Public Health Division

Center for Health Protection, Drinking Water Services

Tina Kotek, Governor

December 11, 2024

Julie Mettille
julie@ambarestate.com
Ambar Estate
12550 NE Worden Hill Rd
Newberg, OR 97132

Sent by email only.

Re: PR# 154-2024 - Well #1 (L142249), pressure tank, and secondary treatment Ambar Estate (PWS ID# 95750) – a new transient non-community system Final Approval

Dear Ms. Mettille,

On November 1, 2024 our office received an "as-built" water system description, well log (YAMH58963), and land use approval information for a new wine tasting room called Ambar Estate located at 12550 NE Worden Hill Rd, Newberg, OR 97132 in Yamhill County (https://www.ambarestate.com/). Plan review #154-2024 was assigned once we received the plan review fee payment of $825 on November 14, 2024. **The submitted materials were reviewed and the water facilities serving Ambar Estate have been granted Final Approval.** Details regarding this plan review, including a pdf of this letter, can be found on our website at: https://yourwater.oregon.gov/planreview.php?pwsno=95750.

Water System ID# 95750:
The water system was assigned Public Water System ID# 41-95750, viewable online at: https://yourwater.oregon.gov/inventory.php?pwsno=95750
A "new water system" letter was emailed on November 8, 2024 (enclosed).

Water System Classification – TNC:
Serving a single home and the tasting room facilities with an average daily population of 50, the system was classified as a Transient Non-Community (TNC) water system.

Regulating Agency – Oregon Dept of Agriculture:
Ambar Estate is licensed by the Oregon Dept. of Agriculture with regulatory oversight of the water system.

Regulating Agency Contact

Agency:	ODA FOOD SAFETY PROGRAM
Contact:	Sarah Schwab
Phone:	(503) 508-6028
Email:	drinkingwater@oda.oregon.gov

New System Capacity Assessment – no deficiencies:
As part of the plan review process a new system Capacity Assessment was completed resulting in no deficiencies found. A separate letter will be issued to relay the findings.

Water Rights – Currently Not Required – Exempt Use:
The water system water usage currently falls under an Exempt Use based on usage of less than 5,000 gallons per day, which means that water rights are not required at this time. If water use exceeds 5,000 gallons per day, you should consult with Water Master Joel Plahn with the Oregon Water Resources Department.

Joel Plahn
District 22 Watermaster
Cell 503-508-2394
joel.m.plahn@water.oregon.gov

Water Facilities Approved – Well #1 (L142249), pressure tank, and treatment*:
This plan review included a review of the following previously constructed facilities:

1) Well #1 (L142249, YAMH58963) constructed on May 4, 2022 and equipped with a pitless adapter (adequately constructed into a confined aquifer). Designated "SRC-AA"
2) One 20-gallon Well Rite pressure tank (model #WR 60R); and
3) Treatment for secondary contaminants (e.g. silica) consisting of:
    a. One Pentek cartridge filter equipped with an NSF-61 compliant ECP5-20BB 5-micron cartridge filter for sediment removal.
    b. One Pentair Pentek PCC-1 phosphate water filter,
    c. One media filter containing NSF-61 AdEdge Bayoxide E33 granular ferric oxide media (designed for arsenic and heavy metals removal),
    d. One ion exchange media filter containing NSF-61 compliant ResinTech SBG2 ion exchange resin, capable of reducing alkalinity and removing nitrates and minerals like silica.
    e. One NSF-55 Class B compliant UV unit - Viqua Arros22 – S/N 240304509 with a VA22LU lamp (not credited with microbial disinfection because it is not an NSF-55 Class A UV unit).

*Distribution piping on private property falls under the jurisdiction of local plumbing code.

Well Evaluation – Adequate construction into a confined aquifer:
A well evaluation completed by our geologist, Tom Pattee, on November 18, 2024 (enclosed) found the well to be adequately constructed into a deep confined aquifer having a low susceptibility to contamination from ground-level activities.

Waivers – 2 waivers granted:

The following two plan review/construction standard waivers were requested and granted:

1) Waiver from engineered plans required under OAR 333-061-0060(1)(b) was granted.
2) Waiver from meeting the 100-ft setback for the Ambar Estate parking lot shown in Figure 1 required under OAR 333-061-0050 (2)(a)(E) was granted (enclosed).

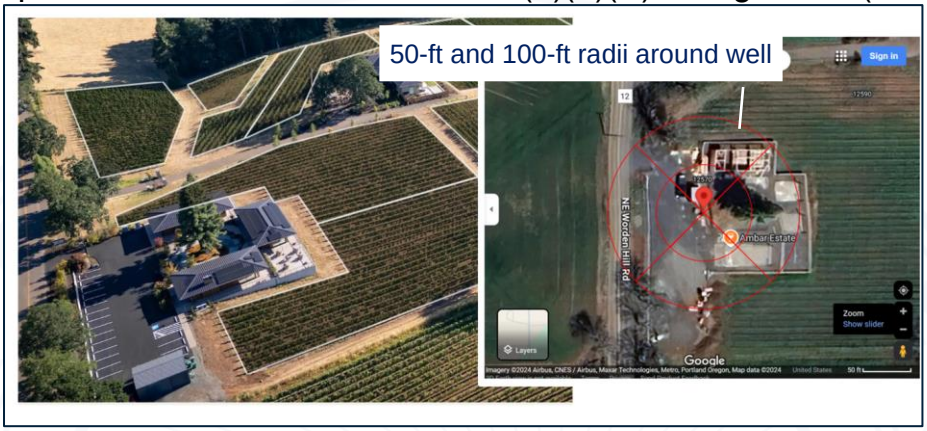


Figure 1. 100-ft setback for NE Worden Hill Road and the Ambar Estate parking lot.

Since the well is adequately constructed into a deep confined aquifer with low susceptibility to contamination from ground-level activities and NE Worden Hill Rd is bordered by an intercepting ditch, the well is deemed to be in compliance with OAR 333-061-0050(2)(a)(D), which requires wells to be located 100-ft away from roadways, unless constructed into a confined aquifer and protected from run-off and roadway spills.

OAR 333-061-0060(1)(b) and OAR 333-061-0050(2)(a)(D) and (E) are enclosed for future reference.

Ongoing monitoring required –quarterly & annual coliform bacteria and annual nitrate:

Ongoing monitoring will include the following (viewable online at the links below). The lab you previously used (Edge Analytical) is an approved lab.

1) **SRC-AA - One coliform sample taken each calendar year from the well <u>prior to treatment</u> (first sample due in 2025)**. The lab report should indicate this sample is taken at "**SRC-AA** for Well #1") and should indicate "Source Assessment" as the sample type.
2) **EP-A - One nitrate sample taken each calendar year from a point <u>immediately after treatment and at or prior to the first possible point of human consumption</u> (first sample due in 2025)**. The lab report should indicate this sample is taken at the entry point to the distribution system for Well #1 (i.e., "**EP-A**" for "Well #1"). Health effects of nitrates in drinking water are available online at: https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le-413201.pdf

3) **DIST-A - One coliform sample taken each calendar quarter from a point after treatment within the distribution system such as at a sink (first sample due prior to 12/31/24)** The lab reporting form should indicate that the sample is a "routine" sample taken of treated water in the distribution system ("**DIST-A**") and should indicate where the sample was taken such as bathroom sink or other location. Health effects of coliform bacteria in drinking water are available online at: https://www.oregon.gov/oha/PH/HealthyEnvironments/DrinkingWater/Monitoring/Documents/health/colibact.pdf

Sampling schedules are viewable on our website at the following links:
- Coliform sampling: https://yourwater.oregon.gov/schedulescoliform.php?pwsno=95750
- Nitrate sampling: https://yourwater.oregon.gov/scheduleschems.php?pwsno=95750

Again, Final Approval has been issued at this time, concluding this plan review process, and the drinking water facilities are approved for use. Thank you for your cooperation and patience in this plan review process and if you have any questions, please feel free to call me at 971-200-0288 or email me at evan.e.hofeld@oha.oregon.gov .

Sincerely,

Evan Hofeld, Regional Engineer
OHA-Drinking Water Services
evan.e.hofeld@oha.oregon.gov

CC:
- Sarah Schwab, Oregon Dept. of Agriculture, sarah.schwab@oda.oregon.gov
- Mellissa Wong, Yamhill County Public Health, wongm@yamhillcounty.gov
- Joel Plahn, Oregon Water Resources Dept., joel.m.plahn@water.oregon.gov
- Tommy Laird, Oregon Water Resources Dept., Tommy.K.Laird@water.oregon.gov

Enclosures:
- New Water System letter sent November 8, 2024.
- Well Evaluation by Tom Pattee Completed November 18, 2024.
- Oregon Administrative Rules associated with the waivers & road allowance under OAR 333-061-0060(1)(b) and OAR 333-061-0050(2)(a)(D) & (E), respectively.
- Water system description.
- Approved construction standard waiver form for the parking lot adjacent to Well #1.

New Water System Letter sent November 8, 2024

Public Health Division
Drinking Water Services
Tina Kotek, Governor

OREGON HEALTH AUTHORITY

November 8, 2024

Julie Mettille
AMBAR ESTATE
6042 Manchester Dr
Oakland, CA 94618

Re: New Water System
AMBAR ESTATE - OR4195750

Dear Julie Mettille,

Your water system, named AMBAR ESTATE, has been added to the Oregon Drinking Water Services (DWS) inventory of Public Water Systems (PWS) as a Transient Non-Community (NC) water system. Your Public Water System ID number is OR4195750. Please use this ID number in all communications involving your water system.

Please be sure that both the water system name and water system number are on any water quality reports or correspondence. Water quality testing results may be submitted in any of the following ways but Email is our preference:

- Fax the reports to (971) 673-0694
  For faxed data, please include a cover sheet with the # of pages including the cover, your name, and your phone number.
- Email the reports to: DWP.DMCE@odhsoha.oregon.gov
- Mail the reports to: Water Quality Reports
  P.O. Box 14350
  Portland, OR 97293-0350

800 NE Oregon Street, #640,Portland, OR 97232 | Voice: 971-673-04
Fax: 971-673-0694 | All relay calls accepted | www.healthoregon.org/d

You may also contact DWS in the following ways:

Overnight/after hours emergency: 503-704-1174

email: info.drinkingwater@dhsoha.state.or.us

For more information about Drinking Water Services, visit www.healthoregon.org/dwp. You can find information about your water system's sample results, monitoring schedules, and contact information by clicking the Data Online blue box at the top of the page. Search Data Online by either your water system name or ID number.

This letter is informative only and does not constitute OHA's approval to provide water. For status of plans currently being reviewed or to initiate the process, please contact the Plan Review Assistant at dws.planreview@dhsoha.state.or.us.

An annual fee is required for every public water system, based upon the type of system, number of service connections or whether treatment is present. In addition, all public water systems are required to have a written coliform sampling plan, operation and maintenance manual and emergency reponse plan.

Please direct any further questions to your regulating agency, Oregon Department of Agriculture, at 503-508-6028.

Sincerely,

Drinking Water Services

cc: Evan Hofeld, OHA,DWS
Oregon Department of Agriculture

800 NE Oregon Street, #640,Portland, OR 97232 | Voice: 971-673-0405
Fax: 971-673-0694 | All relay calls accepted | www.healthoregon.org/dws

Well Evaluation Completed by Tom Pattee on November 18, 2024

A well evaluation completed by our geologist, Tom Pattee, on November 18, 2024 found the well to be adequately constructed into a deep confined aquifer having a low susceptibility to contamination from ground-level activities as shown in his findings noted below.

Reviewed by: Tom Pattee, R. G. Date: 11/18/2024

As Built Well Construction Evaluation for Plan Review and/or Setback Waiver:

☒ Well/Spring meets current construction standards.
- ☐ WRD special construction standards, see well log or Comments.

☐ Well/Spring construction does not meet construction standards.
- ☐ Not sealed to appropriate depth. Recommended depth: _____
- ☐ Not appropriate seal materials
- ☐ Open to more than one aquifer
- ☐ Seal info missing or unknown
- ☐ Seal not constructed properly (☐ Insufficient sealant volume ☐ Insufficient annular space)

☐ Susceptible construction, but grandfathered source. Consider for reconstruction if nitrate ≥ 5mg/L or confirmed *E. coli* at source.

☐ Susceptible well construction, **not approved for use**.

Comments: This well was drilled to a depth of 360 ft. The casing and casing seal extend to a depth of 196 ft below ground level, 17 ft into a 39 ft thick unfractured sandstone layer that overlies the water-bearing zone. A narrow diameter liner has been placed in the well from 180 to 360 ft to help keep the bore hole open below the casing. Therefore, it is assumed that the well functions similar to an open hole, allowing water to enter the well along the entire length of the borehole below the casing and casing seal. Sensitivity Analysis results suggest that well construction does not contribute to overall sensitivity of this water source to nearby land use practices.

Nature of Aquifer Evaluation:

Aquifer Nature: ☒ Confined aquifer ☐ Semi-confined aquifer ☐ Unconfined aquifer

Comments: This well is designed to draw water from a deep, confined fractured sedimentary bedrock aquifer. The water-bearing zone is reported to occur between 218 and 338 ft below ground level and is overlain by 39 ft of unfractured sandstone of low permeability that acts as a confining layer. Water within the aquifer is under pressure, rising 36 ft above the identified water-bearing zone to a final static water-level of 166.5 ft below ground level. Sensitivity Analysis results suggest that the aquifer has a low sensitivity to nearby land use practices.

Construction Setback Waiver Info:

☒ Facility Profiler review for additional contamination info:
- ☒ Not applicable, Facility Profiler doesn't track releases from this type of contaminant source.
- ☐ Facility Profiler does not indicate a spill or chemical release related to the sanitary setback violation.
- ☐ Facility Profiler indicates that there **is** a spill or chemical release related to the sanitary setback violation.

Comments and/or suggested "alternate measures" that could be considered for a Waiver from Construction Standards Request: A parking lot is present with the sanitary setback for this well. However, the well is adequately constructed into a deep confined fractured bedrock aquifer. Sensitivity Analsysis results suggest that the well construction and aquifer characteristics have a low sensitivity to local land use practices that occur within the sanitary setback.

Oregon Administrative Rules associated with the waivers & allowance granted for plan review requirements and construction standards under OAR 333-061-0060(1)(b) and OAR 333-061-0050(2)(a)(D) & (E), respectively.

333-061-0060
Plan Submission and Review Requirements

(1) Plan Submission:
  (a) Construction and installation plans shall be submitted to and approved by the Authority before construction begins on new systems or major additions or modifications, as determined by the Authority, are made to existing systems. Plans shall be drawn to scale;
  (b) Preliminary plans, pilot studies, master plans and construction plans shall be prepared by a Professional Engineer registered in Oregon, and submitted to the Authority unless exempted by the Authority (See OAR 333-061-0060(4));

333-061-0050
Construction Standards

(2) Groundwater:
  (a) Wells:
    (A) …
    (D) Public or private roadways may be allowed within 100 feet of a confined well, provided the well is protected against contamination from surface runoff or hazardous liquids which may be spilled on the roadway and is protected from unauthorized access;
    (E) The following sanitary hazards are not allowed within 100 feet of a well which serves a public water system unless waived by the Authority: any existing or proposed pit privy, subsurface sewage disposal drain field; cesspool; solid waste disposal site; pressure sewer line; buried fuel storage tank; animal yard, feedlot or animal waste storage; untreated storm water or gray water disposal; chemical (including solvents, pesticides and fertilizers) storage, usage or application; fuel transfer or storage; mineral resource extraction, vehicle or machinery maintenance or long term storage; junk/auto/scrap yard; cemetery; unapproved well; well that has not been properly abandoned or of unknown or suspect construction; source of pathogenic organisms or any other similar public health hazards. No gravity sewer line or septic tank shall be permitted within 50 feet of a well which serves a public water system. Clearances greater than indicated above shall be provided when it is determined by the Authority that the aquifer sensitivity and degree of hazard require a greater degree of protection. Above-ground fuel storage tanks provided for emergency water pumping equipment may be exempted from this requirement by the Authority provided that a secondary containment system is in place that will accommodate 110 percent of the fuel tank storage.

Note: *parking lots are considered long term vehicle storage because even though the same vehicles are not stored there, the parking spaces are anticipated to have vehicles parked in them a significant part of every year of operation.*

Water System Description

The water system primarily serves a new wine tasting room called Ambar Estate located at 12550 NE Worden Hill Rd, Newberg, OR 97132 in Yamhill County (https://www.ambarestate.com/).

The system is considered a transient non-community system based on the system serving two connections, year-round, with an average daily population of 50 users, five of which are employees, two residents, and other users would be guests from the public.

Source information, treatment, and a system schematic are shown below.

OR41 95750 **AMBAR ESTATE** **Classification**: TRANSIENT NON-COMMUNITY

Contact: JULIE METTILLE
6042 MANCHESTER DR
OAKLAND, CA 94618

Phone: 443-567-2441
County: YAMHILL
Activity Status: Nov 08, 2024 -- History
Population: 50
Number of Connections: 1
Operating Period: January 1 to December 31
Regulating Agency: DEPT OF AGRICULTURE
Certified Operator(s)
Owner Type: PRIVATE
Required: (PWS inactive)
Licensed By: Dept. of Ag
Distribution class: None
Last Survey Date: NONE
Treatment class: None
Filtration Endorsement Required: No
Source Water Protection Status

Sources

Facility ID	Facility Name - Well Logs	Activity Status	Availability	Source Type
EP-A	EP FOR WELL	A	Permanent	GW
SRC-AA	WELL #1 - L142249	A	Permanent	GW

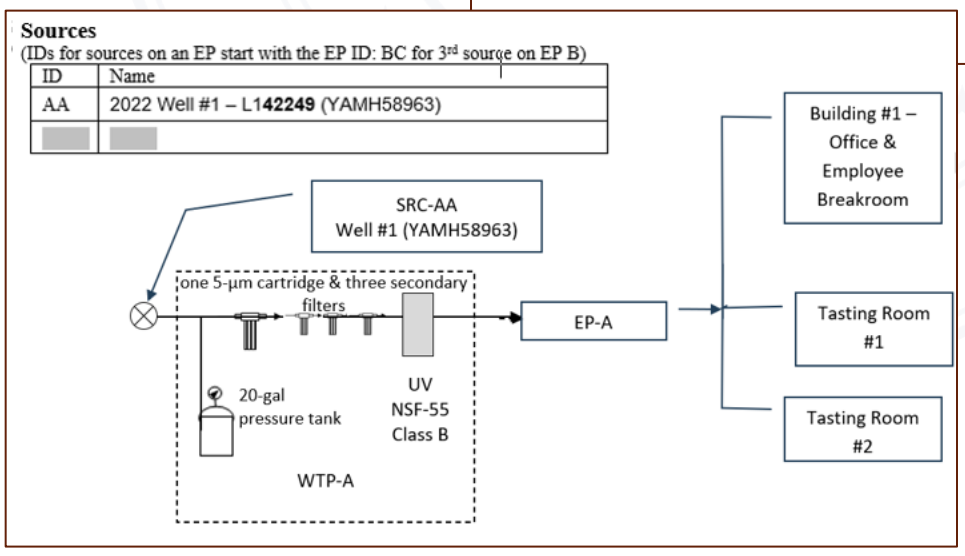
Find Purchasers/Sellers

Treatment

Facility ID	Facility Name	Filter Type	Giardia Removal Credit	Treatment Process	Treatment Objective
WTP-A	TP FOR WELL			GROUNDWATER FILTER/STRAINER	OTHER
				ION EXCHANGE	IRON REMOVAL
				ULTRAVIOLET RADIATION	OTHER

Sources
(IDs for sources on an EP start with the EP ID: BC for 3rd source on EP B)

ID	Name
AA	2022 Well #1 – L142249 (YAMH58963)

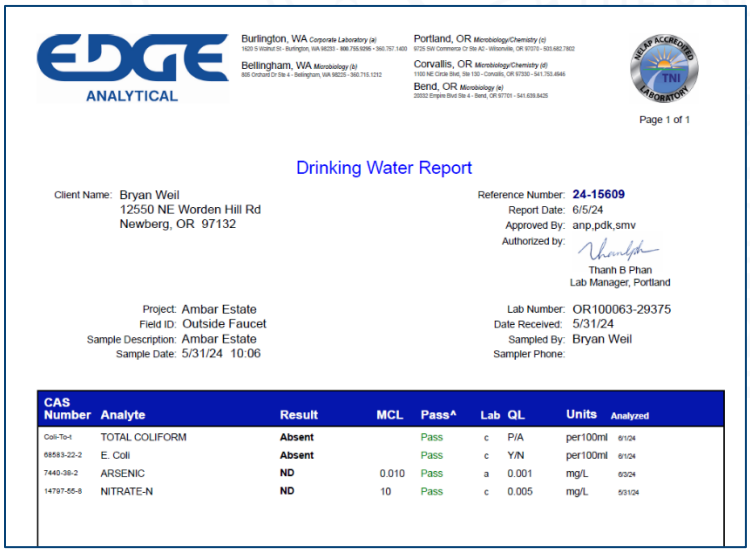


Distance between Well and Septic is 200 feet

The water lines run from the well head to the HVAC room which is the building directly to the left of the well. That's where the water treatment is. It then goes through a series of filters and then UV treatment. Below is a list of the filters with photos below that. From there it runs parallel with the building to the bathrooms. The water line is a 1 inch PEX line.

List of filtration:

- 5-Micron Cartridge Filter, SBG-2 Resin Filter, Bayoxide Media Filter, Phosphate Cartridge Filter



EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
Bellingham, WA Microbiology (b)
Portland, OR Microbiology/Chemistry (c)
Corvallis, OR Microbiology/Chemistry (d)
Bend, OR Microbiology (e)

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Drinking Water Report

Client Name: Bryan Weil
12550 NE Worden Hill Rd
Newberg, OR 97132

Reference Number: 24-15609
Report Date: 6/5/24
Approved By: anp,pdk,smv
Authorized by:
Thanh B Phan
Lab Manager, Portland

Project: Ambar Estate
Field ID: Outside Faucet
Sample Description: Ambar Estate
Sample Date: 5/31/24 10:06

Lab Number: OR100063-29375
Date Received: 5/31/24
Sampled By: Bryan Weil
Sampler Phone:

CAS Number	Analyte	Result	MCL	Pass^	Lab	QL	Units	Analyzed
Coli-Tot-t	TOTAL COLIFORM	Absent		Pass	c	P/A	per100ml	6/1/24
68583-22-2	E. Coli	Absent		Pass	c	Y/N	per100ml	6/1/24
7440-38-2	ARSENIC	ND	0.010	Pass	a	0.001	mg/L	6/3/24
14797-55-8	NITRATE-N	ND	10	Pass	c	0.005	mg/L	5/31/24

Well #1 (L142249, YAMH58963) pitless adapter well constructed on May 4, 2022

Well head

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.545 & 537.765 and OAR 690-205-0210)

YAMH 58963
5/9/2022

Page 1 of 3

WELL I.D. LABEL# L 142249
START CARD # 1056448
ORIGINAL LOG #

(1) LAND OWNER
Owner Well I.D.
First Name Last Name
Company AMBAR LLC
Address 6042 MANCHESTER DR
City OAKLAND State CA Zip 94618

(2) TYPE OF WORK ☒ New Well ☐ Deepening ☐ Conversion ☐ Alteration (complete 2a & 10) ☐ Abandonment (complete 5a)

(2a) PRE-ALTERATION
Casing: Dia + From To Gauge Stl Plstc Wld Thrd
Seal: Material From To Amt sacks/lbs

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud ☐ Reverse Rotary ☐ Other

(4) PROPOSED USE
☐ Domestic ☐ Irrigation ☐ Community ☐ Industrial/ Commercial ☐ Livestock ☐ Dewatering ☐ Thermal ☐ Injection ☒ Other WINE TASTING ROOM

(5) BORE HOLE CONSTRUCTION
Special Standard ☐ (Attach copy)
Depth of Completed Well 360.00 ft.

BORE HOLE Dia	From	To
10	0	196
6	196	360

SEAL Material	From	To	Amt	sacks/lbs
Bentonite Chips	0	196	77	S
		Calculated	70	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other POURED-PROBED-HYDRATE
Backfill placed from ft. to ft. Material
Filter pack from ft. to ft. Material Size
Explosives used: ☐ Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE
Proposed Amount Actual Amount

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
●		6	☒	1	196	.250	●		☒	
	●	4.5	☐	180	360	sch 40		●		☒

Shoe ☐ Inside ☒ Outside ☐ Other Location of shoe(s) 196
Temp casing ☒ Yes Dia 10 From +☐ 0 To 7

(7) PERFORATIONS/SCREENS
Perforations Method
Screens Type slotted Material PVC

Perf/ Screen	Casing/ Liner	Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size
Screen	Liner	4.5	220	240	.032			4.5
Screen	Liner	4.5	280	300	.032			4.5
Screen	Liner	4.5	340	360	.032			4.5

(8) WELL TESTS: Minimum testing time is 1 hour
○ Pump ○ Bailer ● Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
61		358	1

Temperature 54 °F Lab analysis ☐ Yes By
Water quality concerns? ☐ Yes (describe below) TDS amount 189 ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)
County YAMHILL Twp 3.00 S N/S Range 3.00 W E/W WM
Sec 16 NE 1/4 of the SW 1/4 Tax Lot 1300
Tax Map Number Lot
Lat ° ' " or 45.30685500 DMS or DD
Long ° ' " or -123.06812200 DMS or DD
● Street address of well ○ Nearest address
12590 NE WORDEN HILL ROAD NEWBERG, OR 97132

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration				
Completed Well	5/3/2022			166.5

Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES Depth water was first found 178.00

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
5/2/2022	178	179	4.2			166.5
5/2/2022	218	338	61			166.5

(11) WELL LOG Ground Elevation

Material	From	To
top soil	0	1
clay brwn	1	12
clay reddish brwn sticky	12	38
shale gray	38	89
sandstone gray fine grain	89	128
shale gray	128	158
sandstone gray	158	247
shale gray	247	318
sandstone gray	318	338
shale gray/blue soft	338	360

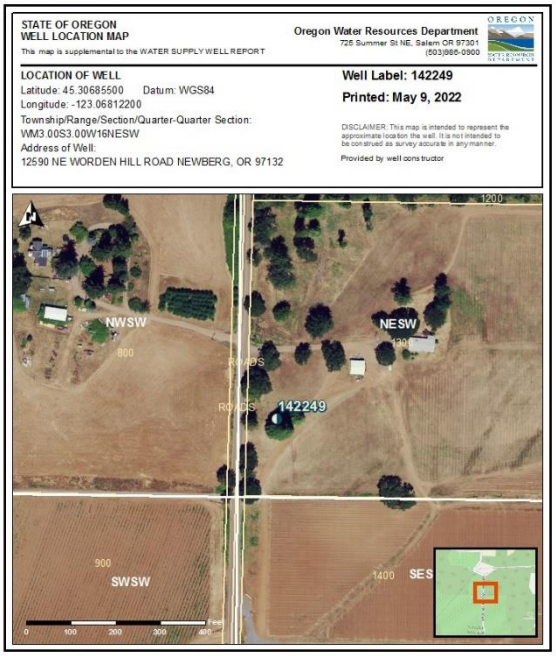
Comments/Remarks
4.5" x 5" PVC bell reducer on top of liner

Date Started 3/29/2022 Completed 5/4/2022

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
License Number 806 Date 5/9/2022
Signed DAVID DONNELLY (E-filed)

(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
License Number 1483 Date 5/9/2022
Signed JOHN STADELI (E-filed)
Contact Info (optional) Arrow Drilling 503-538-4422

ORIGINAL - WATER RESOURCES DEPARTMENT



Treatment System

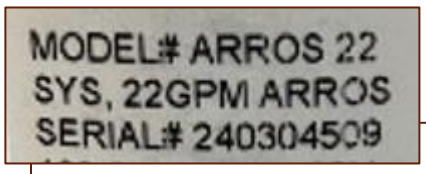
Full view of filtration

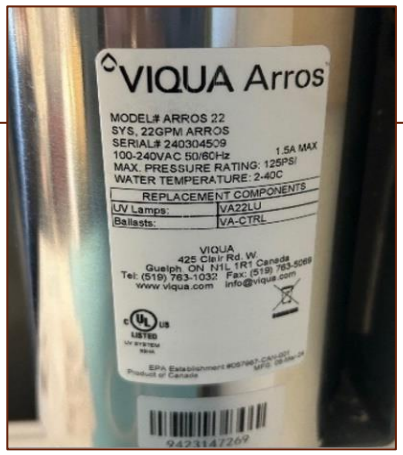
Water enters building to pressure tank. Make: Well-rite Model: WR60R

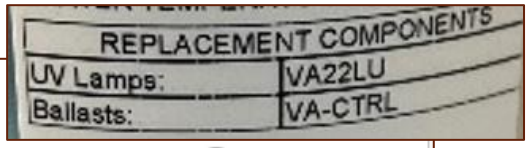
Gallon Size: 20 gallon

First filter

Series of three filters







Specifications

The Arros UV systems (-V models) inactivate heterotrophs, *Escherichia coli (E. coli)*, and fecal coliform.

	Arros 9-V	Arros 15-V	Arros 22-V
Flow rates* (@ 70% UVT)			
NSF Class B Certified 16mJ/cm²	6.4 gpm (30 lpm); 1.45 m³/hr	9.4 gpm (49.2 lpm); 2.13 m³/hr	12.9 gpm (70.0 lpm); 2.93 m³/hr
Dimensions			
Chamber	11.2 in. x 4.0 in. (28.4 cm x 10.16 cm)	16.5 in. x 4.0 in. (42.0 cm x 10.16 cm)	22.5 in. x 4.0 in. (57.2 cm x 10.16 cm)
Controller	10.5 in. x 5.0 in. x 6.5 in. (26.67 cm x 12.7 cm x 16.51 cm)		
Inlet and outlet port size	Combo: 1 in. MNPT, 3/4 in. FNPT		
Shipping weight	12 lbs (5.44 kg)	15 lbs (6.8 kg)	18 lbs (8.16 kg)
Electrical			
Voltage	100–240V (50/60 Hz)		
Max current	1.5 A		
Power consumption	33W	46W	60W
Lamp watts	25W	38W	52W
Maximum operating pressure	125 psi (8.62 bar)		
Ambient water temperature	2-40°C (36-104°F)		
Features			
Lamp type	High output	High output	High output
Display	LCD touchscreen	LCD touchscreen	LCD touchscreen
Lamp unit replacement reminder	Y	Y	Y
Visual lamp life	Y	Y	Y
True lamp running time	Y	Y	Y
System total running time	Y	Y	Y
Chamber material	304 stainless steel	304 stainless steel	304 stainless steel

* Flow rates based on end of lamp life.

Replacement parts†

VA09LU: UV lamp for Arros 9-V	**FRSS-A15:** flow restrictor for Arros 15-V
VA15LU: UV lamp for Arros 15-V	**FRSS-A22:** flow restrictor for Arros 22-V
VA22LU: UV lamp for Arros 22-V	**411111-R:** drain plug for all Arros systems
VA-CTRL: controller for all Arros systems	**411173-R:** lamp head O-ring for all Arros systems
FRSS-A9: flow restrictor for Arros 9-V	**41138-R:** drain plug O-ring for all Arros systems

† Only VIQUA components ensure full functioning of the Arros UV system. Failure to use a VIQUA lamp will result in an ongoing fault mode and impair accurate lamp-life tracking. For a complete list of replacement parts, reference the system's instruction manual or visit VIQUA.com.

Water quality parameters

Hardness	Iron	Tannins
< 7 grains (120 mg/L)	< 0.3 mg/L	< 0.1 mg/L

To learn more about the VIQUA Arros family and the efficacy of its UV treatment systems, visit VIQUA.com

425 Clair Rd. W, Guelph, Ontario, Canada N1L 1R1 • 1.800.265.7246 (US/CAN) • +31.73.747.0144 (EUR) • VIQUA.com

VIQUA.

RESINTECH® SBG2

PHYSICAL PROPERTIES

Polymer Structure	Styrene cross-linked with DVB
Functional Group	$R^-N^-(CH_3)_2\ C_2H_5OH^+\ X^-$
Ionic Form, as shipped	Chloride
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 2 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	0 to 14
Sphericity	> 93 Percent
Uniformity Coefficient	Approx. 1.7
Water Retention Cl Form	37 to 45percent
Solubility	Insoluble
Approximate Shipping Weights	
Chloride Form	44lbs/cu.ft.
Hydroxide Form	41lbs/cu.ft.
Swelling... Cl– to OH– Form	10 to 15 percent
Total Capacity	> 1.45 meq / mL

RESINTECH SBG2 | ANION EXCHANGE RESIN TYPE TWO GEL Cl OR OH FORM

RESINTECH SBG2 is a high capacity, gelular, Type Two strongly basic anion exchange resin supplied in the chloride form as moist, tough, uniform spherical beads. It provides superior regeneration efficiency and greater resistance to organic fouling than Type One strongly basic anion exchange resins. *RESINTECH SBG2* is intended for use in all types of dealkalization, deionization and chemical processing applications.

FEATURES & BENEFITS

- **HIGH OPERATING CAPACITY**
  The high regeneration efficiency of ResinTech SBG2 equates to higher throughputs per pound of regenerant chemical.
- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS**
  Conforms to paragraph 21 CFR173.25 of the Food Additives Regulations of the F.D.A.*
- **NSF/ANSI 61 CERTIFIED FOR MATERIAL SAFETY**
  WQA Gold Seal Certified when ordered as SBG2-HP
- **SUPERIOR PHYSICAL STABILITY**
  93% plus sphericity combined with high crush strengths and uniform particle size provide greater resistance to bead breakage. This results in longer resin life and lower pressure drop.
- **ORGANIC FOULING RESISTANCE**
  Type Two exchange functionality provides a dramatic increase in resistance to organic fouling compared to other types of strongly anion exchangers.

* For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance with extractable levels.

SPEC SHEET

AdEdge water technologies

Bayoxide E33 GRANULAR FERRIC OXIDE MEDIA

For Arsenic and Heavy Metals Removal

AdEdge Water Technologies, LLC's E33 media is the industry standard for arsenic and heavy metals reduction for potable water applications. This media reduces up to 99% of total arsenic, including both arsenic (III) and arsenic (V). It is also effective in reducing other heavy metals such as lead, antimony, and others. This high performing iron-based granular adsorption media is the standard in the industry showing consistently higher capacities than other commercially available adsorption media.

AdEdge's product is ideal for integrated water system solution for drinking water, industrial, commercial, and remediation installations to meet the United States Environmental Protection Agency's maximum contaminant level of 10 ppb. Developed in the mid-nineties, this ferric oxide-based (GFO) product has been successfully used in hundreds of installations around the globe. It is the premier product of choice for commercial water systems for the reliable, cost-effective, proven reduction of arsenic.

FEATURES & BENEFITS

Removal up to 99% of total arsenic in water including As (III) and As (V)	Effective over broad water chemistry
Simple application for drinking water and commercial installations	2 - 2.5 times lighter than other iron-based media
Arsenic is not released or discharged in backwash water	Reliable performance, low maintenance
Adaptable add-on to existing equipment	Effective for the removal of antimony, lead and other heavy metals
Imparts no harmful chemicals into the treated product water	No salt or regeneration needed

Example of E33 Granular Ferric Oxide media

NSF/ANSI 61
Drinking Water System Components - Health Effects

NOTE: Unless otherwise indicated for Materials, Certification is only for the Water Contact Material shown in the Listing. Click here for a list of Abbreviations used in these Listings. Click here for the definitions of Water Contact Temperatures denoted in these Listings.

Lanxess AG
Rheinuferstrasse 7-9
Building 54
Krefeld, 47812
Germany
49 2151 88 3790
Visit this company's website (http://www.bayer-ls.com/ls/lswebcms.nsf/id/021125_EN)

(http://www.bayer-ls.com/ls/lswebcms.nsf/id/021125_EN)

Facility : Krefeld, Germany

Process Media

Trade Designation	Size	Water Contact Temp	Water Contact Material
Adsorption Media[1]			
Bayoxide E33	.3 mm - 2 mm	CLD 23	FEOH

NSF-61 compliant Well-Rite Model (WR60R) 20-gallon pressure tank

Contractor: _____

Description

Well-Rite (WR) series tanks are diaphragm type pre-charged hydro-pneumatic tanks designed for residential and commercial water wells, pressure booster, irrigation and reverse osmosis systems.

Materials of Construction

Shell: Drawn steel w/ epoxy finish

Diaphragm: Butyl rubber w/ copolymer polypropylene lower water chamber

Connection: Stainless steel

Ratings

Max. Working Pressure: 125 PSI
Max. Working Temp: 140 F
Pre-Charge (adjustable): 38 PSI

NSF/ANSI 61
NSF/ANSI 372

Tank Specifications

Model	Diameter (inches)	Height (inches)	System Connection (inches)	Volume (gallons)	Drawdown (gallons)			Weight (lbs)
					20/40	30/50	40/60	
WR 45	16	22	1	14	5.6	4.8	4.1	28
WR 60	16	29	1	20	8.1	6.8	5.9	36
WR 80	16	34.5	1	26	10.5	8.9	7.7	41
WR 100	21	27.75	1 ¼	32	12.9	10.9	9.4	54
WR 120	16	42.75	1	33.4	13.3	11.3	9.7	49
WR 140	21	36.25	1 ¼	44	17.7	15.0	13.0	67
WR 200	21	48	1 ¼	62	25.0	21.1	18.3	82
WR 240	21	62	1 ¼	81	32.6	27.6	23.9	99
WR 260	26	44.5	1 ¼	85	34.3	29.0	25.1	121
WR 360	26	59.75	1 ¼	119	48.0	40.6	35.1	153

FLEXCON INDUSTRIES
A Swan Group Company

Public Health Division – Drinking Water Services
Kate Brown, Governor

Oregon Health Authority

Application for Waiver from Construction Standards for Public Water Systems

Water System Name Ambar Estate PWS ID 95750
Project or Facility Well #1 (L142249) County Yamhill
Need for waiver identified: ☐ Water System Survey Date of Survey
☒ Plan Review # 154-2024

Construction standard requested to be waived: OAR 333-061-0050 (2)(a)(D) & (E) regarding 100-ft setback from roadway and parking lot.

As provided under OAR 333-061-0055, the Department may grant waivers from the construction standards prescribed by these rules:

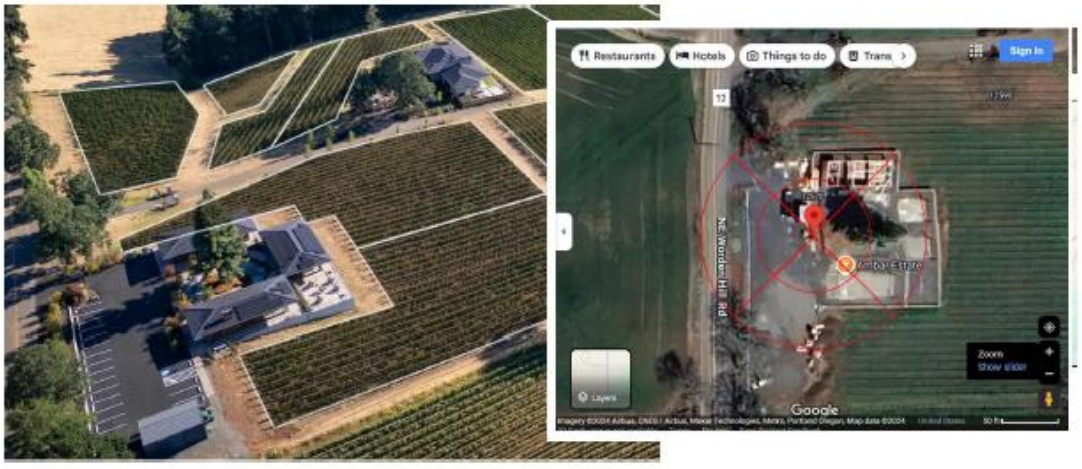
(a) When it is demonstrated to the satisfaction of the Department that strict compliance with the rule would be highly burdensome or impractical due to special conditions or causes; and

(b) When the public or private interest in the granting of the waiver is found by the Department to clearly outweigh the interest of the application of uniform rules; and

(c) When alternate measures are provided which, in the opinion of the Department, will provide adequate protection to the health and safety of the public including the ability to produce water which does not exceed the maximum contaminant levels listed in rule 333-061-0030.

Describe situation that conflicts with the standard.

As shown in the map below, within the 50- and 100-ft radii around the wellhead are NE Worden Hill Rd, which is is a public roadway within 100-ft of the well (L142249) and a parking lot owned by Ambar Estate, which is less than 50-ft away from the wellhead. No other hazards are within 100-ft of the wellhead.



Describe why meeting the standard is highly burdensome or impractical.

- The roadway, parking lot, and well are already constructed and approved by Yamhill County.

Describe proposed alternate measure that provide adequate protection to public health and safety.

- The well evaluation completed by Tom Pattee found the well to be adequately constructed into a deep confined aquifer with both the well construction and aquifer deemed to have a low susceptibility to contamination from nearby land-use practices.
- Any oil, gas, etc. spills on the public roadway or driveway would be contained by various physical barriers and grading away from the well. The public roadway has an intercepting ditch on either side of it and the driveway has curbing. Landscaping around the well is also sloped down towards the parking lot.

Attach plans of proposed waiver request or additional supporting information and
- Email your regulator; or
- Email dws.planreview@dhsoha.state.or.us; or
- Mail:
  Oregon Health Authority
  Drinking Water Services #640
  PO Box 14450
  Portland, OR 97293-0450

Julie Mettille

Signature

11/22/2024
Date

Name Julie Mettille
Address 12550 NE Worden Hill Road
City/State/Zip Newberg, OR 97132
Telephone Number

X
Julie Mettille

☐ Comments:
☐ Attachments:

800 NE OREGON ST.
PO BOX 14450
PORTLAND, OR 97293-0450
(971) 673-0405
healthoregon.org/pwsplanreview

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Rev 1/202

OHA Use Only

Waiver ID 507-2024

Entered into waiver database ☒

☒ Plan Review Coordinator's notes: 0050(2)(a)(D) is allowed under rule, so this waiver form is being evaluated only for 0050(2)(a)E. Well is properly constructed in a confined aquifer with low susceptibility.

After due consideration the above requested waiver from the construction standards of OAR 333-061-0050 is hereby:

☒ Approved Comments:

☐ Denied

Kari Sadis

12/11/2024

Drinking Water Regional Manager Signature
Oregon Health Authority

Date

Waiver database updated ☒

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