

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-18045
Exam Date: 11/27/2020

1. Current Owner:
KOOTENAI COUNTY SOLID WASTE 3650 N RAMSEY RD COEUR D ALENE ID 83815
2. Accompanied by: Laureen Chaffin and John Phillips
Phone No: 208-446-1430
Address: Same as above
Relationship to permit Holder: Permit holder's representatives

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
95-8281	GROUNDWATER	DOMESTIC	LICENSE
95-8485	GROUNDWATER	DOMESTIC	LICENSE
95-15434	RUNOFF	INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, FIRE PROTECTION STORAGE	PERMIT IN PROCESS FOR LICENSING
95-18041	RUNOFF	WILDLIFE STORAGE, FIRE PROTECTION STORAGE	PERMIT IN PROCESS FOR LICENSING
95-18042	GROUNDWATER	IRRIGATION, FIRE PROTECTION	PERMIT IN PROCESS FOR LICENSING

Comments: Rights 95-18041, 95-18042, and this right (95-18045) are all permits that were split from permit 95-15434; 95-15434 uses runoff to fill ponds for industrial storage, fire protection storage, and industrial from storage uses that overlap this rights POU. 95-18041 uses runoff to fill wildlife storage ponds, and is used for fire protection storage in the same ponds that are overlapped by this rights industrial and fire protection beneficial use POU, but there is no overlap concern between the two rights. 95-18042 uses two groundwater wells for irrigation and fire protection use, with overlap in POU between this rights' industrial and fire protection POU and 95-18042's fire protection POU. Due to fire protection use being an exempt use, there is no overlap concern between rights 95-15434 and 95-18042. These two rights each use their designated volume independent of each other, but have a common POU. There is no need of an overlap condition because the industrial use for these two right is limited to 9.6 af + 1.5 af respectively by each right's annual volume. Based on the respective annual volumes on each right for industrial uses, there is no concern for overlap between rights 95-15434, 95-18041, 95-18042, and 95-18045.

Right 95-8281 is a groundwater source license that has an adjudication recommended claim in the CSRBA, active status, for domestic uses that overlaps this right's industrial and fire protection POU. Right 95-8281 used two wells not associated with this rights water source, and the two homes associated with the 95-8281 have been demolished in the recent past after the landfill purchased the property, and no longer use water for domestic purposes. Right 95-8281 is not a concern for overlap.

Right 95-8485 is a groundwater source license that was not claimed during the recent CSRBA adjudication process, which used well water for domestic purposes of one home owned by the Cunningham family in the past. The applicant's representative stated the home associated with this right was located along the HWY 95 corridor, and that it had been demolished after the landfill purchased the property. While right 95-8485 does overlap this right's POU, there is no concern for overlap between the two rights.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County

Method of Determination:

PLACE OF USE: INDUSTRIAL and FIRE PROTECTION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
48N	05W	1		X L2	X		X L3	X L4	X	X	X	X	X	X		X			
48N	05W	2													X			X	
48N	05W	11	X L1																
48N	05W	12					X L3	X L4											

Method of Determination: GPS – POD is a groundwater well permit No. 95-90-N-32, located at -116°55.709, 47°31.948.

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
95-90-N-32		1.5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurement because system pumped directly to a storage reservoir via buried water pipes.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method: Theoretical pumping equation estimates flow at **0.02 cfs**, considering department rounding standards, with pump depth of 485 ft and system operating pressure of 45 PSI.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$

2. Volume Calculations for Other Uses:

INDUSTRIAL ANNUAL VOLUME =

- 109,500 gpy (shop/maintenance building use) + 156,000 gpy (cover machine use) + 50,000 gpy (wash down bay use) + 120,000 gpy (water truck loads) = 435,500 gpy / 325,850 gal per af = 1.3 af considering department rounding standards.
- 10 employees x 20 gpd x 6 days per week x 52 weeks per year = 62,400 gpy / 325,850 gal per af = 0.2 af considering department rounding standards
- TOTAL Volume = 1.3 af (industrial operational use) + 0.2 af (employee use) = **1.5 af**

G. NARRATIVE/REMARKS/COMMENTS

This WR has been split into four separate rights, including 95-15434, 95-18041, 95-18042, and 95-18045. This right, 95-18045, accounts for the industrial and fire protection as direct flow beneficial uses from a single groundwater well. The well and water system associated with this WR were split as they are not incorporated with the other split out WR water systems.

Field exam performed on 6/5/2020 with the applicant's representatives, Laureen Chaffin and John Phillips, showed a groundwater well permit No. 95-90-N-32 being used for industrial and fire protection beneficial uses. At the POD, water was pumped by a 1.5 hp pump to a 65,000 gallon concrete reservoir located up-hill from the well prior to use by Kootenai County (KC) Solid Waste for landfill industrial operations. Mr. Phillips stated the well was the only groundwater source used for industrial purposes by KC Solid Waste. Due to inadequate pipe requirements, a flow measurement was not able to be completed; Theoretical Pumping Equation derived a flow rate of 8.1 gpm or 0.02 cfs, considering department rounding standards, with pump depth of 485 ft and system operating pressure of 45 PSI. **0.02 cfs** is recommended as the maximum diversion rate for licensing purposes.

During the field exam, the industrial POU was identified and sketched out on field maps. The fire protection beneficial use POU is the same as the industrial POU for licensing purposes. Due to the fire protection direct flow beneficial use, no maximum diversion volume is applied to the license. At the industrial POU, water received from the concrete reservoir is used for multiple solid waste landfill operations including: shop/maintenance use, cover machine use, wash down bay use, water truck filling use for dust abatement, and employee use. Mr. Phillips provided annual volumes for the above mentioned industrial use functions, in addition to an emergency use function for fighting fires at the landfill. The emergency use volume was not included in volume calculations, as it applies directly to the fire protection beneficial use, which does not receive a volume for licensing purposes. The annual volume for industrial use is calculated as follows:

- 109,500 gpy (shop/maintenance building use) + 156,000 gpy (cover machine use) + 50,000 gpy (wash down bay use) + 120,000 gpy (water truck loads) = 435,500 gpy / 325,850 gal per af = 1.3 af considering department rounding standards.
- 10 employees x 20 gpd x 6 days per week x 52 weeks per year = 62,400 gpy / 325,850 gal per af = 0.2 af considering department rounding standards
- TOTAL Annual Volume = 1.3 af (industrial operational use) + 0.2 af (employee use) = 1.5 af

The **1.5 af** for industrial use calculated above is recommended for licensing purpose. During licensing review, the industrial & fire protection POU was traced out using Arcmap aerial imagery, and encompasses the acreage owned by Kootenai County (Solid Waste).

As this right was split into four total water rights, several conditions pertaining to wildlife storage, industrial storage, fire protection storage, and irrigation were removed from this permit during licensing review including 26A, 082, WD8, 111, X02, 046, 01M, 106, 218, 219, and 220. Condition 004 was added to describe that the right doesn't grant right of way nor easement across property of another. A text condition was added describing that industrial water use is for a landfill solid waste facility and dust abatement. All other conditions on the permit will remain on the license.

Overlap Concerns: Rights 95-18041, 95-18042, and this right (95-18045) are all permits that were split from permit 95-15434; 95-15434 uses runoff to fill ponds for industrial storage, fire protection storage, and industrial from storage uses that overlap this rights POU. 95-18041 uses runoff to fill wildlife storage ponds, and is used for fire protection storage in the same ponds that are overlapped by this rights industrial and fire protection beneficial use POU, but there is no overlap concern between the two rights. 95-18042 uses two groundwater wells for irrigation and fire protection use, with overlap in POU between this rights' industrial and fire protection POU and 95-18042's fire protection POU. Due to fire protection use being an exempt use, there is no overlap concern between rights 95-15434 and 95-18042. These two rights each use their designated volume independent of each other, but have a common POU. There is no need of an overlap condition because the industrial use for these two right is limited to 9.6 af + 1.5 af respectively by each right's annual volume. Based on the respective annual volumes on each right for industrial uses, there is no concern for overlap between rights 95-15434, 95-18041, 95-18042, and 95-18045.

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Have conditions of permit approval been met? X 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>
INDUSTRIAL	01/01 to 12/31	0.02 CFS	1.5 AF
FIRE PROTECTION	01/01 to 12/31	0.02 CFS	

Totals: 0.02 CFS

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

____ Change P.U. as reflected above ____ Add P.U. as reflected above X None

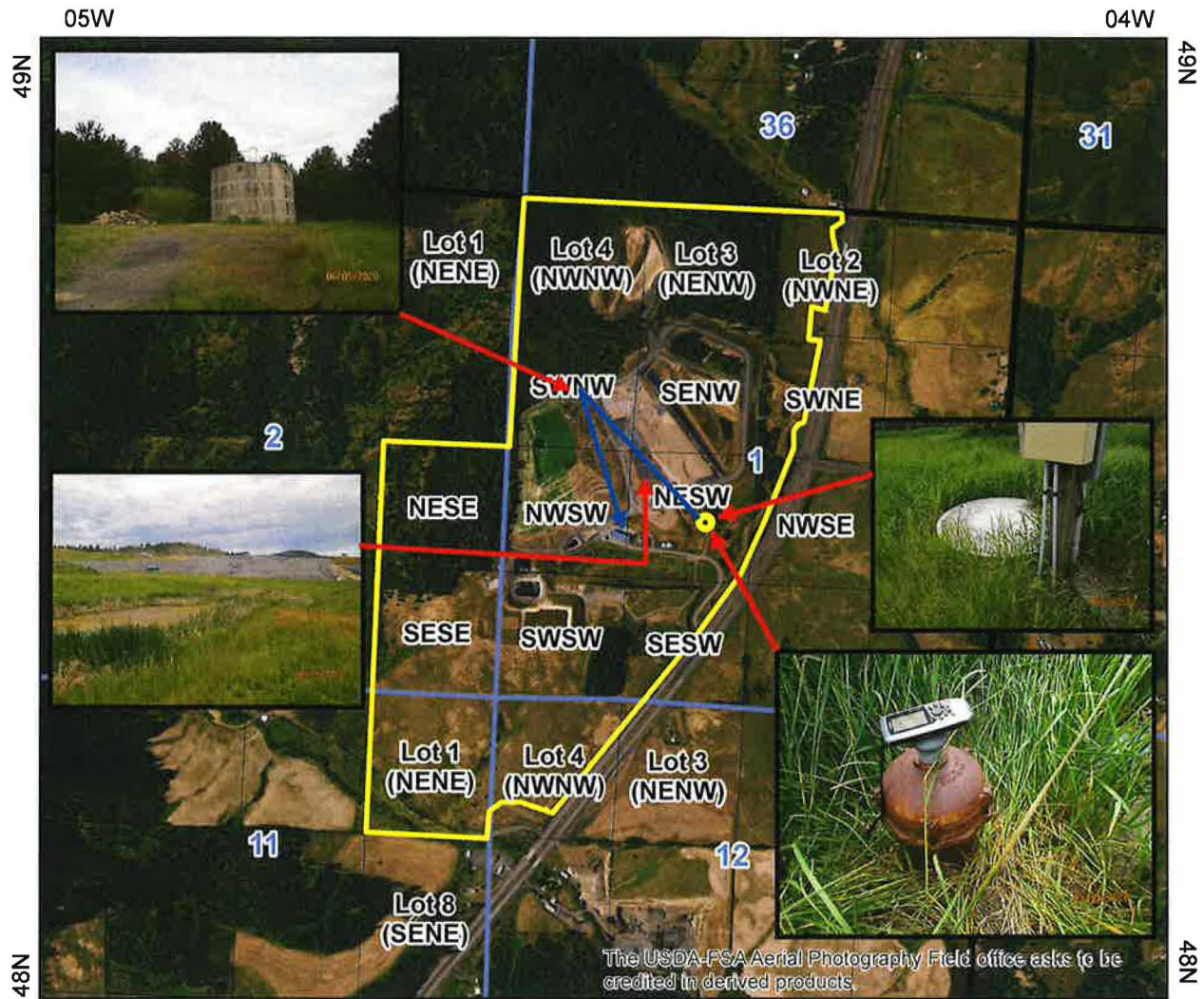
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date 11/27/2020

Reviewer  Date 12/7/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-18045

INDUSTRIAL and FIRE PROTECTION system diagram.



- 05W 04W
- 49N 48N
- Point of Diversion
 - Place Of Use Boundary
 - Townships
 - PLS Sections
 - Quarter Quarters

0 0.225 0.45 0.9 Miles



Bates, Luke

From: John Phillips <jphillips@kcgov.us>
Sent: Thursday, November 19, 2020 4:44 PM
To: Bates, Luke
Subject: Industrial Water Usage Barn Well

Luke:

Below is our estimated annual water usage associated with the industrial well by the barn:

- 1) Shop/Maintenance Building Water 109,500 gallons per year
- 2) Water for cover machine.....156,000 gallons per year
- 3) Wash Down Bay Water.....50,000 gallons per year
- 4) Water Truck Loads (for washing down pavement).....120,000 gallons per year
- 5) Emergency use as needed (landfill fires).....40,000 gallons per year on average (Fire Department sometimes hooks up for this)

I think that covers all of the estimated annual usage.

Please let me know if you have any additional questions.

Thanks, JP

John "JP" Phillips
Solid Waste Director
Direct: 208-446-1441
Cell: 208-818-2613

Bates, Luke

From: Laureen Chaffin <lchaffin@kcgov.us>
Sent: Monday, June 15, 2020 1:23 PM
To: Bates, Luke
Cc: John Phillips
Subject: FW: Idaho Dept. of Water Resource Information
Attachments: IMG_0154.jpg; 202006151205.pdf

Hi Luke,

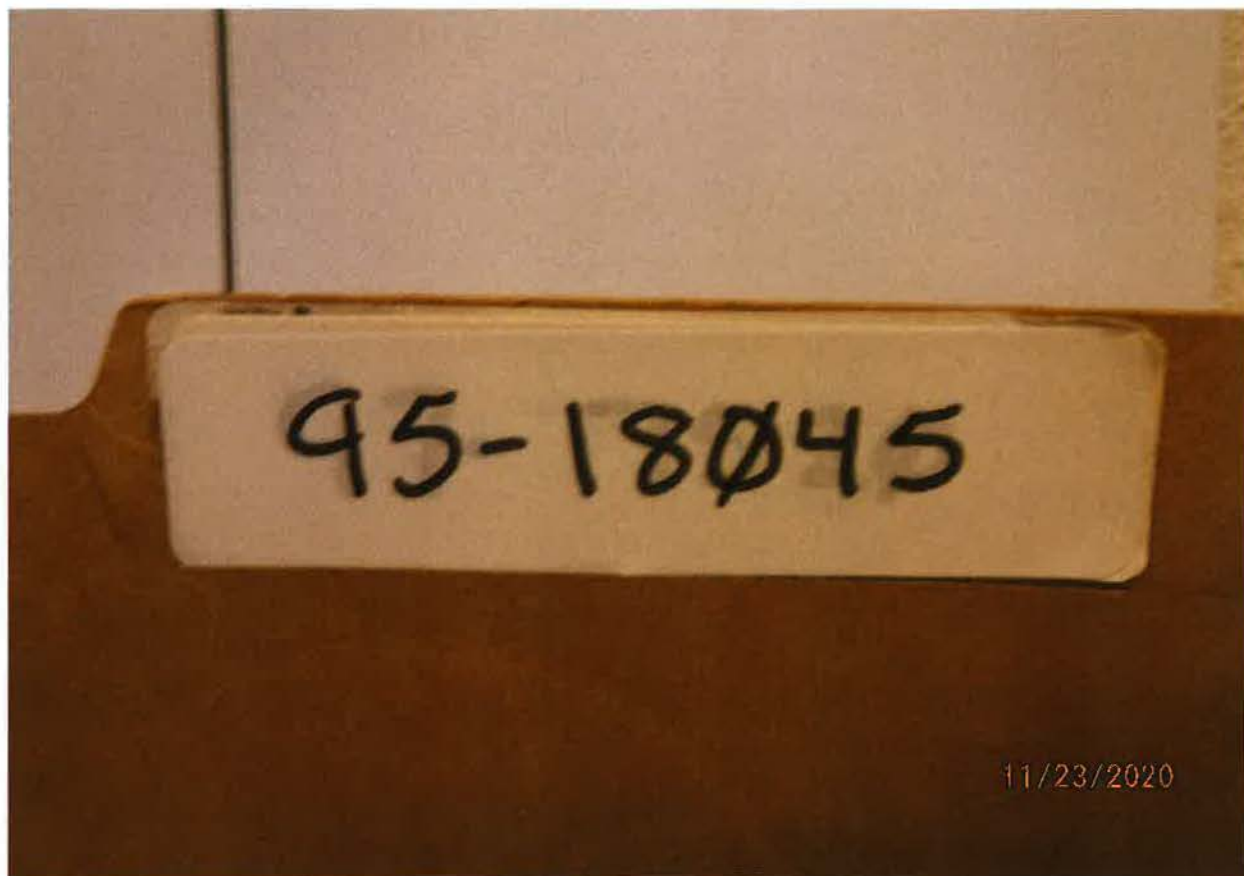
Our highest recordings of water truck loads happened in 2019. We reported 340 loads @ 4800 gallons each for a total of 1,632,000. Our estimate is that the contractor used approximately 1,500,000 for a total of 3,132,000 gallons out of the ponds for dust mitigation.

I have attached the scanned map and a photo of the "missing" well that supplies the vaults. The GPS coordinates are listed in the email chain below.

Should you need any additional information, please contact JP.

Laureen Chaffin
Principal Planner
Kootenai County Solid Waste
Phone: (208) 446-1430
Fax: (208) 446-1432
Email: lchaffin@kcgov.us

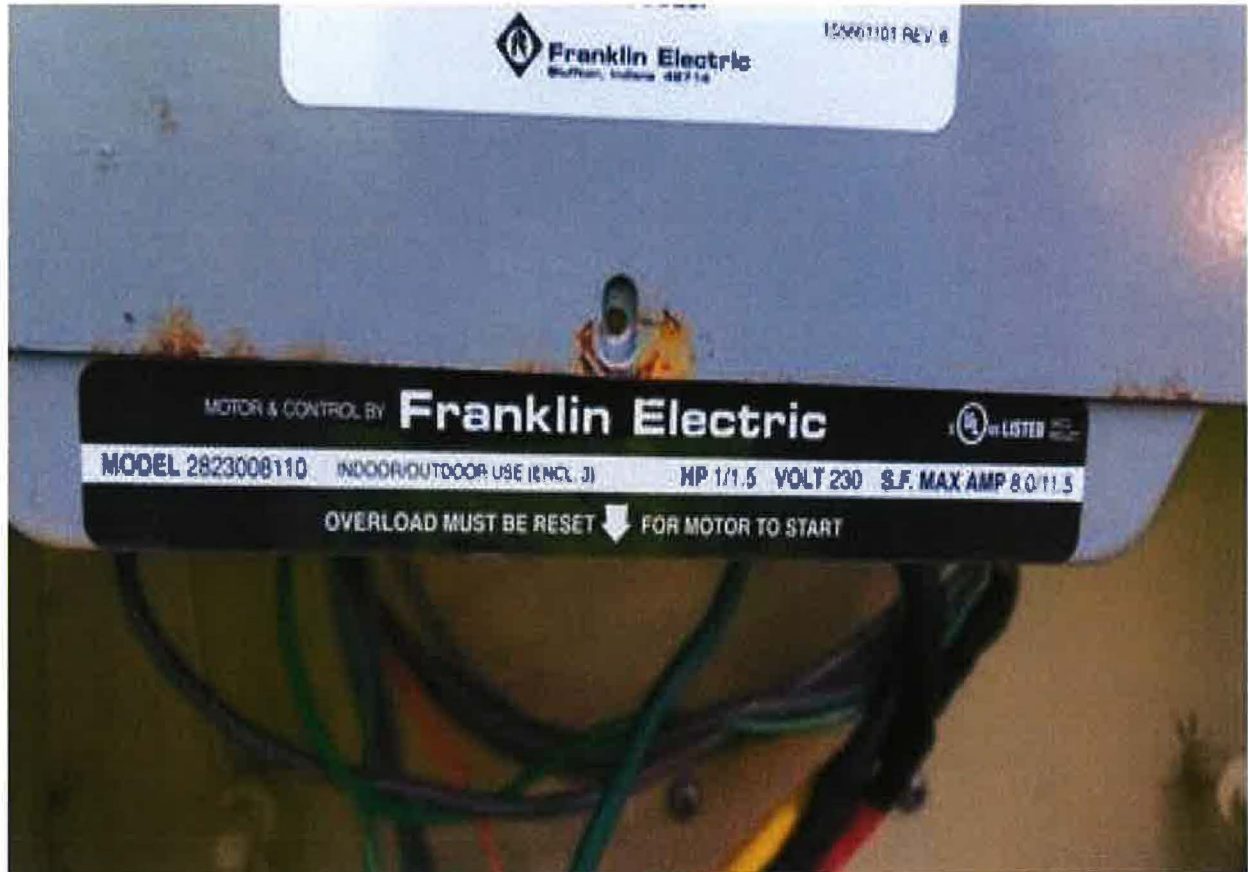
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POD - WELL 95-90-N-32



AT GROUNDWATER POD – WELL PUMP CONTROL PANEL



1.5 HP PUMP IN WELL



06/05/2020

INDUSTRIAL AND FIRE PROTECTION POU – SOLID WASTE FACILITY OPERATION



06/05/2020



INDUSTRIAL AND FIRE PROTECTION POU – 65,000 GALLON RESERVOIR