

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8165

Exam Date: August 21, 2008

1. Current Owner: BERNARDINE M ERKINS
PO BOX 108
BLISS ID 83314
(208)352-4460

And

ROBERT A ERKINS
PO BOX 108
BLISS ID 83314
(208)352-4460

2. Accompanied by: Allen Merritt (IDWR), Cindy Yenter (IDWR), George Panagiotou (Bliss Valley Properties), and Charles G. Brockway (consultant for Bliss Valley Properties)

Phone No: (208)352-1200 & 1(800)223-2589 (phone numbers for Bliss Valley Properties)

Address: Bliss Valley Properties, 756 Lynnmere Dr, Thousand Oaks, CA91360

Relationship to Permit Holder: Bliss Valley Properties is the current property owner

3. SOURCE

TRIBUTARY

WHITE ARROW HOT SPRING

CLOVER CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 37-810, 37-811, 37-4040, and 37-4041 (irrigation use) and perhaps 37-11069 and 37-11072 (domestic use)
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

WHITE ARROW HOT SPRING	NW1/4SE1/4NE1/4	Sec. 30,	Twp 04S,	Rge 13E, B.M.
GOODING County				
WHITE ARROW HOT SPRING	NE1/4NW1/4SE1/4	Sec. 30,	Twp 04S,	Rge 13E, B.M.
GOODING County	(Injection)			
WHITE ARROW HOT SPRING	NW1/4SW1/4SE1/4	Sec. 30,	Twp 04S,	Rge 13E, B.M.
GOODING County	(Rediversion)			
WHITE ARROW HOT SPRING	SW1/4NW1/4NE1/4	Sec. 31,	Twp 04S,	Rge 13E, B.M.
GOODING County	(Rediversion)			

Method of Determination: GPS and aerial photography

2.

PLACE OF USE: FISH PROPAGATION STORAGE

[illegible]

PLACE OF USE: COMMERCIAL

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
				X									X				

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
													24.0		35.0	27.0	86.0
04S 13E 31	24.0	23.0															47.0

Total Acres: 133

PLACE OF USE: HEATING

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
				X									X				

PLACE OF USE: DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
													X				

PLACE OF USE: FISH PROPAGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
													X				
04S 13E 31	X																

PLACE OF USE: RECREATION

Twp Rge Sec	NE				NW				SW				SE				Totals
04S 13E 30	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
													X				

Method of Determination: Aerial Photography

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
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One point of diversion at White Arrow Hot Spring with gravity flow to place(s) of use

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flowmeter	Polysonic	Fuji	Portaflow	240335		April, 2008
Current Meter	Propeller	Swoffer				

2. Measurements:

Two pipe flow measurements ("East pipe" and "West Pipe") downstream of diversion at White Arrow Hot Spring totaling 1.37 cfs. One open channel measurement in overflow section below diversion totaling 0.56 cfs. Note that pipe system was not flowing at total capacity due to numerous (40+) valves being closed downstream in the conveyance system. If all valves are opened the entire flow from White Arrow Hot Spring is conveyed in the two pipes. Entire diversion is the entire flow of White Arrow Hot Spring of 1.37 cfs + 0.56 cfs = 1.93 cfs (*see attached measurement results*).

E. FLOW CALCULATIONS

Measured Method: (*See attached*)

 Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 133 \text{ acres} \times 4 \text{ afa per acre} = 532 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.93 \text{ cfs} \times 231 \text{ days} \times 1.9835 = 884.3 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 532 \text{ afa}$$

2. Volume Calculations for Other Uses: *(See attached)***G. NARRATIVE/REMARKS/COMMENTS**

Permit 37-8165 was permitted for the diversion and use of up to a total of 3.0 cfs from White Arrow Hot Spring for irrigation use (3.0 cfs for 190 acres), heating use (3.0 cfs), domestic use (0.06 cfs), fish propagation use (3.0 cfs), and recreation use (0.30 cfs). The currently recorded permit holders, Robert and Bernardine Erkins, filed Proof of Beneficial Use in 1992. The property involved with the permit has changed hands and is now owned by Bliss Valley Properties LLC. Apparently the Erkins no longer have an interest in the permit and property involved with the permit.

On August 21st 2008, Allen Merritt, Cindy Yenter, and I met George Panagiotou of Bliss Valley Properties and C. G. Brockway (consultant for Bliss Valley Properties) on site to conduct the licensing exam for permit 37-8165. The development of the permit was completed by the Erkins, and essentially abandoned, and Bliss Valley Properties is in the process of restoring the development and property. Mr. Panagiotou has been attempting to figure out the vast network of pipes (many of which are buried) and valves in the developed system. The exam consisted of examining the existing system and development, and attempting to quantify the extent of beneficial use(s).

During the exam it was noted that the entire flow of White Arrow Hot Spring was captured and diverted to the development via two main pipes from the spring (see "Photo A"). Cindy Yenter, Water District 130 & 140 water master, conducted flow measurements of the captured White Arrow Hot Spring flow and it was determined that 1.93 cfs was diverted from the spring.

Permit 37-8165 describes the source as White Arrow Hot Spring tributary to Clover Creek, but it appears that White Arrow Hot Spring is tributary to a stream that is tributary to Clover Creek. This is reflected on the Davis Mountain SW USGS Quadrangle (Z69) with White Arrow Hot Spring being tributary to a stream (unnamed on map) that is tributary to Clover Creek. It should be noted that two SRBA decrees, 37-810 and 37-811, identify "Hot Spring Creek tributary to Clover Creek" as a source of water for irrigation use. These two decrees, 37-810 and 37-811, have priority dates dating back to the 1880s and identify a point of diversion near White Arrow Hot Spring. The IDWR GIS water right layer shows this particular point of diversion as being about 190 feet up the drainage from White Arrow Hot Spring. During the exam, it was noted that an old (abandoned) ditch is visible along the west side of the drainage below White Arrow Hot Spring that apparently conveyed water from the stream for irrigation use to the lands

below. It is assumed that the "Hot Spring Creek" listed on the two decrees, 37-810 and 37-811, refers to the unnamed stream that White Arrow Hot Spring is tributary to. It was observed that the channel above White Arrow Hot Spring was a dry channel and would only convey water for very limited time(s) resulting from snow melt or large rainfall runoff events. The development of permit 37-8165, capturing all of the flow of White Arrow Hot Spring, before entering the stream below, appears to replace the two decrees, 37-810 and 37-811. However, the two decrees could perhaps be modified via the transfer process to change the point of diversion to a location further down the stream channel to a point downstream of where waste water from 37-8165 returns to the stream. This would allow for the diversion and use of these rights from the stream (presumably "Hot Spring Creek tributary to Clover Creek") as described on the decrees.

As indicated previously the entire flow of White Arrow Hot Spring, measured at 1.93 cfs, is captured and utilized on the property. This captured water is capable of being used multiple times throughout the system. Some of the use(s) were not in operation during the time of the exam, but physical evidence was observed to document the following developed uses...

Irrigation: Water from White Arrow Hot Spring can be conveyed to the irrigation place of use via the east pipeline from the spring which can discharge into a ditch that leads to a series of ponds/lakes where the water is cooled and/or mixed with water from other sources of irrigation water. The irrigation use via these other sources of water is covered by decreed rights 37-4040 and 37-4041 which allow for the irrigation of 80 total acres located towards the south end of the overall irrigation place of use. Water from White Arrow Hot Spring can also be conveyed to the overall irrigation place of use via the west pipeline from the spring to the upper end of the irrigation place of use providing the ability to irrigate higher ground above and beyond the 80 acres described by decreed rights 37-4040 and 37-4041. This would pick up the entire irrigation place of use described by decreed rights 37-810 and 37-811, which is 133 acres. Rights 37-810, 37-811, 37-4040, and 37-4041 contain a condition limiting their combined irrigation to a total of 133 acres. It appears that the irrigation development described by permit 37-8165 does not include additional irrigated acres above the 133 acres described by the other rights. The irrigation development described by permit 37-8165 actually consists of the ability to irrigate the same 133 acres via a different source of water (White Arrow Hot Spring) than described by the existing rights. It is recommended that the irrigation use described by permit 37-8165 be licensed for the same 133 acres described by the other rights (with appropriate limiting overlap conditions) with a flow rate of 1.93 cfs (total measured diversion from White Arrow Hot Spring). Note that the 133 acre irrigation place of use does not include any land located within the NWSE of Section 30, which is BLM land. The recommended flow rate of 1.93 cfs for 133 acres is less than the maximum allowable 0.02 cfs per acre, and less than the permitted amount of 3.0 cfs for 190 acres of irrigation.

Heating: Water from White Arrow Hot Spring is conveyed via the east and west pipelines from the spring to various buildings on the property where it is utilized for heating use. Water is used to heat three homes (main residence, a relatively small home located near the main residence, and a guest house *all shown in "Photo B"*) and the "greenhouse building" (*see "photo C"*). Estimates of the water needs were made in accordance with the processes outlined in IDWR Application Processing Memo # 23 and a March 25, 1988 IDWR memo entitled "Estimating Annual Water Requirements for Geothermal Heating". The calculations were made based on information related to building size, building properties, water temp, climate, etc. Calculations for heating use are included as an attachment to this report. One item of note relates to a source temperature of 141.8 degrees Fahrenheit being used rather than the temperature of the water at the spring, measured as high as 158 degrees Fahrenheit. The 141.8 degree measurement was taken approximately 1000 feet downstream of the source, prior to entering the main residence, to account for heat loss in the uninsulated conveyance system to the heating place(s) of use. The results of the heating use estimate calculations revealed that 0.50 cfs of flow and an annual volume of 68.4 acre-feet per year can be licensed under 37-8165 for heating use (*see attached calculations*).

Domestic: George Panagiotou of Bliss Valley Properties indicated that water from White Arrow Hot Spring is used for culinary use in the three homes located on the property (see "photo B"). It is recommended that 0.06 cfs (permitted amount) and 1.8 acre-feet per year (IDWR standard of 0.6 afa for indoor domestic use multiplied by 3 homes) be licensed under 37-8165 for domestic use.

Fish Propagation: Water from White Arrow Hot Spring was used for fish propagation uses at two general locations on the property. The first location consisted of six raceways located south of the "greenhouse building" (see "Photo D"). The second location consisted of a couple of ponds located near the southwest end of the property. After water was used in the various uses associated with the buildings, surrounding uses, and the upper six raceways, the water was returned (injected) into the stream (the same stream discussed earlier below White Arrow Hot Spring and apparently identified as "Hot Spring Creek" on rights 37-810 and 37-811) where it was conveyed to the two ponds located towards the southwest end of the property. The first of these ponds (see "Photo E") is an on stream pond, constructed on the stream channel, and estimated to be storing approximately 1.0 acre-foot (surface area of 0.33 acres and approximately 3 feet deep). The second pond is located off stream, further to the south, where water could be diverted from the stream into the pond. George Panagiotou of Bliss Valley Properties indicated that it was his understanding that the Erkins had raised trout in these two ponds based on court testimony that he could recall. Apparently the Erkins, or some other party, had testified that trout was some of their more productive fish crop at the property. It seems logical that if trout were raised that they would be raised at these two ponds since the White Arrow Hot Spring water diverted through the overall system would be the coolest at these two locations. The map that accompanied Application for Permit 37-8165 also identifies "fish ponds" at these general locations. Note that since the White Arrow Hot Spring water is conveyed to these ponds in a natural channel, a point of injection (into the channel) is needed, and a point of rediversion is needed for the second pond diversion (where water is re-diverted from the channel). Since the first pond is located on a stream (on stream storage), the use of water at this pond needs to be described as "**fish propagation storage**", rather than "fish propagation" (use consists of storage of water on a stream), which may require a licensing amendment. It is recommended that the entire measured flow from White Arrow Hot Spring (1.93 cfs) over a 24 hour, 365 day period (1397.3 afa) be licensed for fish propagation use and that 1.0 acre-feet (on stream storage) be licensed for fish propagation storage. Note that the same water used in the upper six raceways can be reused further down the system in the lower two fish ponds.

Recreation: It is recommended that the permitted amount of 0.30 cfs for recreation use be licensed. The recreation use consists of water that is utilized in the swimming pool located behind the main residence and the moat located around the smaller house located behind the main residence (see "Photo B"). During the August 21st visit, the moat was drained for cleaning and maintenance, but I recall seeing water in the moat during a January 2008 pre exam visit to the property. George Panagiotou of Bliss Valley Properties indicated that when he took over the property, numerous ornamental type fish were observed in the moat. Water is typically diverted from the White Arrow Hot Spring system on a continual basis to keep the water in the moat and pool refreshed. A 24 hour, 365 day, diversion volume of 217.2 acre-feet (based on 0.30 cfs flow) is recommended for licensing for recreation use.

Commercial Use: Examination of the developed system that diverts and uses water from White Arrow Hot Spring revealed use(s) of water that do not actually fall under the previously permitted described uses (irrigation, domestic, fish propagation use, and recreation use). These uses of water were primarily confined to the "greenhouse building" (see "Photo C"). George Panagiotou of Bliss Valley Properties indicated that it was his understanding that the Erkins grew flowers, tomatoes, and mushrooms at the facility. Water from White Arrow Hot Spring was used for watering plants that were grown in the building and providing water to the employees working in the building. Note that large coolers were observed at the east side of the "greenhouse building" that were used to cool the hot water from White Arrow Hot Spring to a usable temperature (see "Photo C"). These uses of water are best described as a commercial use of water. Permit 37-8165 does not include commercial use as an authorized use of the water.

However examination of Application for Permit 37-8165 reveals that it indicates that water will be used to "supply" mushroom growing buildings, greenhouses, and an office building. It appears that the original intent of Application for Permit 37-8165 was for additional "non heating" use in the "greenhouse building". Permit 37-8165 was permitted for irrigation of a possible 190 acres, but as indicated previously it appears that only 133 acres were actually developed under the permit (and other rights). It appears that some of the undeveloped permitted irrigation use could be converted to commercial use without exceeding the permitted amounts authorized by Permit 37-8165, via the licensing amendment process. Assuming a general allowable consumptive use allowance of 3.0 acre-feet per acre for the area, the 57 acre difference in the 190 permitted acres versus the 133 developed acres could have in the neighborhood of 170 acre-feet per year of consumptive use. Note that exact historical cropping use on the 133 acres is not available, so using the general allowable consumptive use allowance of 3.0 acre-feet per acre for the area seems appropriate as an estimate of the maximum amount of water that might be available to convert to commercial use.

Estimates were made on the amount of water needed for the commercial use in the "greenhouse building". George Panagiotou of Bliss Valley Properties indicated that the "greenhouse building" was approximately 40,000 square feet, with six dark houses (used for mushrooms), four greenhouses (used for non mushroom plants), a large room where additional plants were grown, and a section of the building with locker rooms, break rooms, offices, etc.. Arcmap was used to determine that the "greenhouse building" is actually closer to 42,500 square feet, with the dark house and greenhouse section being approximately 25,000 square feet, the large room being about 10,000 square feet, and the remainder of the building (locker rooms, break rooms, offices, etc.) being about 7,500 square feet in size. Internet research was conducted to attempt to learn about mushroom farming and a way to estimate the water needs associated with raising mushrooms. However, no exact quantitative analysis was found to determine the amount of water needed on a mushroom farm, but it was determined that water is definitely needed in the various mushroom growing processes. Water is used to wet the mushroom compost, control the humidity in the growing environment, and water the casing (top dressing) on the growing mushrooms, and washing (pasteurizing) the growing room(s) after harvest. During the August 21st exam, Allen and I walked through the "greenhouse building" and observed an extensive plumbing system in the dark houses where the mushrooms were raised (see "Photo F"). This plumbing system consisted of a network of primarily overhead pipes with some pipes used to wet the walls in the facility (see "Photo G"). It was also observed that a wastewater collection drain ran through the center of the floor in the dark houses. Allen and I also observed the plumbing system where it appeared that water from White Arrow Hot Spring entered the "greenhouse building". A 5hp pump was observed as part of the system (see "Photo H"). Assuming an operating pressure of 50 psi, a 10 foot lift (approximately to the overhead piping elevation), and a 70% efficiency, the 5hp pump would provide a flow of approximately 0.25 cfs (see *attached calculations*). Allen and I found three timers that each appeared to allow for three cycles of pump operation totaling 11.5 minutes every hour. Assuming a 0.25 cfs flow rate and running the pump 11.5 minutes every hour for each of the three timers, 365 days a year, a total volume of about 102 acre-feet could be provided (see *attached calculations*). This 102 acre-foot volume is assumed to be the amount of water provided to the mushroom portion of the operation.

An article from a Texas newspaper was found on the internet where a vice president of Village Farms Tomato Growers was quoted that each of their 40 acre tomato greenhouses use an average of 80 million gallons of water per year. Note that George Panagiotou of Bliss Valley Properties indicated that the Erkins grew tomatoes in the "greenhouse building". Assuming that the entire footprint of the four greenhouses and the entire large room were utilized for growing tomatoes, a total of 20,000 square feet of area could have been used. Using an annual average of 2,000,000 gallons per acre, the 20,000 square feet could require 920,000 gallons per year or approximately 2.8 acre-feet per year (see *attached calculations*). Note that this estimate errors in favor of the permit/water right holder by assuming the entire square footage of the four greenhouses and the entire large room were utilized for growing tomatoes, but

may be offset by the differences in efficiency of scale when comparing the water needs for 20,000 square feet of tomato greenhouse versus 40 acres of tomato greenhouse.

An attempt to estimate the amount of water needed for the various workers working at the "greenhouse facility" was also made. It was estimated that a total of 40 workers were employed at the "greenhouse building" based on the number of lockers in the employee locker room. The IDWR field examiners handbook indicated that workers could require 15 gallons per shift so an estimate was made based on an assumed number of workers per shift, year round, to obtain an annual water use of approximately 0.5 acre-feet per year (*see attached calculations*). George Panagiotou of Bliss Valley Properties also indicated that water was more than likely used quite a bit for shower purposes at the facility. He based this on the idea of concerns with worker and plant safety associated with the growing of mushrooms (powder mold and other contaminants). While Allen and I were walking through the "greenhouse building" numerous warning signs were observed on various doors, so it seems that there may have been some sort of employee &/or plant safety concern. It was assumed that each employee showered twice per shift (coming and going) using 15 gallons per shower. This resulted in a water use estimate of approximately 1.0 acre-foot per year for employee showering purposes (*see attached calculations*).

If the 102 afa (dark house/mushroom water use), 2.8 afa (greenhouse/ tomato water use), 0.5 afa (worker water use), and 1.0 afa (shower water use) are added together a total of 106.3 afa could be licensed for commercial water use. It is recommended that a maximum flow of 0.25 cfs (based on theoretical flow rate calculation from 5 hp pump) be licensed for commercial use.

Total Amounts: Water for the various previously outlined uses can be reused for more than one use (water used multiple times in the system). For example, water for heating or commercial use could be used and then reused for the fish propagation or irrigation use. This appears to be the original intent of Application for Permit 37-8165 since terms such as "cascade effect", "multi-use", "maximum use of resource", were used on the original application. It is recommended that permit 37-8165 be licensed for a maximum diversion rate of 1.93 cfs, the entire measured captured flow of White Arrow Hot Spring. Each individual use will have individual rates and volume limitations as previously discussed. It is recommended that the total licensed annual volume amount reflect the annual volume of the 1.93 cfs running continuously for a total of 1397.3 acre-feet per year. This represents the physical limit of the system and allows for maximum utilization of the water for the various uses previously outlined.

Ownership: Permit 37-8165 is in the name of Robert & Bernadine Erkins, but the property is now owned by Bliss Valley Properties, LLC. Bliss Valley Properties, LLC has filed an ownership change / assignment of permit with the Department in an attempt to list Bliss Valley Properties, LLC as the current owner. See IDWR receipt S026520. Southern Region records indicate that this ownership change / assignment of permit was sent to the State Office on March 5, 2004.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

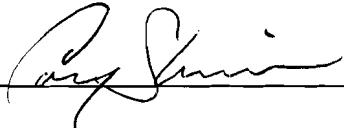
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
FISH PROPAGATION STORAGE	01/01 to 12/31		1.00 AF
COMMERCIAL	01/01 to 12/31	0.250 CFS	106.30 AF
IRRIGATION	03/15 to 11/15	1.930 CFS	532.00 AF
HEATING	01/01 to 12/31	0.500 CFS	68.40 AF
DOMESTIC	01/01 to 12/31	0.060 CFS	1.80 AF
FISH PROPAGATION	01/01 to 12/31	1.930 CFS	1,397.30 AF
RECREATION	01/01 to 12/31	0.300 CFS	217.20 AF
<u>Totals:</u>		1.930 CFS	1,397.30 AF

2. Recommended Amendments

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

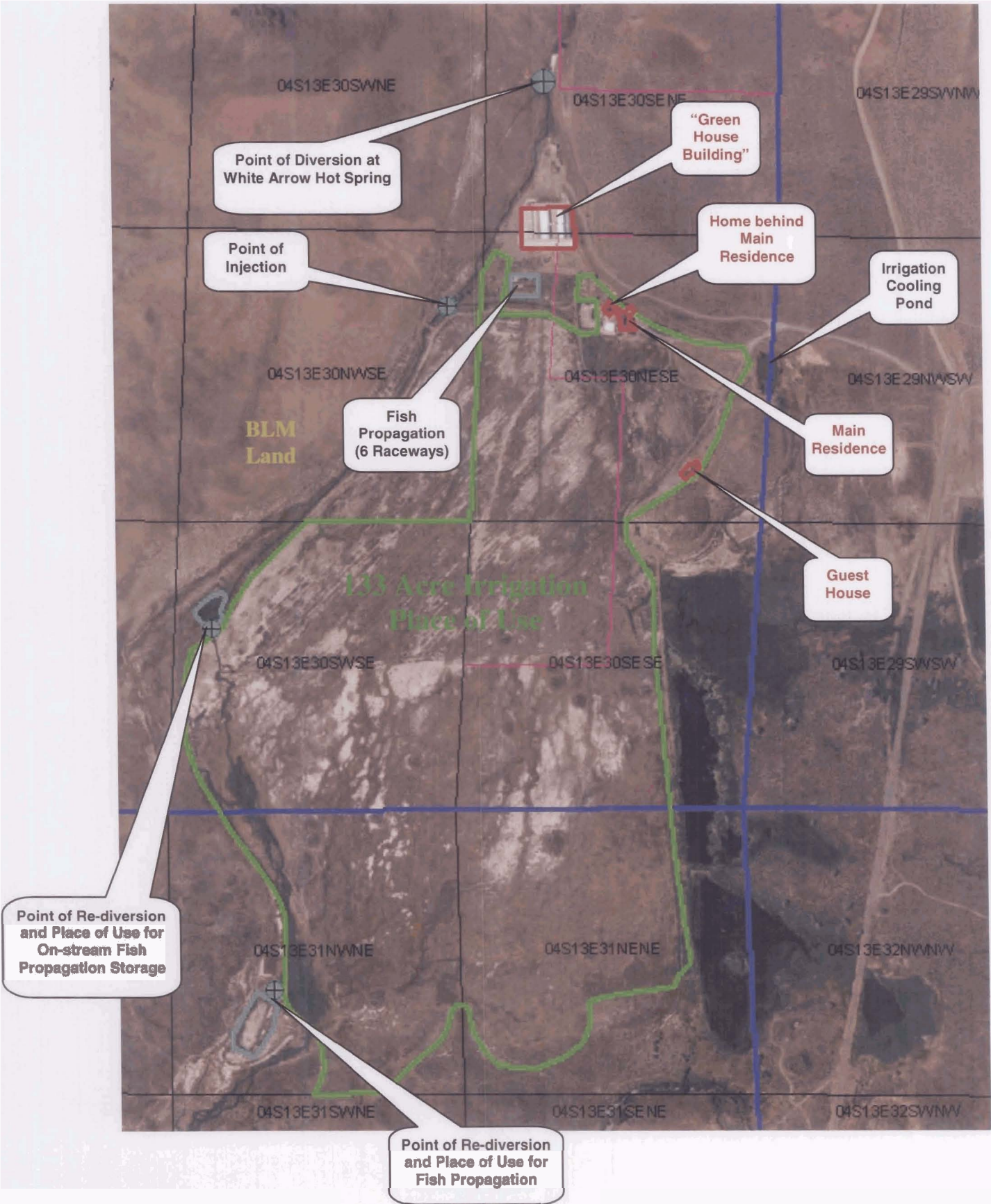
☒ Change P.U. as reflected above ☒ Add P.U. as reflected above ☒ Other *CHANGE NATURE(S) OF USE*

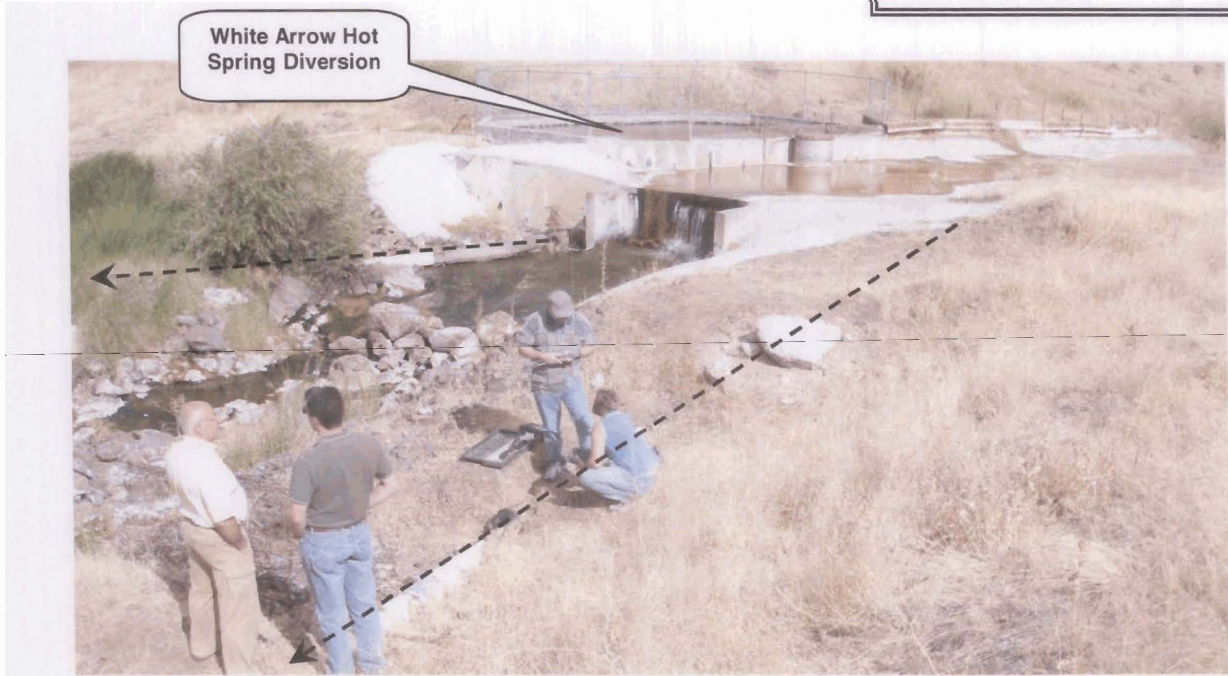
I. AUTHENTICATION

Field Examiner's Name  Date 9/9/2008

Reviewer _____ Date _____

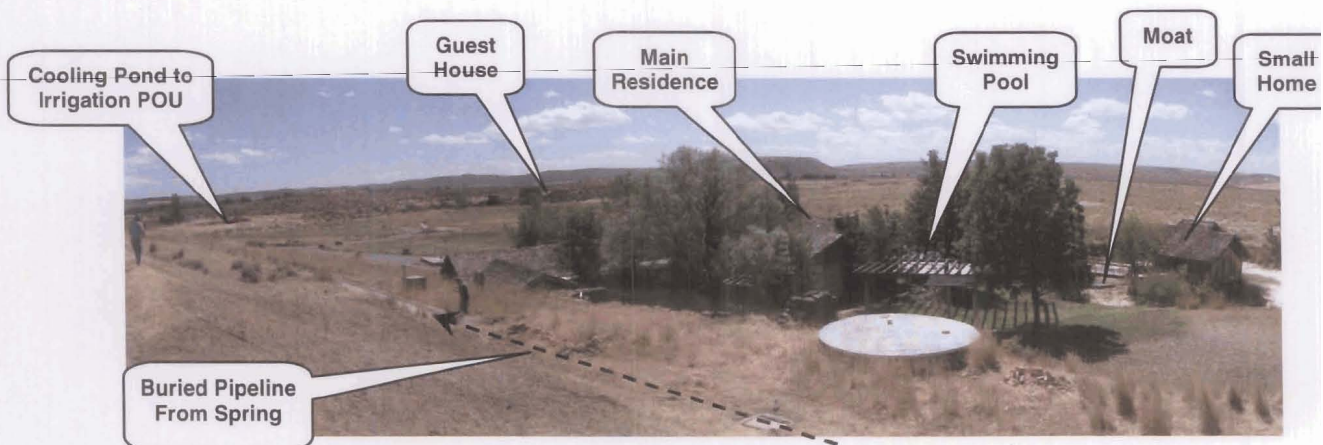
37-8165 Licensing Exam Map

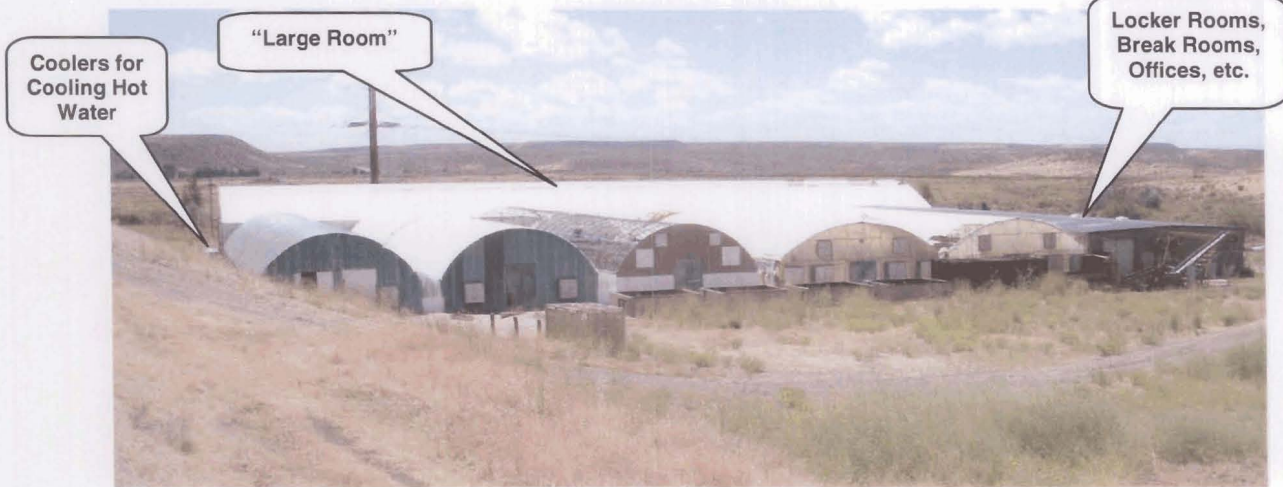




ABOVE: "Photo A" showing diversion of White Arrow Hot Spring (fenced in area indicated). Two main diversion pipes (approximate path indicated by dashed lines) convey water from the spring to the place(s) of use to the south.

BELOW: "Photo B" showing parts of the place(s) of use with various points of interest indicated. The irrigation place of use is located in the background, beyond the main residence and small home in the foreground of this view.

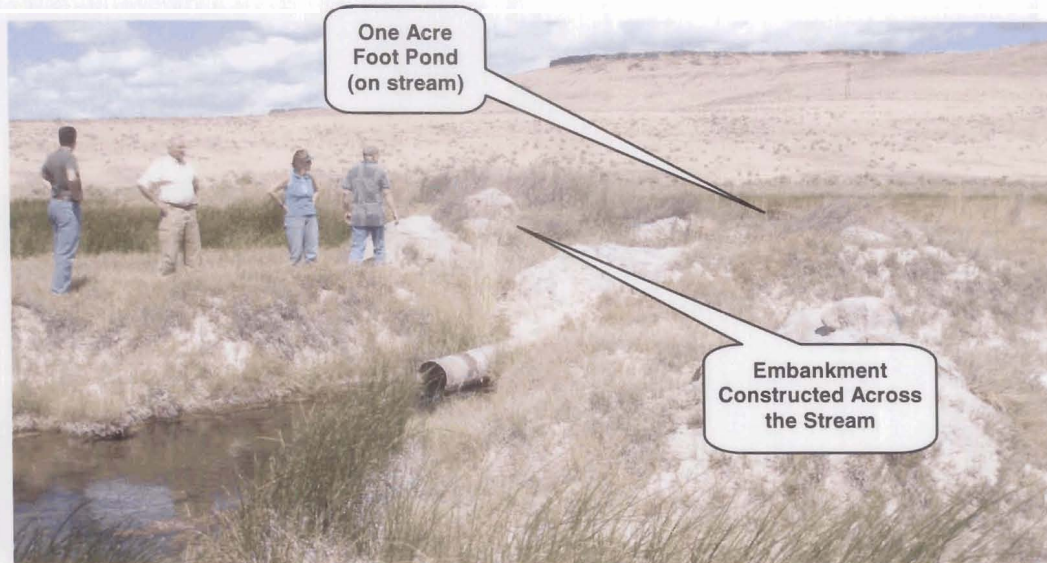




ABOVE: "Photo C" showing the "Green House Building" where commercial use occurred. The "large room" (south end of building) and the five round-roofed structures in the foreground of the view are where mushrooms and plants were grown. The flat roofed building at the far right is the location of locker rooms, break rooms, offices, etc. associated with the business.

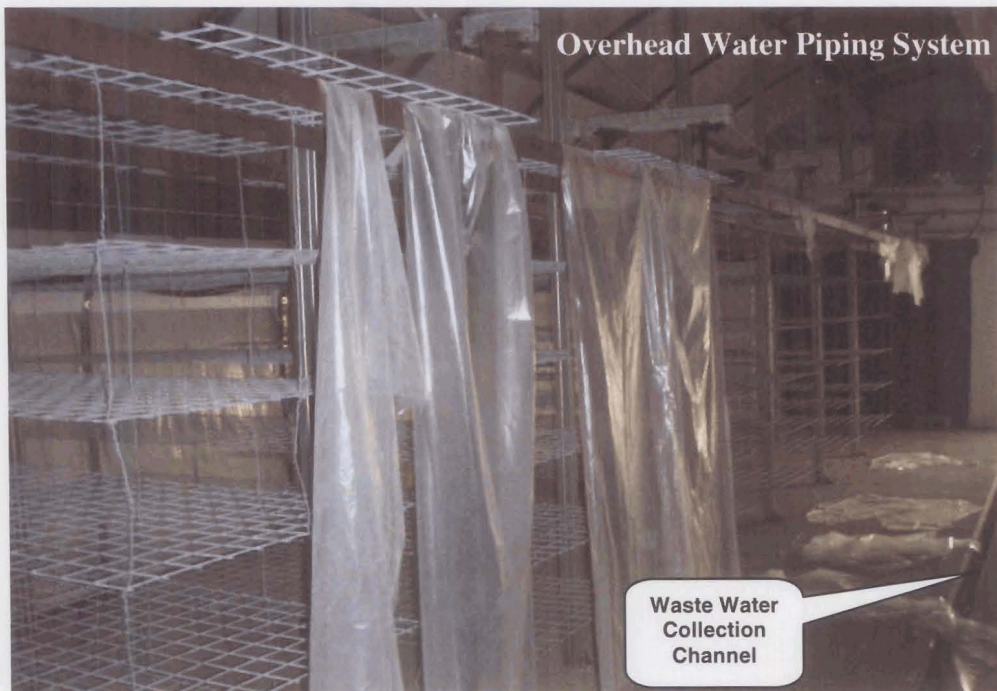
BELOW: "Photo D" showing one of the six fish raceways located just south of the "Green House Building". Note piping system visible in this view.

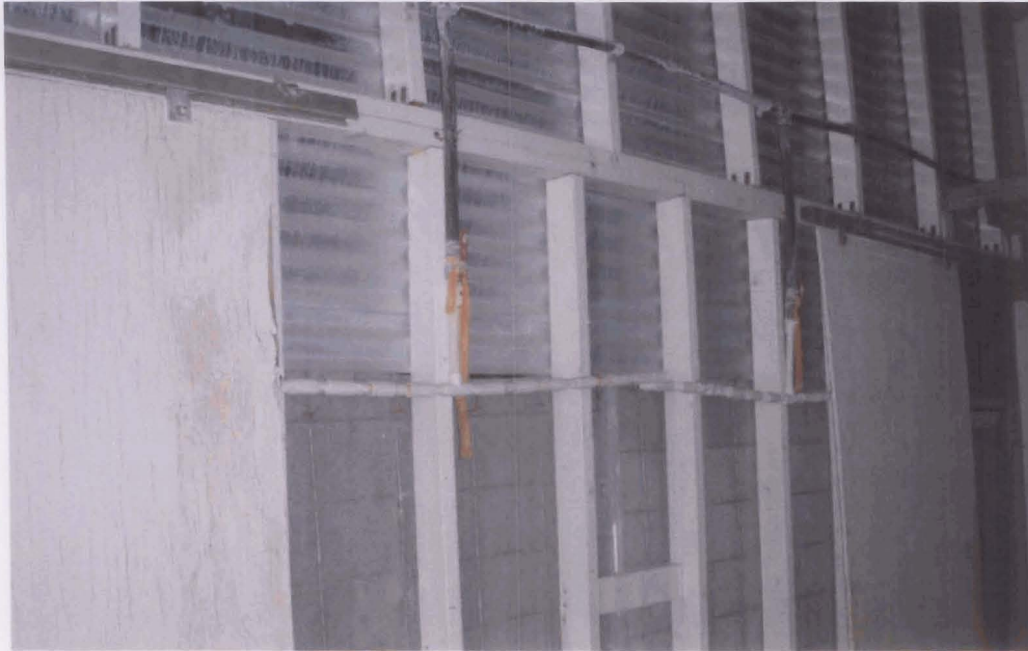




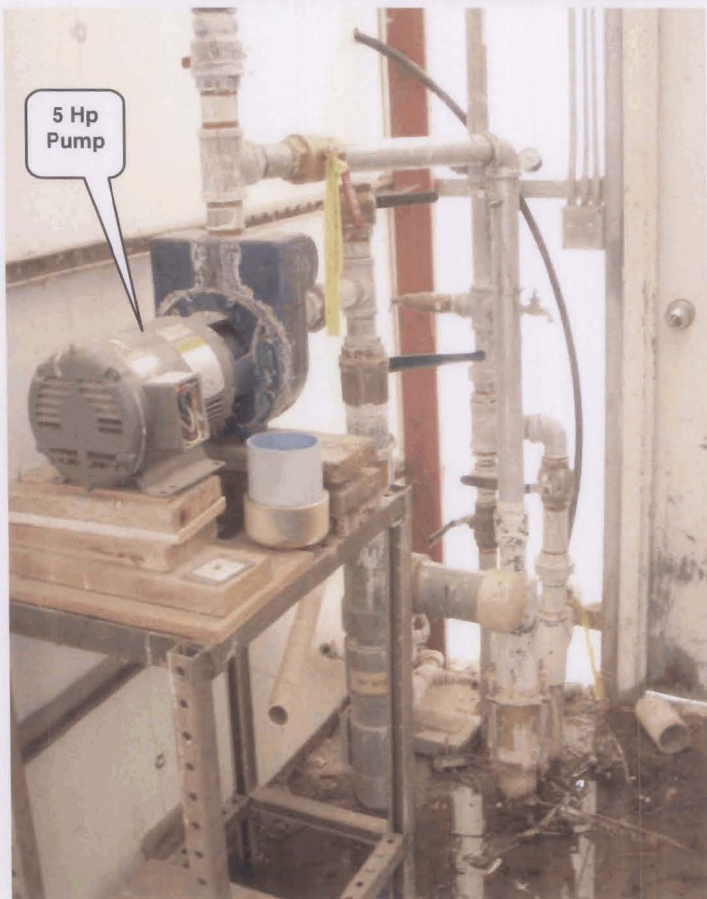
ABOVE: “Photo E” showing the location of the on stream pond (approximately one acre foot of storage). The pond is not quite visible in this photo, but is behind the embankment in the area indicated.

BELOW: “Photo F” View inside a portion of one of the dark houses in the “Green House Building” showing where mushrooms were grown (on the racks). An overhead piping system (not clearly visible) provided water to this area. The floor drained to a wastewater collection channel in the center of the dark house.





ABOVE: “Photo G” showing a section of one of the dark houses where water was used to wet the walls in the facility.



LEFT: “Photo H” View inside the “Green House Building” showing the plumbing system that delivered water to the various sections of the “Green House Building”. The plumbing system included a 5 hp pump.

Meas. No. _____
RCES
 Comp. by _____
 Checked by _____

[illegible]

Flow Weather

Other Air °F@

Gage Water °F@

..... Record removed Intake flushed ^U.....

Control _____

Remarks _____

G. H. of zero flow ----- ft.

[illegible]

White Arrow Hot Springs - East Pipe below spring diversion

LOG NAME:WA EAST

START :08-21 10:54

END :08-21 11:04

INTERVAL:00:01:00

8/21/2008 10:54	8/21/2008 11:00
+8.730E-1 ft/s	+8.510E-1 ft/s
+1.451E+2 gal/m	+1.414E+2 gal/m
+TOTAL 0000000 gal	+TOTAL 0000881 gal
NORMAL	NORMAL
8/21/2008 10:55	8/21/2008 11:01
+8.772E-1 ft/s	+8.936E-1 ft/s
+1.458E+2 gal/m	+1.485E+2 gal/m
+TOTAL 0000144 gal	+TOTAL 0001028 gal
NORMAL	NORMAL
8/21/2008 10:56	8/21/2008 11:02
+8.872E-1 ft/s	+8.771E-1 ft/s
+1.474E+2 gal/m	+1.457E+2 gal/m
+TOTAL 0000291 gal	+TOTAL 0001175 gal
NORMAL	NORMAL
8/21/2008 10:57	8/21/2008 11:03
+8.488E-1 ft/s	+8.957E-1 ft/s
+1.410E+2 gal/m	+1.488E+2 gal/m
+TOTAL 0000439 gal	+TOTAL 0001323 gal
NORMAL	NORMAL
8/21/2008 10:58	8/21/2008 11:04
+8.815E-1 ft/s	+8.777E-1 ft/s
+1.465E+2 gal/m	+1.458E+2 gal/m
+TOTAL 0000584 gal	+TOTAL 0001470 gal
NORMAL	NORMAL
8/21/2008 10:59	
+8.859E-1 ft/s	147 gpm
+1.472E+2 gal/m	0.33 cfs
+TOTAL 0000732 gal	
NORMAL	

White Arrow Hot Springs - West pipe near greenhouse building

LOG NAME:WA WEST

START :08-21 11:37

END :08-21 11:47

INTERVAL:00:01:00

8/21/2008 11:37
+1.984E+0 ft/s
+4.741E+2 gal/m
+TOTAL 0000000 gal
NORMAL

8/21/2008 11:43
+1.936E+0 ft/s
+4.627E+2 gal/m
+TOTAL 0002801 gal
NORMAL

8/21/2008 11:38
+1.935E+0 ft/s
+4.624E+2 gal/m
+TOTAL 0000458 gal
NORMAL

8/21/2008 11:44
+1.932E+0 ft/s
+4.617E+2 gal/m
+TOTAL 0003266 gal
NORMAL

8/21/2008 11:39
+1.958E+0 ft/s
+4.680E+2 gal/m
+TOTAL 0000926 gal
NORMAL

8/21/2008 11:45
+1.949E+0 ft/s
+4.658E+2 gal/m
+TOTAL 0003735 gal
NORMAL

8/21/2008 11:40
+1.940E+0 ft/s
+4.638E+2 gal/m
+TOTAL 0001395 gal
NORMAL

8/21/2008 11:46
+1.913E+0 ft/s
+4.571E+2 gal/m
+TOTAL 0004204 gal
NORMAL

8/21/2008 11:41
+1.940E+0 ft/s
+4.636E+2 gal/m
+TOTAL 0001863 gal
NORMAL

8/21/2008 11:47
+1.992E+0 ft/s
+4.761E+2 gal/m
+TOTAL 0004670 gal
NORMAL

8/21/2008 11:42
+1.981E+0 ft/s
+4.735E+2 gal/m
+TOTAL 0002332 gal
NORMAL

467 gpm
1.04 cfs