"/> | Truck Routing Plan: <input type="checkbox"/> | ROW/Easement Dedications: <input type="checkbox"/> |
| Park Access Permit: <input type="checkbox"/> | Oil/Gas Well Abandon. Cert.: <input type="checkbox"/> | Railroad/Ditch Company Permission: <input type="checkbox"/> |

Requested dates to perform the proposed work

From: To: Permit Expiration Date:

Staff Approval: Approval Date:

Traffic Eng. Approval: Approval Date:

Date Paid:

The Applicant and Contractor agree to be bound by the provisions of this permit, the Broomfield Standards and Specifications, the Manual on Uniform Traffic Control, approved plans, or any other Ordinance, Law, Rule or Regulation, and that this Permit shall be invalid if, during the performance of the work, a violation of any of the above ensued. By signing this Public/Private Improvement Permit, the Applicant accepts full responsibility for damage done to public or private property (this may include, but is not limited to, street pavement, sidewalk, curb and gutter, landscaping, and utilities); and further understands that he/she will be held financially liable for all required repair work.

Applicant's Signature: _____

Date: _____

City Engineer's Signature: _____

Date: _____

Form No. GWS-09 6/2006	STATE OF COLORADO, OFFICE OF THE STATE ENGINEER 821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203 (303) 866-3581 Fax (303) 866-3589 http://www.water.state.co.us	For Office Use Only
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WELL ABANDONMENT REPORT

Use to report plugging and sealing of permitted wells, monitoring and other holes. Type or print in black or blue ink. Instructions and plugging standards are on reverse side of form.

**Well Permit Number of the well being plugged _____ or
MH File Number MH- _____ Hole ID #/Name _____**

Individual/Company responsible for plugging and sealing the well:

NAME(S) _____

Mailing Address _____

City, St., Zip _____

Phone (_____) _____

Well (Hole) Owner:

NAME(S) _____ Phone (_____) _____

Mailing Address, City, St., Zip _____

ACTUAL WELL LOCATION: County _____

Property Address, City, St, Zip _____

_____ 1/4 of the _____ 1/4, Sec. _____, Twp. _____ N. or S., Range _____ E. or W., _____ P.M.

Distance from Section Lines _____ Ft. From N. or S., _____ Ft. From E. or W. Line.

Subdivision Name _____ Lot _____, Block _____, Filing/Unit _____

Optional: GPS well location information in UTM format. You must check GPS unit for required settings as follows:

Format must be UTM, zone 12 or zone 13 ; Units must be meters; Datum must be NAD83; Unit must be set to true north.

Easting _____ **Northing** _____

I (we) report the existing well (hole) was plugged and sealed on the date of _____ for the following reason(s):

- The well was plugged and sealed as required under Well Permit Number _____.
- The well was not in use and was plugged and sealed.
- Other (please explain) _____

The well was plugged with the following materials placed at the indicated intervals:

Amount and Type of Material	Method of Placement	Interval
_____	_____	from _____ feet to _____ feet
_____	_____	from _____ feet to _____ feet
_____	_____	from _____ feet to _____ feet
Intervals of casing removed/ripped in feet		from _____ feet to _____ feet

Report must be signed by person who performed the well plugging work or by the well owner if this person is unknown or not reachable. I (we) have read the statements made herein, know the contents thereof, and that they are true to my (our) knowledge.

Signature(s) _____	Please print the Signer's Name & Title _____	Date _____
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It is the responsibility of the well owner to have the well/hole properly plugged and sealed. The Well Construction Contractor is responsible for notifying the owner of this requirement.

Information and Standards

Conditions of approval of a replacement well permit generally require that the old well be plugged and sealed according to the Water Well Construction Rules. A blank report form is provided to the well owner when a replacement permit is issued. This report is also used to affirm that other types of wells and holes have been plugged and sealed. These reports must be completed and submitted to the Division of Water Resources, usually within 90 days of plugging and sealing the well/hole.

This form may be reproduced by photocopy or word processing means.

RULE 16 STANDARDS FOR PLUGGING, SEALING, AND ABANDONING WELLS AND BOREHOLES

16.1 General - The plugging, sealing and abandonment of all wells, monitoring and observation wells, monitoring and observation holes and test holes that are no longer intended for use, and the plugging, sealing, and abandonment of dry holes, collapsed or unusable boreholes, and other incomplete wells or excavations is necessary to prevent contamination of ground water and the migration of water through the borehole. It is the ultimate responsibility of the well owner to have an existing well properly plugged, sealed and abandoned. The well construction contractor or authorized individual is responsible for notifying the well owner in writing of these plugging requirements.

16.1.1 In the event a borehole(s) is not completed for the intended purpose, the contractor will notify the well owner of the well owner's responsibility for the proper abandonment of the borehole(s) according to Rule 16.1. If the well owner does not agree to allow the contractor to abandon the borehole(s), the contractor shall notify the Board of Examiners, in writing, of the existence of the borehole(s) and the contractor's effort to notify the well owner of the well owner's abandonment responsibilities under Rule 16.1

16.1.2 Persons authorized to install pumping equipment may plug, seal and abandon wells that do not require the removal of casing that penetrates more than one aquifer or the ripping or perforating of casing opposite confining layers.

16.1.3 Materials used for backfilling shall be clean, inert, and free from contaminants. The well casing may be cut off below land surface so that it will not interfere with the anticipated use of the land. If the casing is cut off below land surface, the uppermost five (5) feet of the remaining casing shall be filled with grout or a watertight cover shall be permanently attached to the remaining casing and the excavation shall be filled with materials that are not more permeable than the surrounding soils and adequately compacted to prevent settling.

16.2 Wells or Boreholes in Type II and Type III Aquifers - Wells completed into unconfined aquifers and unconsolidated aquifers shall be plugged, sealed and abandoned by filling the well to the static water level with drill cuttings, clean sand or clean gravel, then with clean native clays, cement or high solid bentonite grout to the ground surface. The uppermost five (5) feet of casing shall be filled with grout or a permanent watertight cover shall be installed at the top of the casing. If casing is removed, the hole shall be filled as described above to within five (5) feet of the ground surface. The top five (5) feet of the hole shall be filled with materials less permeable than the surrounding soils that are adequately compacted to prevent settling.

16.2.1 Dewatering wells, horizontal drains, monitoring and observation holes, percolation holes, piezometer holes, sumps, test holes and dry holes shall be plugged, sealed, and abandoned either pursuant to Rule 16.2 or by removing all casing that was installed and by filling the hole(s) with drill cuttings, clean native clays, cement or high solid bentonite grout to within five (5) feet of the ground surface. The top five (5) feet of the hole shall be filled with materials less permeable than the surrounding soils that are adequately compacted to prevent settling.

16.3 Wells or Boreholes in Type I Aquifers - Wells which were constructed through more than one aquifer shall be plugged and sealed by placing a cement grout plug at the confining layer above each aquifer. If records do not show that the casing opposite each confining layer has been grouted when originally installed, the casing shall be either completely removed from the hole, or perforated or ripped opposite such layer prior to placing the grout plug. Plugs shall be no less than forty (40) feet in length and shall be designed to withstand the maximum potential hydrostatic pressure differential between the aquifers. The well casing, except for the grout plug intervals, shall be completely filled to the land surface with clean native clays, cement or high solid bentonite grout. A watertight cover shall be permanently welded or attached to the top of the casing.

If you have questions, contact the Denver or the Division Office where your well is located.

Division 1 810 9 th St. 2 nd Floor Greeley, CO 80631 (970) 352-8712 Fax (970) 392-1816	Division 2 310 E. Abriendo Ave Ste B Pueblo, CO 81004 (719) 542-3368 Fax (719) 544-0800	Division 3 301 Murphy Drive Alamosa, CO 81101 (719) 589-6683 Fax (719) 589-6685	Division 4 1871 East Main St. Montrose, CO 81401 (970) 249-6622 Fax (970) 249-8728
Division 5 Direct mail to Box 396 Glenwood Spgs CO 81602 50633 U.S. Hwy 6 & 24 Glenwood Spgs., CO 81601 (970) 945-5665 Fax (970) 945-8741 Call First	Division 6 Direct mail to Box 773450 505 Anglers Dr. Suite 101 Steamboat Spgs, CO 80477 (970) 879-0272 Fax (970) 879-1070	Division 7 701 Camino Del Rio Ste. 205 Durango, CO 81301 (970) 247-1845 Fax (970) 259-0944	Denver Office 1313 Sherman St. Rm. 818 Denver, CO 80203 (303) 866-3581 Fax (303) 866-3589