



AC-08
MONITORING WELL ABANDONMENT WORK PLAN
and BUDGET FORMAT

This Monitoring Well Abandonment Work Plan (WP) is for the routine abandonment of monitoring wells no longer needed for petroleum release investigation or cleanup, or needed by the owner/operator for their own purposes. Monitoring wells to which this WP applies include groundwater monitoring wells, soil vapor extraction wells, recovery wells, observation wells, sparge/injection wells, and piezometers.

Administrative Rules of Montana (ARM) 36.21.810 sets forth the legal requirements for properly abandoning monitoring wells. ARM 36.21.810 is attached and may be found at the following Internet address: <http://www.mtrules.org/gateway/RuleNo.asp?RN=36.21.810>.

Return this WP to: Petroleum Tank Cleanup Section, Montana Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901. **Please note that incomplete and/or unsigned WPs will be returned** and may delay processing of claims submitted to the Petroleum Tank Release Compensation Board.

Facility Name Former Caldwell's Service Facility ID# 07-08561 Release # 1963
Facility Address 115 East Main Fort Shaw 59443
(Street) (City) (Zip)
Owner/Operator Name Justin Caldwell
Owner/Operator mailing address, if different from above: P.O.Box 211, Fort Shaw, Montana 59443

Consultant's name, address, and phone number: Air Water Soil, LLC (AWS) / 1321 8th Avenue North, Suite 104,
Great Falls, Montana 59401 / 406.315.2201

List monitoring wells by name and number to be abandoned: MW-1; MW-2; MW-3; MW-4

List monitoring wells by name and number to be maintained: None

Specify the method by which the monitoring wells will be abandoned: Well casing/screen removed from ground
(as feasible). Borings backfilled with hydrated bentonite. Surface finished to match surroundings.

Target date for abandonment of the monitoring well(s): Fall 2025

Unit cost per monitoring well for abandonment (include mobilization, Portland cement, grout or bentonite, equipment, and consultant or contractor labor costs): \$ 1,126.99 /well \$ 112.70 /ft

Total cost of abandoning the above-listed monitoring wells: \$ 4,507.94

- ☐ I elect to maintain the monitoring wells located at the above-referenced Facility and will monitor the wells at least every three years and in accordance with applicable requirements of the Montana Department of Natural Resources & Conservation Division.
- ☒ I elect to abandon the monitoring wells located at the above-referenced Facility and certify that the above-referenced monitoring wells are to be properly abandoned in accordance with the provisions ARM 36.21.810 and other applicable requirements of the Montana Department of Natural Resources & Conservation Division.

J. Scott Vosen (AWS), for Justin Caldwell
(Signature of Facility owner or operator or authorized representative)

August 25, 2025
(date)

36.21.810 ABANDONMENT

(1) Wells which have not been monitored for more than three years shall be deemed abandoned unless written permission is obtained from the board to maintain the well.

(2) Monitoring wells that have outlived their useful purpose shall be abandoned by one of the following methods:

(a) if the casing and screen are left in place, the casing and screen shall be sealed from the bottom up by the following methods:

(i) using a pump and hose or tremie pipe to conduct the sealing material to the bottom of the well; or
(ii) by filling the casing and screen with bentonite pellets or chips placed in a manner that will prevent bridging. Metal casings shall be cut off three feet below the ground surface and the last three feet backfilled with naturally occurring soils;

(b) the department recommends that the casing be removed in all possible instances. If the casing and/or screen are removed, the hole shall be filled with sealing material, concrete, or bentonite pellets or chips from the bottom up, as the casing and/or screen is removed. From six to three feet from the surface, bentonite shall be added to the well. The last three feet shall be filled with naturally occurring soils;

(c) the sealing material shall be bentonite pellets or chips, bentonite clay grout, neat cement grout, or concrete. The material may contain nonbiodegradable fluidizing admixtures, provided they will not contaminate the groundwater. Sealing materials which settle shall be topped to provide a continuous column of grout to within three feet of the surface; or

(d) other methods for abandonment with prior board approval.

(3) For flowing wells, the abandonment procedures outlined in ARM [36.21.671](#) shall apply.

(4) A properly abandoned well shall not produce water nor serve as a channel for movement of water.

(5) A water well log report, fully describing all abandonment procedures, shall be submitted to the Ground Water Information Center (GWIC) of the MBMG within 60 days of abandoning the well.

History: [37-43-202](#), MCA; [IMP](#), [37-43-202](#), MCA; [NEW](#), 1990 MAR p. 739, Eff. 4/13/90; [AMD](#), 1991 MAR p. 913, Eff. 6/14/91; [AMD](#), 1997 MAR p. 65, Eff. 1/17/97; [AMD](#), 2010 MAR p. 1614, Eff. 7/16/10.

For additional information or requirements for abandoning or maintaining monitoring wells, please contact the Montana Department of Natural Resources & Conservation, Board of Water Well Contractors at (406) 444-6643.

Well Abandonment Form (WAF) - Facility Information

This Well Abandonment Form (WAF) is used for routine abandonment of monitoring wells that no longer needed for petroleum release investigation or cleanup, and the owner/operator does not want to retain responsibility and use of wells for other purposes. Monitoring wells, to which this WAF applies, include groundwater monitoring wells, soil vapor extraction wells, recovery wells, observation wells, sparge/injection wells, and piezometers.

Administrative Rule s of Montana (ARM) 36.21.810 sets forth the legal requirements for properly abandoning monitoring wells. ARM 36.21.810 may be found at the Links of Interest page or may be found at the following internet address:

<http://www.mtrules.org/gateway/ruleno.asp?RN=36%2E21%2E810>

Submit the WAF with your corrective action plan. Please note that incomplete and/or unsigned WAFs will be returned and may delay processing of claims submitted to the Petroleum Tank Release Compensation Board.

Facility ID Number:	07-08561
Release Number:	1963
Work Plan ID Number:	35070

Facility Name:

Former Caldwell's Service

Facility Address:

115 East Main, Fort Shaw, Montana 59443

Owner/Operator Name:

Justin Caldwell

Owner/Operator Mailing Address:

P.O. Box 211, Fort Shaw, Montana 59443

Consultant's Name, Address, and Phone Number:

Air Water Soil, LLC / 1321 8th Avenue North, Suite 104, Great Falls, Montana 59401 / 406.315.2201

List monitoring wells to be abandoned (well name and number, e.g. MW1, RSW1, etc.):

MW-1, MW-2, MW-3, MW-4

List monitoring wells to be maintained (well name and number, e.g. MW1, RSW1, etc.):

None

Specify the method by which the monitoring wells will be abandoned:

Casings removed from the ground, if feasible. Borings backfilled with hydrated bentonite. Surface finished to match surroundings (e.g., soil, gravel, concrete, etc.).

Target date for abandonment of the monitoring well(s):

Fall 2025

Will the well abandonment activity be subcontracted?Yes or No **yes****Subcontractor's Name, Address, and Phone Number:**

Boland Drilling / 4701 North Star Boulevard, Great Falls, Montana 59405 / 406.761.1063

See [ARM 17.58.344\(2\)](#) for bids greater than \$2,500.00

Unit cost per monitoring well for abandonment (include portland cement, grout or bentonite, equipment, and consultant or contractor labor costs):

Cost per Well \$508.25 /wellCost per Foot \$50.83 /ft

Total cost of abandoning the above-listed monitoring wells: \$4,507.94

I elect to maintain the monitoring wells located at the above-referenced Facility and will monitor the wells at least every three years and in accordance with applicable requirements of the Montana Department of Natural Resources & Conservation Division.

Yes or No **no**

I elect to abandon the monitoring wells located at the above-referenced Facility and certify that the above-referenced monitoring wells are to be properly abandoned in accordance with the provisions ARM 36.21.810 and other applicable requirements of the Montana Department of Natural Resources & Conservation Division.

Yes or No **yes**
Quantity of Wells **4**

Signature of Facility owner, operator, or authorized representative:

J. Scott Vosen / Principal / Air Water Soil, LLC
(on behalf of Justin Caldwell)


Date:

8/25/2025

Water Required per Well - Water Available per Well	Water Required per Total Wells - Water Available per Total Wells
<i>Additional Water Required per Well</i>	<i>Additional Water Required per Total Wells</i>

Petroleum Tank Release Compensation Board

Soil Boring/Monitoring Well Installation Unit Cost Worksheet

Contractor Information

Company Name: Boland Drilling

Address: 4701 N Star Blvd

City, State, Zip: Great Falls, MT 59405

Cost Estimator: Chris Boland

Signature: 

Phone: 406-761-1063

Date: mo/day/year 8/15/2025

Project Information and Specifications

Former Caldwell's Service

115 East Main

fort Shaw, MT 59443

TID 18692

Facility ID # 07-08561

Release # 1963

WP ID # 35070

Type of Drilling Equipment

Hollow-Stem Augers

Air Rotary

Direct Push

Other (please specify)

Soil Boring

Number of Borings

Boring Diameter (inches)

Depth (per boring - ft)

Surface: Concrete Asphalt Barren

Soil Disposal: Onsite Stockpile Drums

Abandonment: Bentonite Soil Cuttings

Soil Sampling

Continuous Soil Sampling

Interval Soil Sampling (specify interval)

No Sampling

Monitoring Well Specifications

Number of Wells

Surface: Concrete Asphalt Barren

Depth (per well)

Estimated Depth to Groundwater (ft)

Boring Diameter (inches)

Casing Diameter and type (inches)

Surface Completion: Flush Mount Aboveground

Cost Estimate Explanation:

- (1) Mobilization/Demobilization: Includes all costs and mileage to transport equipment, materials, and personnel to and from the site location. More than one mobilization event of either the drilling rig or support vehicle will require justification and pre-approval by the DEQ-PRS and Board staffs. This item should be estimated on a per mile unit rate
- (2) Soil Boring Installation: Includes all costs (labor, equipment, and materials) to drill, collect soil samples and abandon soil borings, as well as decontaminate equipment. Drilling costs should be estimated using a per foot unit rate. Unit cost should include handling of contaminated soil by stockpiling or placing in drums. Assume level "C" personal protective equipment.
- (3) Monitoring Well Installation: Includes all costs (labor, equipment, and materials) to drill, collect soil samples, and complete monitoring well to specifications and according to Montana Well Drillers Board rules, as well as decontaminate equipment. Drilling costs should be estimated using a per foot unit rate. Unit cost should include handling of contaminated soil by stockpiling or placing in drums. Assume level "C" personal protective equipment.
- (4) Drilling Standby: Drilling standby should be estimated on an hourly basis. Prior approval and justification for accumulating standby time is needed prior to billing.
- (5) Well Development: Includes all costs (labor, equipment, and materials) to develop monitoring wells. This task should be estimated using a per well unit rate.
- (6) Monitoring Well Abandonment: Includes all costs (labor, equipment, and materials) to properly abandon a well location according to the Montana Well Drillers Board rules. Abandonment costs should be estimated using a per well unit rate.

Soil Boring/Monitoring Well Installation Unit Cost Worksheet

TASK		UNIT COST	NUMBER OF UNITS	TOTAL COST
Mobilization/Demobilization (1)				
Mobilization/Demobilization: Drilling Rig	\$	/mile		#VALUE!
Mobilization/Demobilization: Support Vehicle	\$	5.00 /mile	60	\$ 300.00
Soil Boring Installation (2)				
Drilling (0'-50' range per boring)	\$	/foot	0	#VALUE!
Drilling (50'-100' range per boring)		/foot		\$ -
Other (please specify) _____				\$ -
Monitoring Well Installation (3)				
Drilling (0'-50' range per well)	\$	/foot	0	#VALUE!
Drilling (50'-100' range per well)		/foot		\$ -
Other (please specify) _____				\$ -
Drilling Standby (4)				
-prior approval needed	\$	/hour		#VALUE!
Well Development (5)				
Well Development	\$150	/hour		\$ -
Monitoring Well Abandonment (6)				
Abandonment	\$	400.00 /well	4	\$ 1,600.00
Lodging may only be paid at actual costs when documented by receipts.				
Per Diem				
Lodging: number of individuals =	2	\$	/person per day	#VALUE!
Food: number of individuals =	2	\$	30.50 /person per day	\$ -
TOTAL PROJECT EXPENSE				\$1,900.00

D.O.T. Drums

\$120

Additional Conditions/Comments/Costs:

Abandon 4 monitor wells at the Former Caldwell's Service in Fort Shaw, MT

If you require assistance, call 406-841-5090.

Submit completed form to:

Petroleum Tank Release Compensation Board PO Box 200902, Helena MT 59620-0902