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JAN 11 2018

DEPARTMENT OF
WATER RESOURCESSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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AUG 09 2017

Department of Water Resources
Eastern Region

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 37-88561. Owner Heath Marshall Inc. Phone No. _____

Current address _____

2. Examiner's name Keith C Wilson & Paul H Scoresby EXAM DATE 12/20/20163. Accompanied by Douglas B Walters & Larry Anderson Email _____Address 10820 Hwy 75, P.O. Box 66, Bellevue, ID 83313 (Walters/Anderson)Relationship to permit holder Walters Ready Mix / Anderson Asphalt Phone No. (208)309-0483/ 720-39244. Source Ground water tributary to N/A**B. OVERLAP REVIEW**1. Other water rights with the same place of use N/A2. Other water rights with the same source and point of diversion N/A**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	1/4	1/4	1/4	Sec	Twp	Rge	County	Method of Determination/Remarks
40 Hp			SE	SW	13	01N	18E	BLAINE	On site & Google Earth Aerial Photos
Dom.			SE	SW	13	01N	18E	BLAINE	Referred to as "Domestic Well"

2. Place(s) of Use: Method of determination On site & Google Earth Aerial Photos

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01N	18E	13									I			I					

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☐ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
40 Hp	Hitachi	40	G27066E	Hitachi	
"Domestic Well"	Franklin	7.5		Franklin	

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
McCrometer Propeller (40 Hp)	Totalizing	McCrome	M0308	12-05716	6.25 id	Unknown
Acutal Volumetric ("Domestic Well")	N/A	N/A	N/A	N/A	N/A	N/A

2. Measurements: _____

E. NARRATIVE/REMARKS/COMMENTS

There are two industrial businesses served under this permit; a Concrete Batch Plant and an Asphalt Plant. Douglas Walters is the plant manager for the Concrete Batch Plant and Larry Anderson is the owner/plant manager of the Asphalt Plant.

The place of use for the Concrete Batch Plant is in the SESW and the place of use for the Asphalt Plant is in the NESW, both in Section 13, T01N, R18E. The Concrete Batch Plant system has two interconnected wells. Both wells are located in the SESW Sec 13, T01N, R18E. One well is designated as the "Domestic Well" and the second is designated as the 40 Hp well. The 40 Hp well is shared between both plants. The McCrometer flowmeter measures all the water produced by this well. For the concrete plant, this well supplies water to a boiler where it can be heated before being dumped into the mixing drum. This is mostly done in winter. The domestic well is specific to the concrete batch plant. It delivers water to a holding tank inside the plant, which can also be heated, and is measured before dumping into the mixing drum. The water from both wells are blended sometimes in the mixing drum, but not before summing the water used in each batch. There is no meter on the domestic well. It is measured as it enters the holding tank inside the plant, but only per batch. After each batch, the volumetric water measurement is reset. Summing the water used in each batch enables a volumetric measurement of the domestic well.

There is no washing of rocks and gravel at the batch plant. The pre-washed rocks & gravel are purchased from another company. The consumptive component is the water used in the concrete and is estimated at 27-30 gallons per yard. According to Douglas Walters, their maximum annual production of concrete has been 27,154 yards. [For Volume Calculations, see Item G.2] Each truck has a 250 gallon "Temper Tank" to ensure that the concrete is delivered at the proper temperature. Water in the "Temper Tank," and water used for washing trucks is discharged into an on-site gravel pit to recharge and is considered non-consumptive.

The Asphalt Plant is connected only to the 40 Hp well (located in the SESW Sec 13, T01N R18E), and uses approximately 105 gal/min (0.23 cfs) when operating. Depending on the demand, (at most) the plant operates 6-8 hours per day for 6 days per week. Water to the asphalt plant is used only in the "Scrubber" to remove dirt/dust in the process of making asphalt. The water is then discharged into an on-site gravel pit, where it seeps back into the ground. It is considered non-consumptive.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

The permit requires annual mitigation by recharge of 2.5 af from Water Right Nos. 37-235C, 37-236A, and 37-308A (the splits of the rights originally described in the condition). This entails retiring 1.0 acre of irrigated land within the POU. Permit holder has pumps installed on the ditch to deliver the 2.5 af into the gravel pit for recharge purposes. Please see the attached letter and package from B.C. Porter & Associates describing the pumping information. B.C. Porter & Assoc. performed a pump test and measured higher diversion rate values than the pumps were rated for. Thus, the rate used for each pump originates from the manufacturer's rated values, not the pump test, to be conservative. The pumps were located in the NWNWSE Sec 13, T01N R28E. Additionally, 1.0 acre of farm ground has been retired to meet the mitigation requirements given in the Conditions of Approval. A map is included to identify the location of the 1.0 acre in the final page of the Item E attachment. The POU shapefile from IDWR does not correspond to the actual irrigated acres. However, the distribution of acres per QQ is fairly consistent.

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

The McCrometer flowmeter was read at 1.84 cfs with valves entirely open. The plant systems have the capability of operating at the permitted diversion rate.

Concrete Batch Plant = 0.92 cfs

Asphalt Plant = 0.23 cfs

 $Q = 0.92 \text{ cfs} + 0.23 \text{ cfs} = 1.15 \text{ cfs}$

RECOMMENDED PERMITTED AMOUNT = 1.15 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$ _____ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ _____

2. Volume Calculations for Other Uses:

INDUSTRIAL USES:

Concrete Batch Plant @ Maximum of 27,154 yards produced

@27 gal/yard Vol = (27,154 yards)(27 gal/yard) = 733,158 gal/325850 gal/af = 2.24 afa or 2.2 afa

@30 gal/yard Vol = (27,154 yards)(30 gal/yard) = 814,620 gal/325850 gal/af = 2.49 afa or 2.5 afa

Asphalt Plant @ 105 gpm (0.23 cfs) and would be considered non-consumptive

H. RECOMMENDATIONS

1. Recommended Amounts

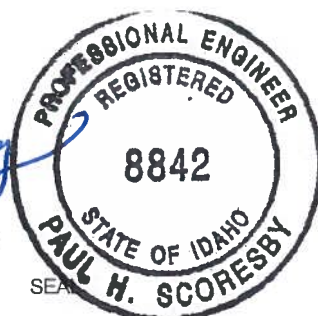
Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Industrial (Concrete Batch Plant)	01/01	12/31	0.92 cfs	_____
Industrial (Asphalt Plant)	01/01	12/31	0.23 cfs	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Totals:			1.15 cfs	_____

2. Recommended Amendments

☒ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☐ None☒ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**Field Examiner's Signature _____ Date 8-9-17

Reviewer _____ Date _____

Paul H. Scoresby



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DEPARTMENT OF
WATER RESOURCES

Addendum

Field Examination of Permit No. 37-8856

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JAN 05 2018

Department of Water Resources
Eastern Region

At the request of Mr. Steven Visosky, Senior Water Resource Agent of IDWR, we are providing herein additional information to accompany the field examination of Permit No. 37-8856. Due to information available, or not available, field examiner recommendations are also amended.

Mitigation

The development period consisted of the years 1996-1999 (Proof was due on December 1, 1999). During that time, the water right and property were owned by Heath-Marshall, Inc. Unfortunately, no records are available to indicate that the mitigation of 2.5 AF of water recharged under the described surface water rights took place during the development period.

Quantity

The Concrete Batch Plant is already sufficiently addressed in the existing field examination.

The Asphalt Plant is a non-consumptive water use. Owner Larry Anderson indicated that their annual production in 2017 was 2800 tons. He also indicated that their peak diversion rate is higher than the value (0.23 cfs) previously provided on the field examination. The previously recommended amount was limited by the amount authorized under the water right permit.

At peak operating capacity, their diversion rate ranges from 150 gpm to 180 gpm. The plant can process 30 tons/hour under that diversion rate. For the purpose of calculating annual volume, a diversion rate of 180 gpm, or 0.4 cfs, will be used.

$$\text{Volume} = 2800 \text{ tons} / (30 \text{ ton/hr}) = 93.33 \text{ hrs operation} \times 180 \text{ gpm} \times 60 \text{ min/hr} = 1,007,964 \text{ gal}$$

$$\text{AF} = 1,007,964 \text{ gal} / 325,850 \text{ gal/af} = 3.1 \text{ AFA}$$

Well Capacity

The Concrete Batch Plant and the Asphalt Plant were in full operation the day the flowmeter was read. All systems were running at maximum capacity simultaneously. The flowmeter indicated a total system capacity of 1.84 cfs.

Overlapping Rights

Domestic water right 37-12966 pertains to a small well adjacent to the Asphalt Plant office trailer. It is specific to the office location. In the case of a broken line or well failure, the domestic well is used to temporarily provide water to the plant through a temporary connection.

Recommendations

The condition to mitigate 2.5 AFA through recharge into a gravel pit does not appear to have been met during the development period. It is recommended that only the non-consumptive portion for the Asphalt Plant be licensed as follows:

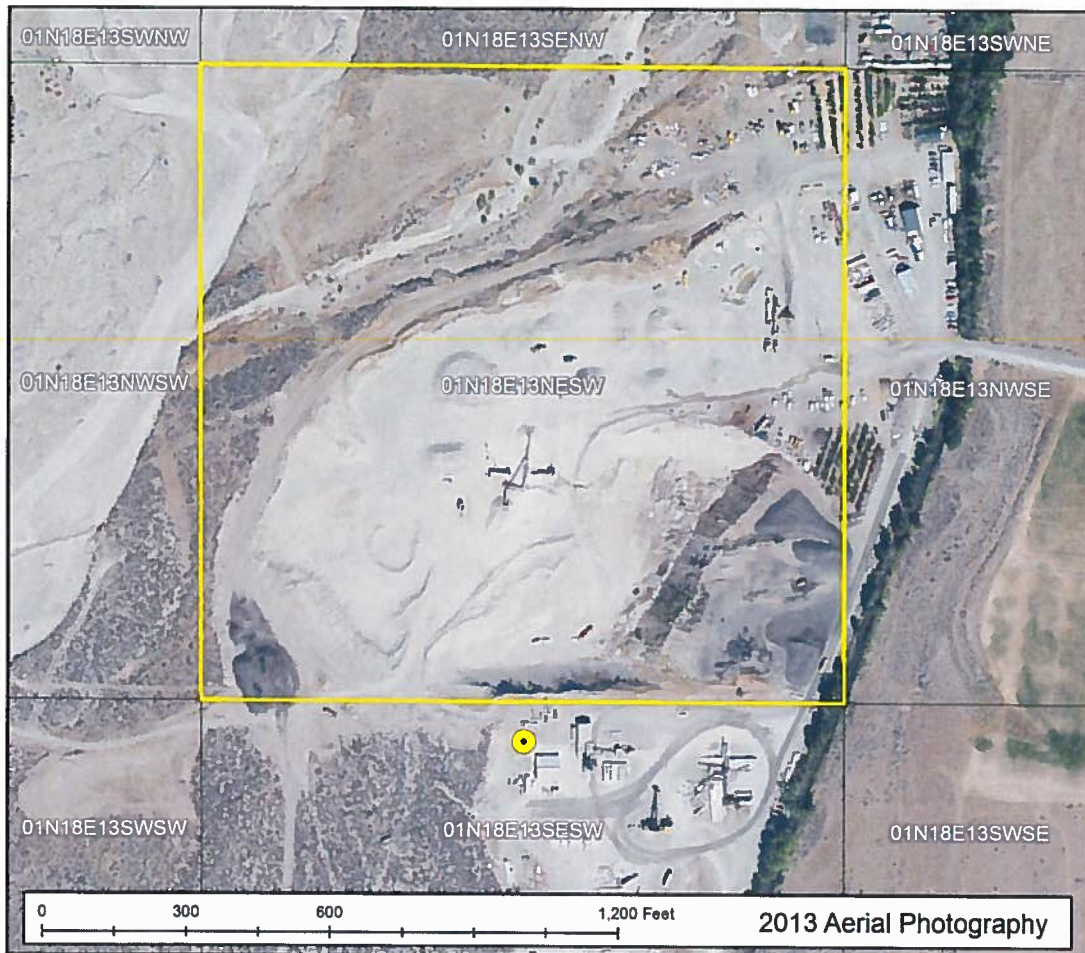
Beneficial Use	Period of Use	Rate of Diversion (cfs)	Annual Volume (afa)
Industrial	01/01 – 12/31	0.4 cfs	3.1 afa

Amendments:

Recommended POD: Since the Asphalt plant is only connected to the 40 hp well, it is recommended that only this well is an authorized point of diversion.

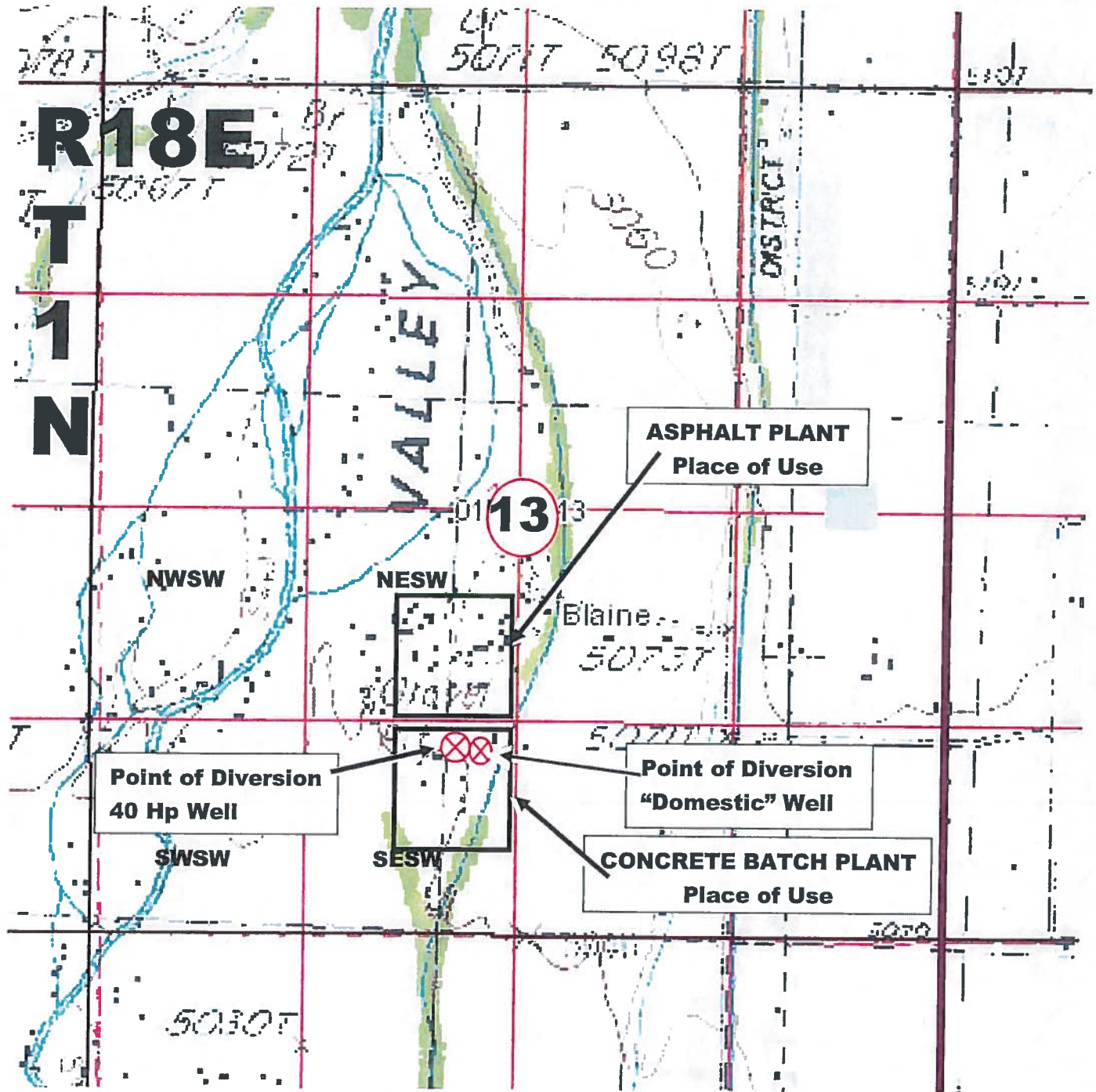
Recommend POU: NESW, Section 13, T1N, R18E

See map below for illustration of proposed POU and POD.



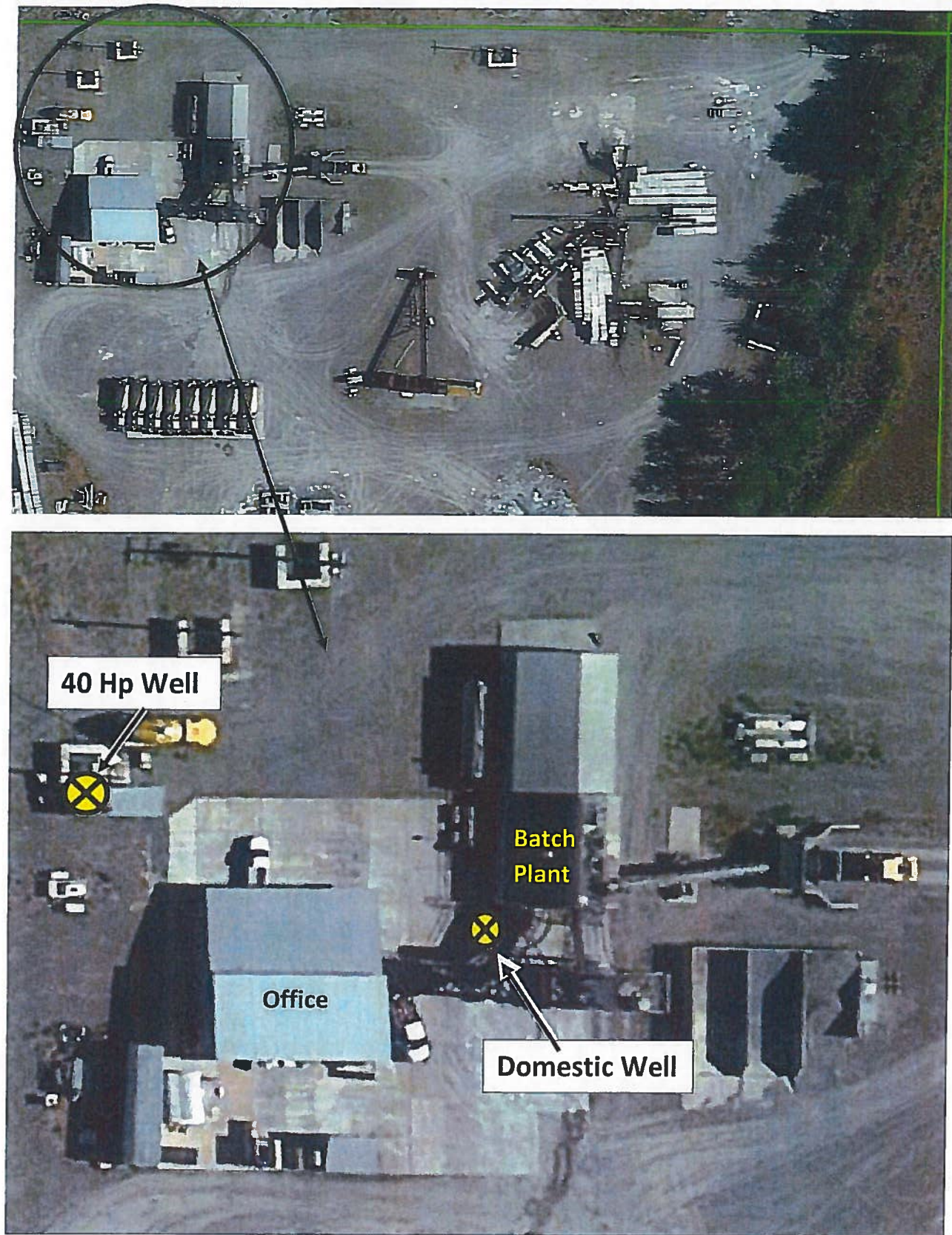
Place of Use & Points of Diversion

37-8856

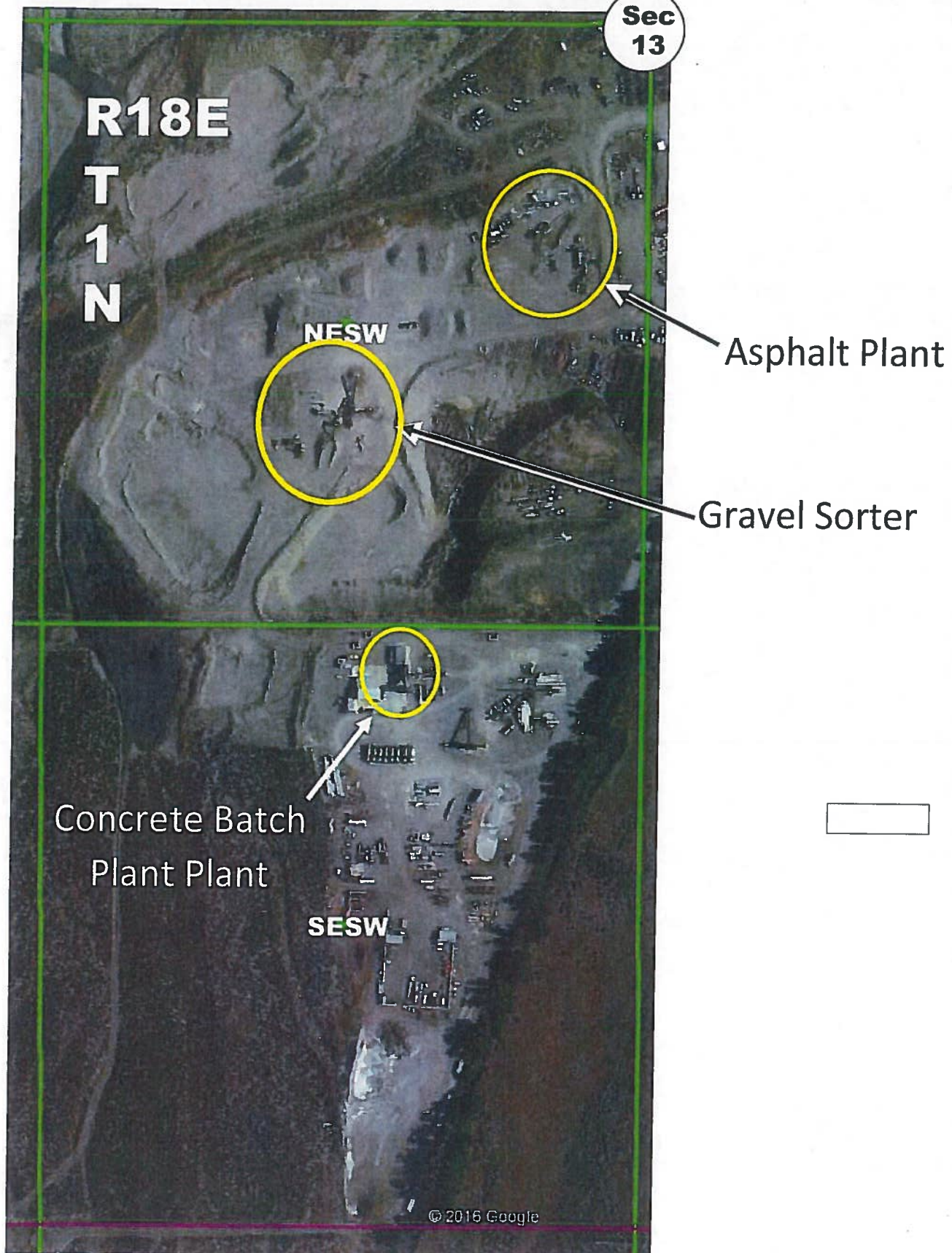


Place of Use & Points of Diversion

37-8856

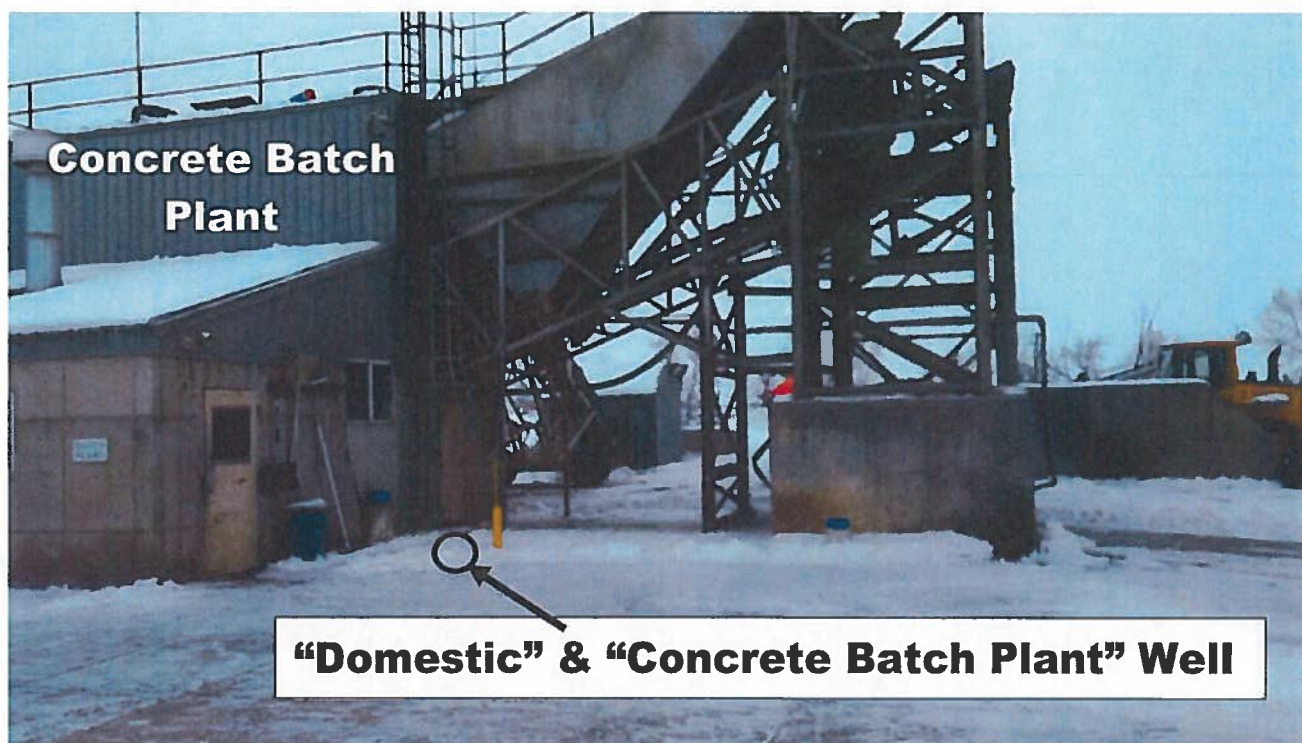
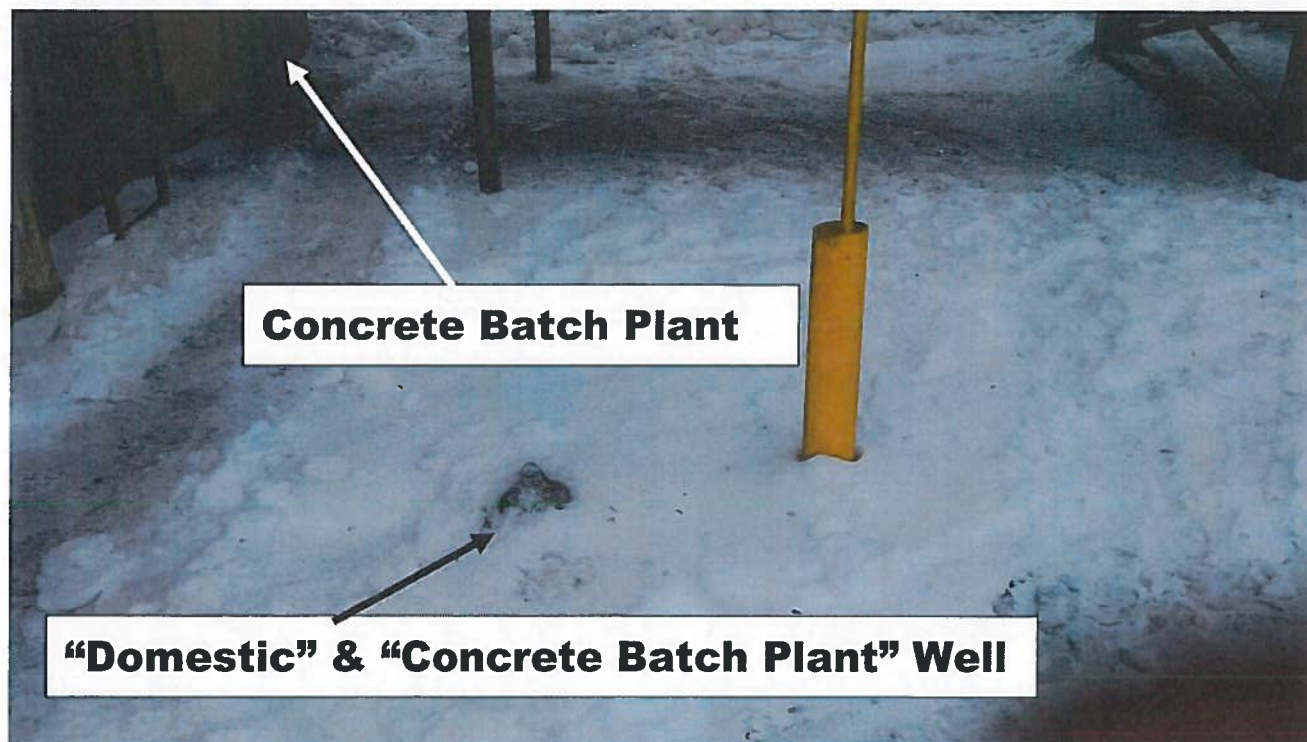


Place of Use & Points of Diversion



37-8856

Photos



37-8856

Photos

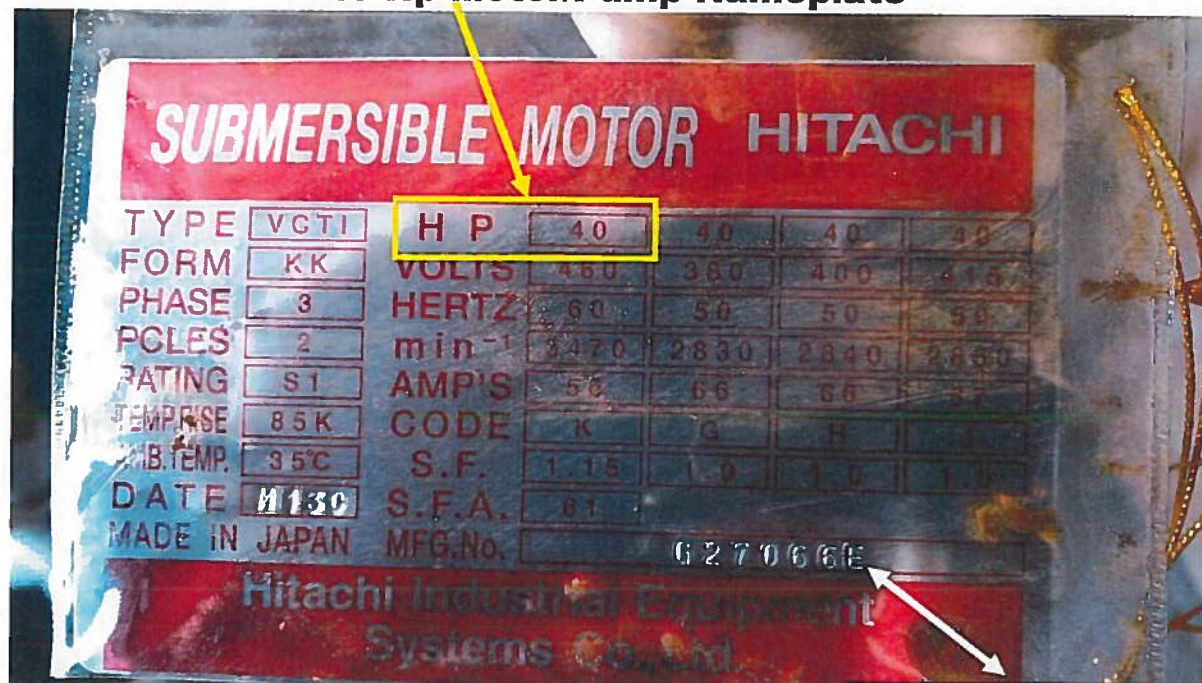


Flow Meter Tag for 40 Hp Submersible Hitachi Pump

37-8856

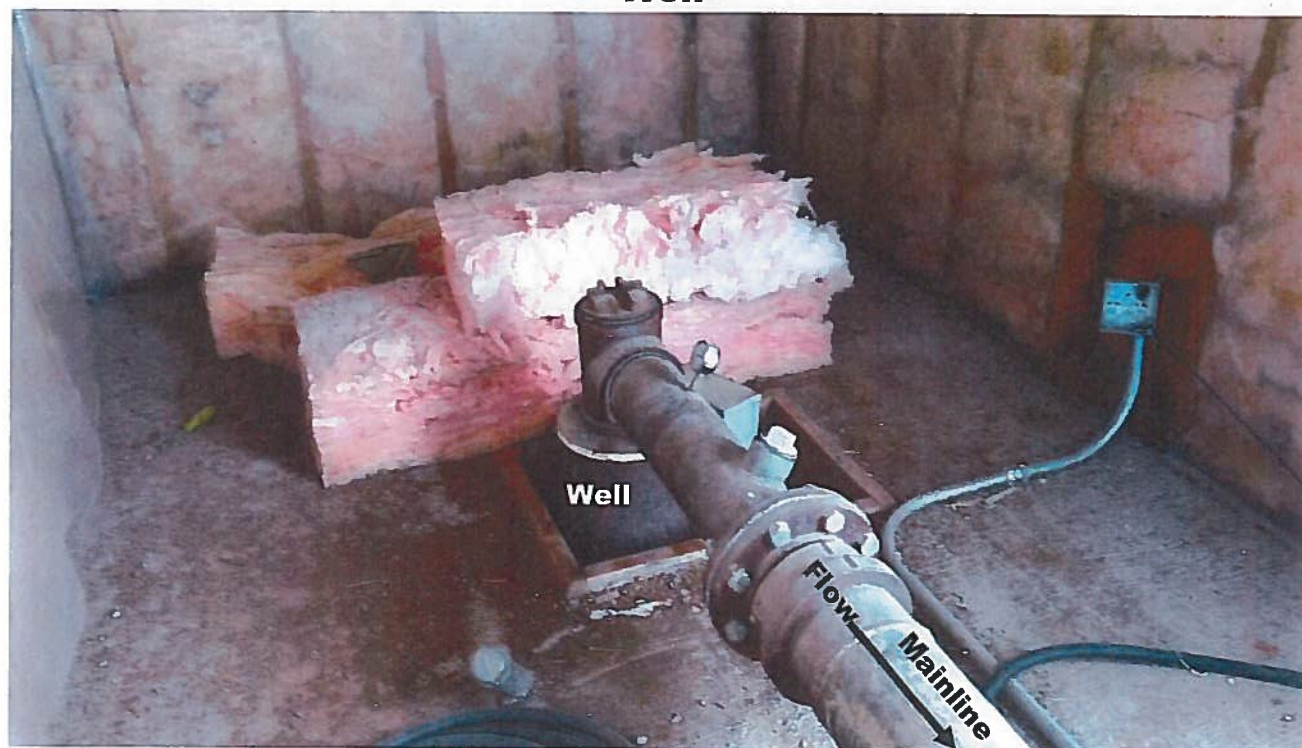
Photos

40 Hp Motor/Pump Nameplate



MFG. No: G027066E

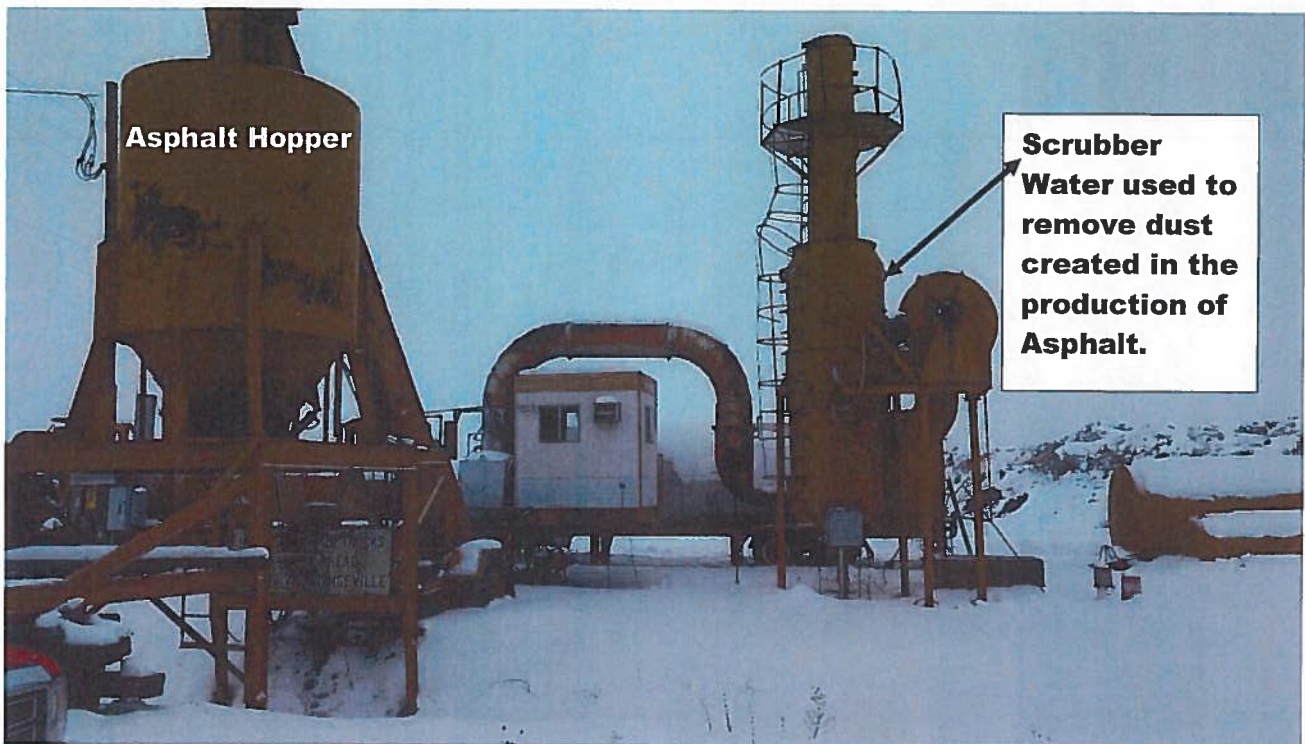
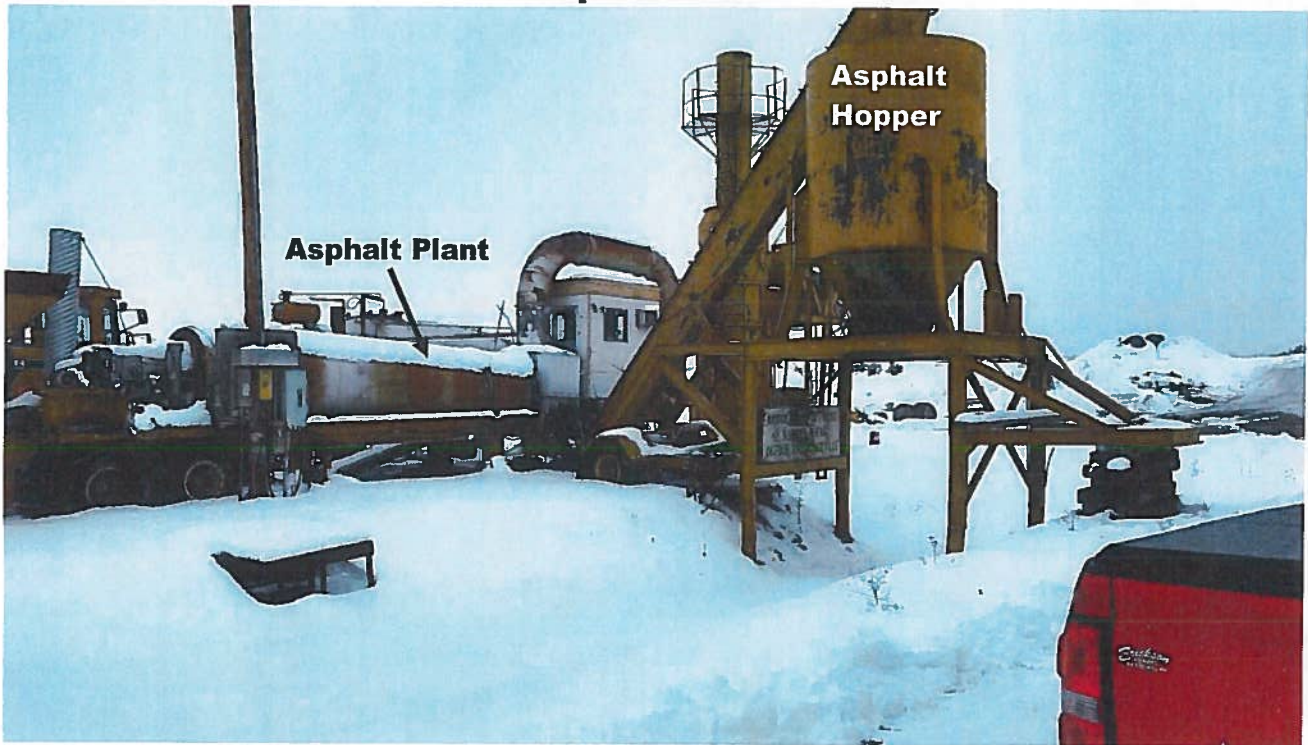
Well



37-8856

Photos

Asphalt Plant



PAGE 1 OF 2

JULY 17, 2017

TO: MR. ROGER WARNER
ROCKY MOUNTAIN ENVIRONMENTAL
482 CONSTITUTION WAY STE. 303
IDAHO FALLS, IDAHO 83420

FROM: B. C. PORTER & ASSOCIATES FOR:
ANDERSON ASPHALT PAVING, INC.
WALTERS REDI MIX
10828 HWY 75
BELLEVUE, IDAHO 83313

ROGER:

ON SATURDAY, JULY 15, 2017 ANDERSON ASPHALT AND WALTERS REDI MIX COMPLETED REQUIREMENTS FOR RECHARGE WATER FROM THE CANAL ON THE EAST BOUNDARY OF THEIR PLANT FACILITIES INTO THE MAIN GRAVEL PIT BY USE OF 5 GAS PUMPS 3" & 2" DISCHARGE PORTS.

PAGE 2 OF SUBMITTAL HAS TEST PUMP CHECKS AND CALCS FOR FLOW.

THANKS,

B.C. PORTER

A handwritten signature in black ink, appearing to be "B.C. Porter", written over a horizontal line.

CC: ANDERSON ASPHALT, WALTERS REDI MIX, B.C.P.

PUMP TEST DATA

FLOW CALCULATIONS

2 EA. HONDA 3" SEMI TRASH PUMPS GX-340

#1 110 GAL/ 19 SEC. = 19140 QPH

#2 110 GAL/18.9 SEC.	#1	319 QPM
	#2	319 QPM

1 EA. HONDA 3" SEMI TRASH PUMP

WHACKER PUMP

100 GAL/15.1SEC = 24000 QPH	400 QPM
-----------------------------	---------

1 EA. 2" SEMI TRASH PUMP GX 160

100 GAL/31 SEC. = 11820 QPH	197 QPM
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1422 QPM

1422/ QPM = 85320 QPH

DURATION TIME OF PUMPING

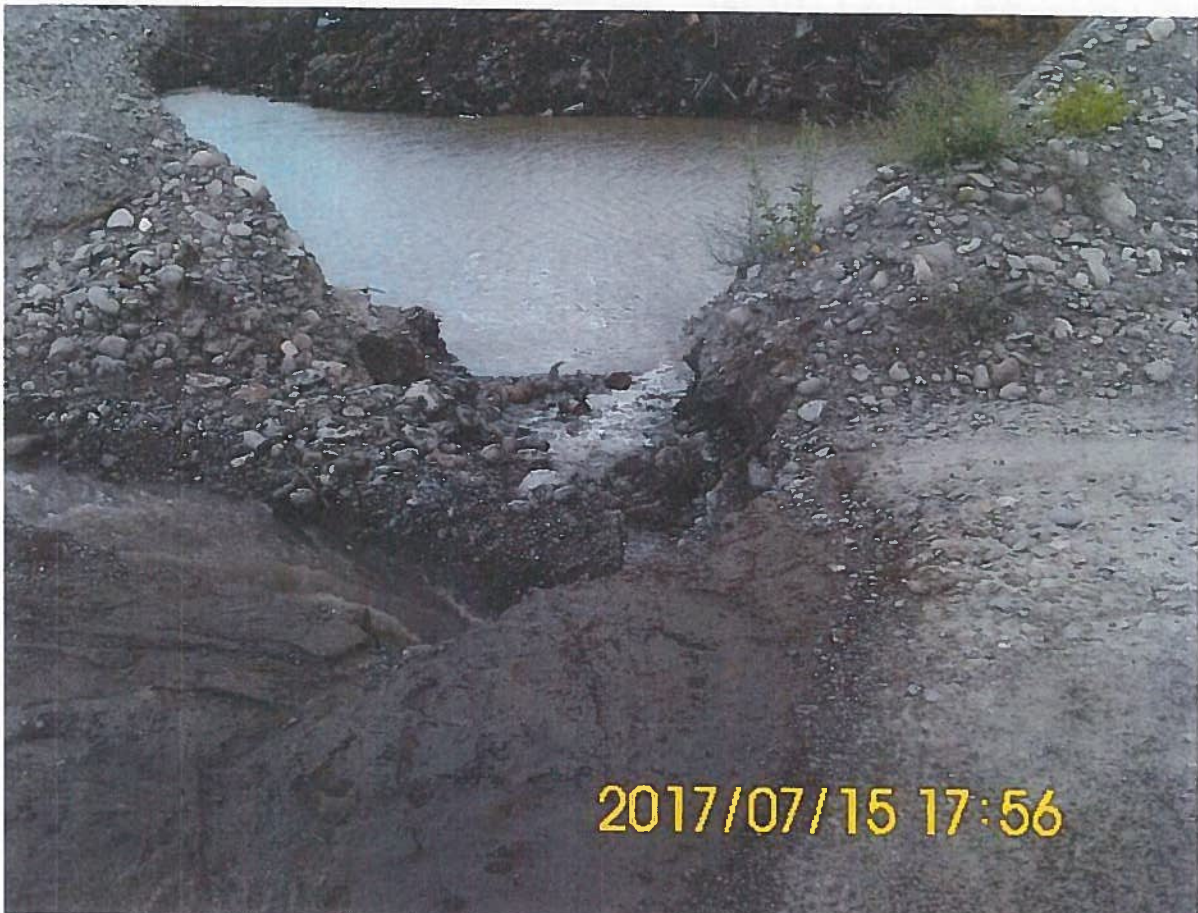
10:00 A.M. TO 8:00 P.M. 10 HRS.

REQUIRED 2.5 ACRE FT. 814,625 GAL.

PUMPED 853,200 GAL.

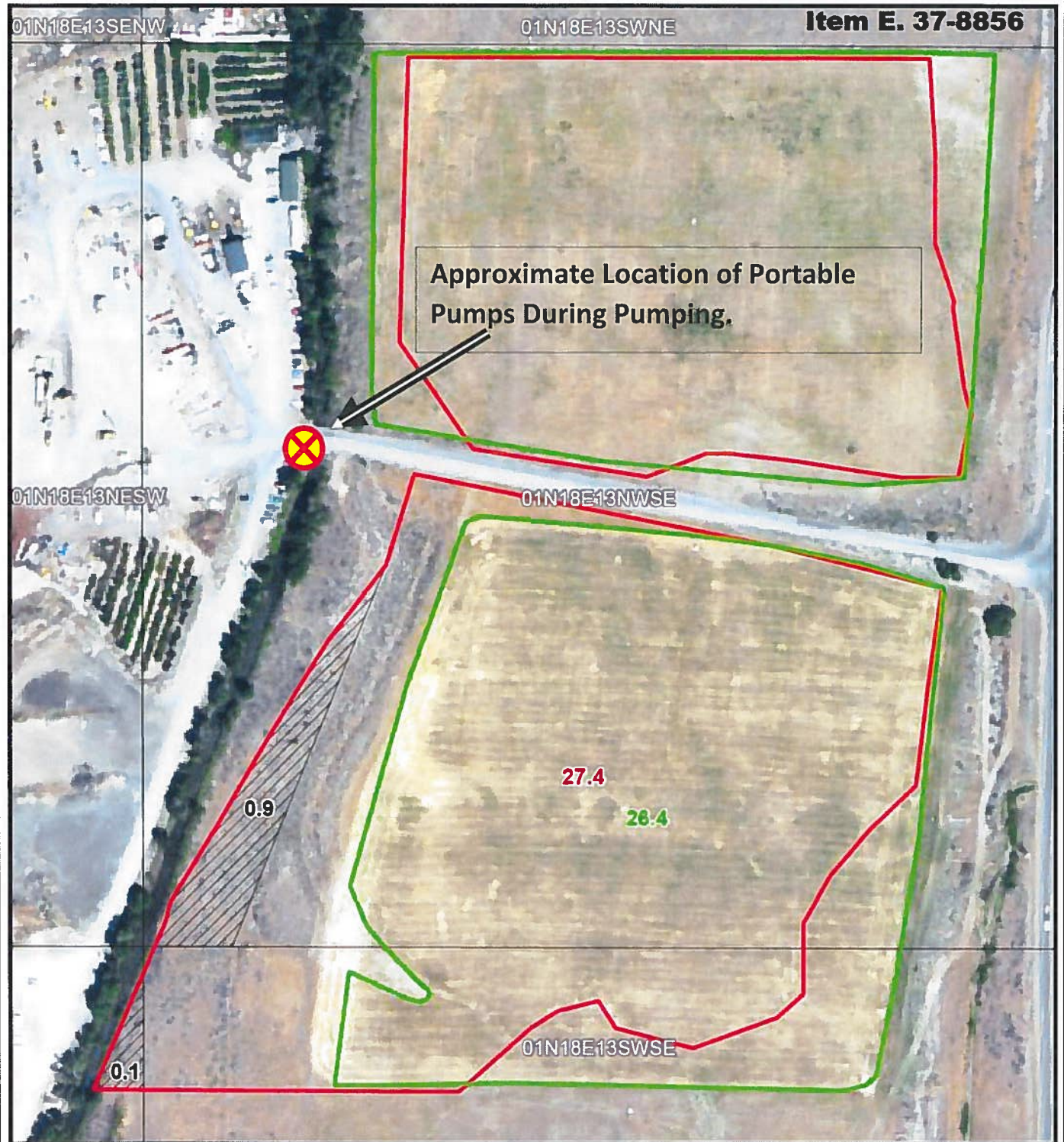






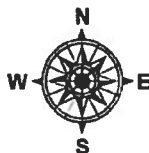






Legend

- | | |
|---------------------------------|-----------|
| Actual Irrigated Acres | Twp & Rng |
| WRPOU 37-235C, 37-236A, 37-308A | Section |
| Mitigation - Retired Acre | QQ |



**Mitigation - WR Nos. 37-235C,
37-236A, 37-308A**
for Permit No. 37-8856

RMEA #16-0171

by: KM

May 8, 2017

