

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-18069
Exam Date: 09/28/2021

1. Current Owner:
C & K LEASING 3110 N GOVERNMENT WAY COEUR D'ALENE ID 83815-3756
2. Accompanied by: Jason Peterson
Phone No: 208-762-0235
Address: same as above
Relationship to permit Holder: Representative

3. SOURCE: GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-8921	GROUNDWATER	IRRIGATION, COMMERCIAL, DOMESTIC	DECREED
95-8941	GROUNDWATER	DOMESTIC, IRRIGATION	DECREED

Comments: Decreed right 95-8921 is owned by the same applicant, uses the same water source, and has a commercial POU that overlaps this right's commercial POU. Condition X35 was added during licensing review to mitigate overlap concerns. Decreed right 95-8941 is for Stepping Stones HOA which previously owned the two parcels this permit's POU includes. Due to no development on the two parcels for uses covered under 95-8941 prior to the land being repurposed by new owners, there is no concern for overlap between 95-8941 and this right.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-8921	GROUNDWATER	IRRIGATION, COMMERCIAL, DOMESTIC	DECREED

Comments: Right 95-8921 and this right share the same POD.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NW¼ NE¼, Sec. 34, Twp 52N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS; POD located at -116°49.080, 47°48.998 well 95-95-N-059

PLACE OF USE: IRRIGATION

[illegible]

Total Acres: 2.2

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
52N	04W	34			X														

Method of Determination: field examination and Arcmap aerial imagery.

3.

☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.
☒ Indicate weir size/pipe as applicable.

☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
95-95-N-059		7.5	Variable Freq Drive		

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET						

2. Measurements: Three 5-gal bucket tests were completed from a frost-free hydrant co-located with the well, with the average of three resulting in a diversion rate of 5 gal / 6.84 sec x 60 sec/min = 43.86 gpm = **0.10 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 6.60 sec) x 60 sec/min = 45.45 gpm
 = (5 gal / 7.09 sec) x 60 sec/min = 42.31 gpm
 = (5 gal / 6.84 sec) x 60 sec/min = 43.86 gpm

Average of 3ea 5-GAL Bucket Tests = (45.45 gpm + 42.31 gpm + 43.86 gpm) / 3 = 43.87 gpm = 0.10 cfs considering department rounding standards

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.2 \text{ ac} \times 3.0 \text{ afa} = 6.6 \text{ af}$

$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.07 \text{ cfs} \times 246\text{-day} \times 1.9835 = 34.2 \text{ af}$

$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{6.6 \text{ af}}$

2. Volume Calculations for Other Uses: Commercial annual volume =

- 19ea 4,000 gal truck filled daily
- 6 days per week operations
- 214 day season of use (1-Apr through 31-Oct), 214-day / 7 day week = 31 days and 214 – 31 = 186 days truck filling operations.
- 186 days x 19 trucks per day = 3,534 trucks per season x 4,000 gal per truck = 14,136,000 gal annually commercial use
- 14,136,000 gal annually / 325,850 gal per af = 43.4 af
- 43.4 af commercial use (95-18069) – 20.7 af commercial use (95-8921 overlap) = **22.7 af** total for commercial use.

Maximum diversion volume = 6.6 af (irrigation use) + 22.7 af (commercial use) = **29.3 af**

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/28/2021 with the applicant's representative, Jason Peterson, showed a groundwater well being used for irrigation and commercial use at a gravel pit operation. At the POD, well 95-95-N-059 has a 7.5 hp VFD pump motor installed. Three 5-gal bucket tests were completed from a frost-free hydrant co-located with the well, with the average of three resulting in a diversion rate of 5 gal / 6.84 sec x 60 sec/min = 43.86 gpm = **0.10 cfs**, considering department rounding standards which is recommended for licensing purposes. The applicant has an existing right 95-8921 which uses the same infrastructure & POD, but was license approved for 0.12 cfs. Condition F06 and X35 were included during licensing review and describes the overlap and designates the combined diversion rate shall not exceed 0.12 cfs between the two rights.

From the well head, a service line routes directly to a 30,000-gal storage tank prior to distribution to uses. A 15 HP Baldor pump/motor drafts water from the storage tank that feed irrigation pipelines that route around the eastern & southern border of the POU, for domestic use covered under right 95-8921, and to a co-located "J" hook water truck filling station & fire hydrant – both used for commercial use by the applicant.

During the exam, the irrigation POU was walked and sketched out on field maps. During licensing review Arcmap aerial imagery was used to trace out the irrigation POU which equals 2.2 acres of buffer zone land on the eastern and southern perimeter of the applicant's property. There is a common irrigation main line that serves both 95-8921 and this permit, but there is no overlap between the irrigation POUs. The irrigation system incorporates pressurized sprinklers and control boxes at intervals around the perimeter, with irrigation occurring by station at timed intervals during the season of use. The annual volume recommended for licensing the irrigation beneficial use equals 2.2 ac x 3.0 afa = **6.6 af**.

The commercial POU identified during the field exam includes the gravel pit operations located in the SW¼NE¼, Section 34 as permit approved, but also includes the truck filling station located in the NW corner of the applicant's property located in the NW¼NE¼, Section 34. During licensing review an Application for Amendment was mailed to the applicant on 1/11/2022 in order to add the commercial use occurring in the NW¼NE¼, Section 34, Township 52 North, Range 04 West. The amendment was received back at the Department on 1/25/2022. Arcmap aerial imagery was used to trace out the commercial POU which includes the entirety of the gravel pit operations following the amendment. A large percentage of water truck fills distribute their loads off site from the gravel pit, and water truck use at the gravel pit is for dust abatement. The water truck fill station is the only commercial use by the applicants from the water system.

The annual volume for commercial use is influenced by two water rights, prior right 95-8921 & this permit 95-18069. In performing calculations, the commercial use volume associated with 95-8921 (20.7 af) was subtracted from the total commercial volume derived as part of the field exam for 95-18069. Commercial annual volume recommended as follows:

- 19ea 4,000 gal truck filled daily
- 6 days per week operations
- 214 day season of use (1-Apr through 31-Oct), 214-day / 7 day week = 31 days and 214 – 31 = 186 days truck filling operations.
- 186 days x 19 trucks per day = 3,534 trucks per season x 4,000 gal per truck = 14,136,000 gal annually commercial use
- 14,136,000 gal annually / 325,850 gal per af = 43.4 af
- 43.4 af commercial use (95-18069) – 20.7 af commercial use (95-8921 overlap) = **22.7 af** total for commercial use.

The maximum diversion volume recommended for licensing equals 6.6 af (irrigation use) + 22.7 af (commercial use) = **29.3 af**.

Condition 046 was removed from the permit during licensing review. A text condition was revised accurately describing the commercial use for the gravel pit operation. Condition X35 was added during licensing review to mitigate overlap concerns between 95-8921 & 95-18069 as described below. All other conditions on the permit shall be carried to licensing. Overlap concerns: Decreed right 95-8921 is owned by the same applicant, uses the same water source, and has a commercial POU that overlaps this right's commercial POU. Condition X35 was added during licensing review to mitigate overlap concerns. Decreed right 95-8941 is for Stepping Stones HOA which previously owned the two parcels this permit's POU includes. Due to no development on the two parcels for uses covered under 95-8941 prior to the land being repurposed by new owners, there is no concern for overlap between 95-8941 and this right. There are no further overlap concerns for this water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

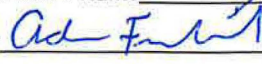
<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	03/15 to 11/15	0.07 CFS	6.6 AF
COMMERCIAL	01/01 to 12/31	0.10 CFS	22.7 AF
<u>Totals:</u>		0.10 CFS	29.3 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ None

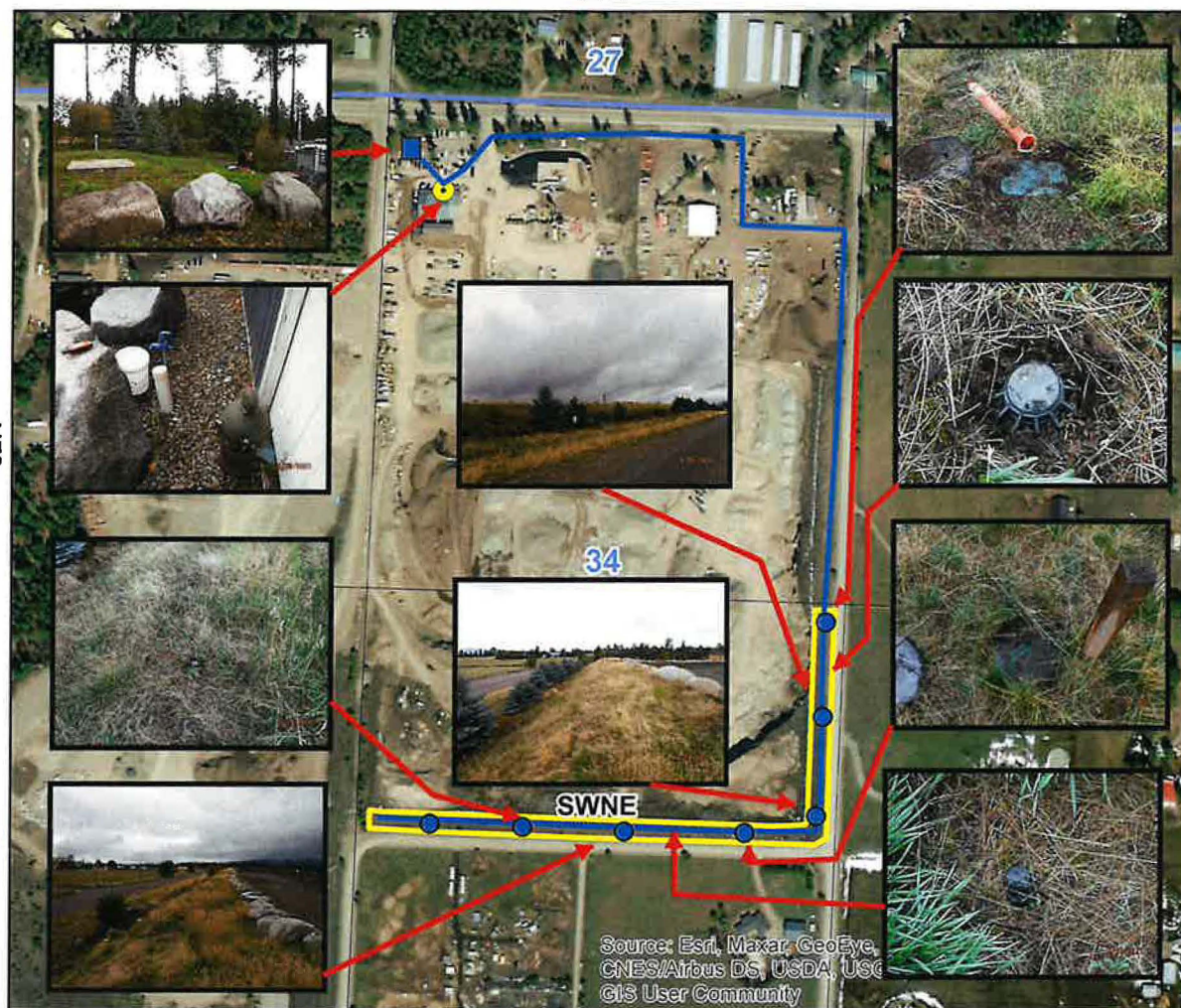
I. AUTHENTICATION

Luke Bates -

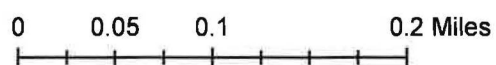
Field Examiner's Name  Date 2/10/2022
 Reviewer  Date 2/11/2022

IRRIGATION system diagram.

52N



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters



State of Idaho
Department of Water Resources
Attachment to Field Exam
95-18069

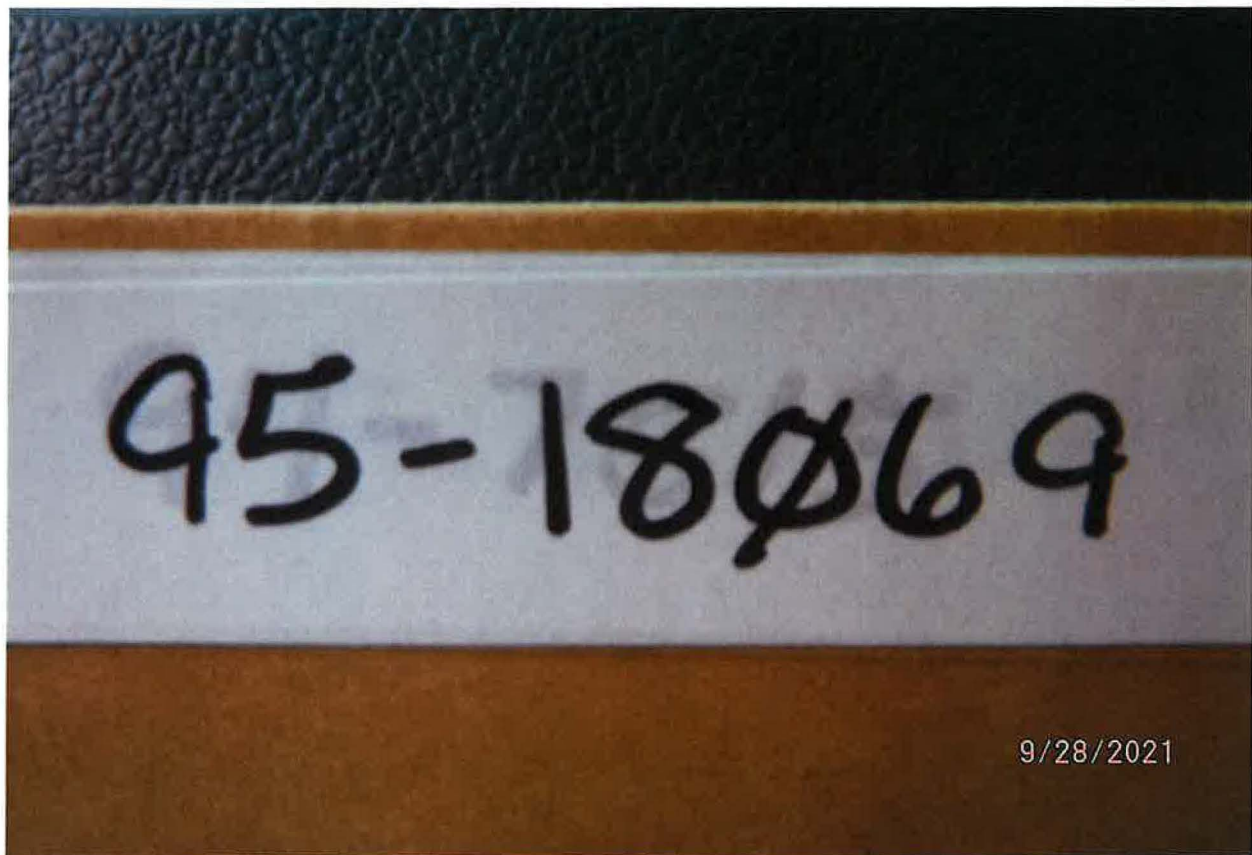
COMMERCIAL system diagram.



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.05 0.1 0.2 Miles





FIELD EXAM DATE 9/28/2021



POD – GROUNDWATER WELL 95-95-N-059 (NO D-TAG) WITH 7.5 HP VFD PUMP MOTOR



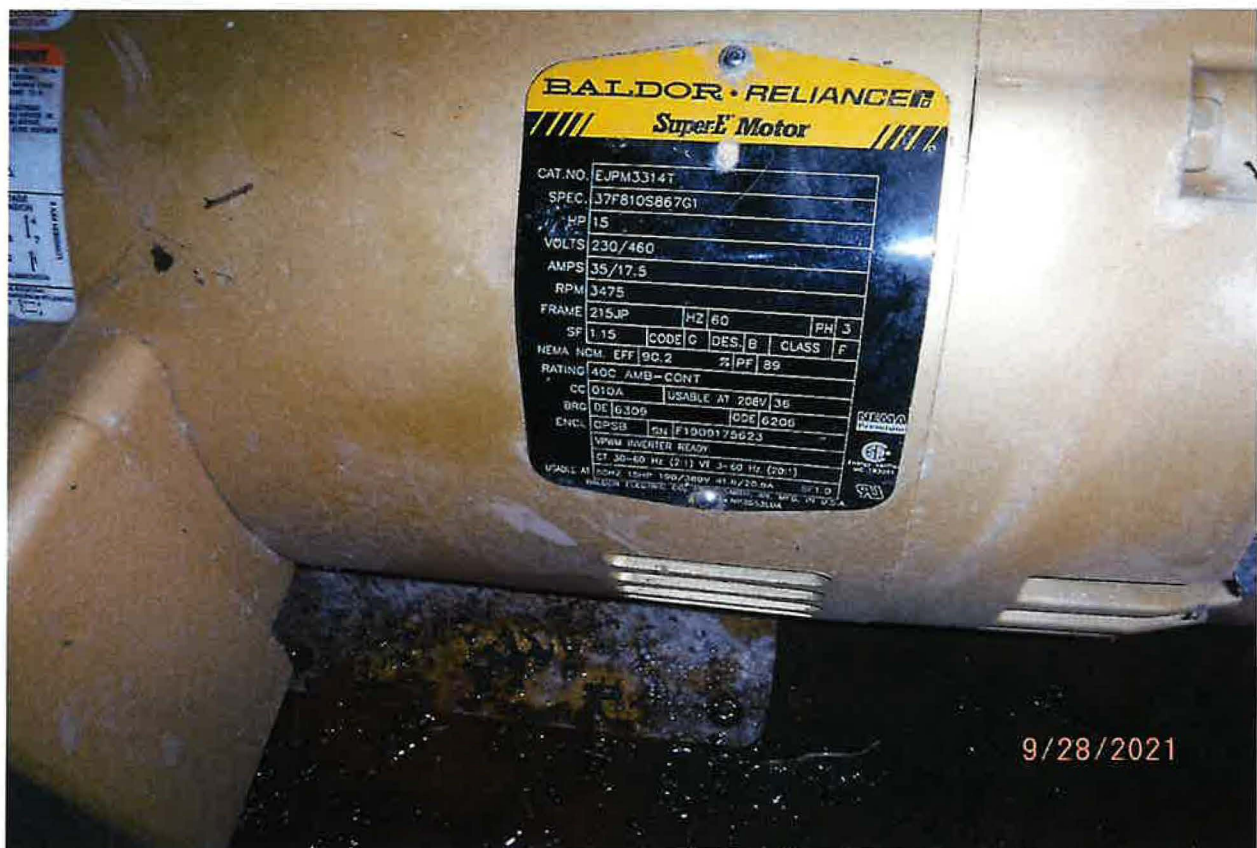
5-GAL BUCKET FLOW MEASUREMENTS (1 OF 3)



30,000-GAL VAULTED STORAGE RESERVOIR



VAULTED DIVERSION WORKS (R/H OF IMAGE METAL LID)



15 HP TRANSFER PUMP FROM 30K RESERVOIR TO WATER USES



WATER DIVERTING WORKS



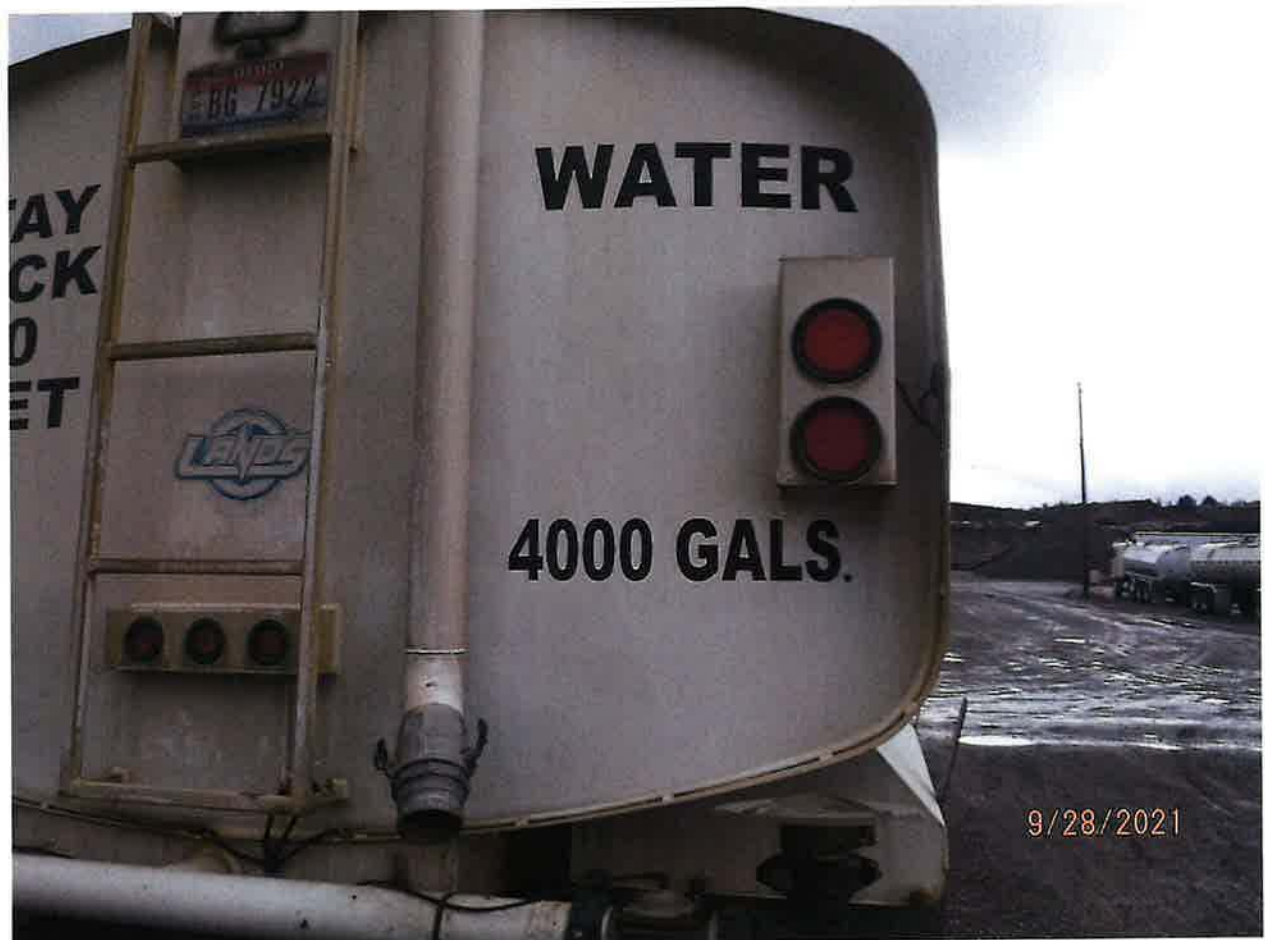


INDUSTRIAL POU - WATER TRUCK FILL STATION – CO-LOCATED WITH 30K STORAGE RESERVOIR





INDUSTRIAL USE WATER TRUCK(S) – 4,000 GAL CAPACITY





INDUSTRIAL POU – GRAVEL PIT WATER USE FOR DUST ABATEMENT



IRRIGATION POU – GREEN SPACE BUFFER BETWEEN QUARRY AND ROADWAY(S)



IRRIGATION POU – EXAMPLE PRESSURIZED IRRIGATION VALVE SPLITTER STATION





IRRIGATION POU





IRRIGATION POU – EXAMPLE SPRINKLER HEADS





IRRIGATION POU

