

Dr. Bob Harrington
Inyo County Water Department
135 South Jackson Street
Independence, CA 93526

December 1, 2010

RE: Summary of Hydrologic Monitoring Activities November 2010
Rose Valley, Inyo County, California
Hay Ranch Project Conditional Use Permit #2007-03

Dear Dr. Harrington:

This letter is intended to summarize hydrologic monitoring activities conducted in November 2010 by TEAM Engineering & Management, Inc. (TEAM), related to the Hay Ranch Water Extraction Project and CUP #2007-03.

Phase 2: Startup Monitoring and Reporting

With the initiation of pumping by Coso Operating Company on December 25, 2009, the Hay Ranch Water Extraction Project entered into the Phase 2 Startup Monitoring and Reporting period as outlined in the Hydrologic Monitoring and Mitigation Plan (HMMP).

During the November 2010 monthly hydrologic data collection event at 30 monitoring locations in the Rose Valley area, static depth-to-water (DTW) measurements, one visual observation of the Little Lake Ranch Siphon Well Outflow and four sets of flow rates were collected by TEAM, as summarized in the attached table (Table 1). Data for this monthly field event was collected on November 17-18. Pressure transducer data were downloaded from 24 units, including one “BaroTroll” measuring barometric pressure. On November 2, a DTW measurement at LADWP 816 Well was taken by LADWP personnel.

With the completion of the permanent water tank in May 2010 at the Hay Ranch Property, groundwater flow from the Hay Ranch South Well is being recorded at the HRS B Totalizer. This totalizer went on-line May 12, 2010 with an initial reading of 0 gallons. The HRS A Totalizer, which had captured all flow pumped from the Hay Ranch South Well before May 12, has been removed. The amount of groundwater captured by HRS A for the Hay Ranch Project was 245,294,000 gallons (753 acre feet). Groundwater pumped from the Hay Ranch North Well, the project’s reserve production well, is being measured at the HRN C Totalizer. The HRN C Totalizer went online in May 2010 with an initial reading of 0 gallons.

The HRS B Totalizer read 398,765,000 gallons at 12:43 hours, November 17. The HRN C Totalizer read 199,551,000 gallons at 12:44 hours, November 17. The combined totals from HRS A, HRS B, and HRN C represent approximately 843,610,000 gallons (2589 acre feet) of groundwater extracted from the Hay Ranch property wells since project initiation on December 25, 2009.

Figure 1 presents the combined amount of groundwater pumped from the Hay Ranch North and South wells from December 25, 2009 to November 17, 2010 in acre feet (AF) compared to a hypothetical pumping amount. The hypothetical pumping amount assumes a linear pumping rate (approximately 8.2 AF/day) which starts on December 25, 2009 and reaches 3000 AF on December 25, 2010.

Dunmovin Trigger Level

In Table 3.1 of the HMMP for the Hay Ranch Project, Trigger Levels have been set for the 0.75-year time period at specific monitoring wells. Approximately 11 months (0.92 years) have elapsed since the Hay Ranch Project's pumping was initiated. Based on data collected by TEAM during the November monitoring event, the groundwater elevation (GWE) in the Dunmovin Well is below the 0.75-year Trigger Level (Table 2).

The baseline groundwater elevation (GWE) for Dunmovin, set by Inyo County Water Department (ICWD) in January 2010, is 3252.73 feet. The GWE at Dunmovin as measured at 09:00 on November 17, 2010 was 3250.42 feet. The 0.75-year Trigger Level for Dunmovin is 0.7 feet. The Dunmovin GWE has decreased by 2.31 feet compared to its baseline, exceeding its 0.75-year Trigger Level drawdown by 1.61 feet. The Dunmovin GWE was 0.49 feet above its Maximum Acceptable Drawdown level as of November 17. The maximum GWE recorded at Dunmovin Well was 3253.60 and occurred on January 21, 2010. The minimum GWE recorded at the Dunmovin Well was 3250.42 and occurred on November 17, 2010. Inyo County Water Department and Coso Operating Company were notified by TEAM in a timely manner regarding this continuing trigger level event.

Groundwater elevations are above 0.75-year Trigger Levels and above Maximum Acceptable Drawdowns at all other Hay Ranch Project monitoring wells which have baseline and trigger levels established.

Operational Notes

A manual DTW read was not taken from RV-160 (18-28 GTH Well) due to an inoperable lock. The pressure transducer from this well was downloaded. This lock issue will be addressed before the December 2010 monitoring event.

Data Transmittal

TEAM posted updates to the "Coso" database on the ICWD web server. New Hay Ranch Project hydrographs in PDF form were uploaded to the ICWD website (www.inyowater.org).

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If you have any questions or require additional information, please contact TEAM at your convenience.

Sincerely,

TEAM Engineering & Management, Inc.

Keith Rainville
Staff Geologist

TABLE 1
Field Observations of Rose Valley Hydrologic Monitoring Points
November 17-18, 2010

Project Name:	Hay Ranch Project HMMP	Date: November 17-18, 2010
Location:	Rose Valley, Inyo County	
Observer(s):	K. Rainville	Page: 1 of 1

Well ID	Monitoring Point	Date	Time	DTW (ft)	Flow (cfs)	GWE (ft amsl)	Method	Transducer Log Interval	Notes
RV-10	Dews	11/17/10	15:08	231.39		3755.53	TEAM manual read	NA	
RV-20	LADWP 816	11/02/10	13:48	80.10		3434.96	LADWP manual read	NA	Data provided by LADWP
RV-30	Cal Pumice	11/17/10	9:14	253.18		3252.71	TEAM manual read	Hourly	
RV-40	Dunmovin	11/17/10	9:00	297.45		3250.42	TEAM manual read	NA	
RV-50	Hay Ranch North	11/17/10	12:44	NM	Yes	NM	TEAM manual read	NA	199,551,000 gallons (612 AF) pumped since 12/25/09
RV-60	Hay Ranch 1A	11/17/10	12:50	196.91		3235.26	TEAM manual read	Hourly	
RV-61	Hay Ranch 1B	11/17/10	12:54	228.53		3203.32	TEAM manual read	Hourly	
RV-62	Hay Ranch 1C	11/17/10	13:02	217.93		3213.57	TEAM manual read	Hourly	
RV-70	Hay Ranch South	11/17/10	12:43	NM	Yes	NM	TEAM manual read	NA	644,059,000 gallons (1976 AF) pumped since 12/25/09
RV-80	Hay Ranch 2A	11/17/10	11:30	198.00		3235.00	TEAM manual read	Hourly	
RV-81	Hay Ranch 2B	11/17/10	11:28	224.97		3207.66	TEAM manual read	Hourly	
RV-82	Hay Ranch 2C	11/17/10	12:21	210.70		3221.40	TEAM manual read	Hourly	
RV-90	Coso Jct Ranch	11/17/10	9:32	171.95		3231.18	TEAM manual read	Hourly	
RV-100	Coso Jct Store #1	11/17/10	9:52	144.25		3227.87	TEAM manual read	Hourly	
RV-110	Davis Ranch North Well	11/17/10	13:28	6.48		3886.52	TEAM manual read	Hourly	
RV-111	Davis Ranch South Well	11/17/10	13:45	11.25		3886.75	TEAM manual read	Hourly	
RV-112	Davis Ranch South Flow	11/17/10	13:58	NA	0.010	NA	TEAM manual read	Hourly	
RV-120	Red Hill Well (BLM)	11/17/10	10:10	140.05		3200.78	TEAM manual read	Hourly	
RV-130	G-36	11/18/10	13:45	180.05		3199.97	TEAM manual read	NA	
RV-140	Lego	11/18/10	13:29	222.05		3200.80	TEAM manual read	Hourly	
RV-150	Cinder Road	11/17/10	10:56	191.00		3186.96	TEAM manual read	Hourly	
RV-160	18-28 GTH	11/18/10	13:11	NM		NM	TEAM manual read	Hourly	Well inaccessible
RV-170	Fossil Falls Campground	11/17/10	10:45	141.03		3175.74	TEAM manual read	NA	
RV-180	LLR North Well	11/18/10	10:45	40.11		3158.99	TEAM manual read	Hourly	
RV-210	LLR Dock Well	11/18/10	11:02	6.21		3147.93	TEAM manual read	Hourly	
RV-220	LLR Stilling Well (lake surface)	11/18/10	11:09	3.69		3147.35	TEAM manual read	Hourly	
RV-230	LLR Little Lake Outflow	11/18/10	11:40	NA	0.01	NA	TEAM manual read	Hourly	
RV-240	LLR Coso Springs Flow	11/18/10	11:28	NA	0.31	NA	TEAM manual read	Hourly	
RV-245	LLR North Culvert Flow	11/18/10	12:00	NA	0.81	NA	TEAM manual read	Hourly	
RV-250	LLR Siphon Discharge	11/18/10	11:55	NA	Yes	NA	TEAM visual read	NA	Siphon Well flowing into Pond 2
RV-260	LLR Hotel Well	11/18/10	10:28	0.68		3138.10	TEAM manual read	Hourly	Pressure gauge reads 0 psi

NM - not measured; NA - not applicable; IO - Inoperative

DTW - Depth to water in feet below top of casing or other reference point; a negative DTW indicates that the groundwater elevation is above the surveyed reference point

GWE- Groundwater elevation in feet above mean sea level

TABLE 2
Hay Ranch Project Groundwater Baselines and Trigger Levels
November 2010

Well ID	Monitoring Point	Baseline GWE ¹	Recent Date of Measurement	Recent GWE	Recent GWE Compared to Baseline	Recent GWE Above Max DD ²	Trigger Level At .75 year elapsed	Recent GWE Compared to Trigger Level
RV-30	Cal Pumice	TBD ³	11/17/10	3252.71	NA	NA	3.3	NA
RV-40	Dunmovin	3252.73	11/17/10	3250.42	-2.31	0.49	0.7	-1.61
RV-90	Coso Jct Ranch	3230.65	11/17/10	3231.18	0.53	3.03	0.9	1.43
RV-100	Coso Jct Store #1	3227.59	11/17/10	3227.87	0.28	2.58	0.7	0.98
RV-120	Red Hill Well	3200.66	11/17/10	3200.78	0.12	TBD ⁴	TBD ⁴	NA
RV-130	G-36	3198.35	11/18/10	3199.97	1.62	2.72	0.2	1.82
RV-140	Lego	3199.21	11/18/10	3200.80	1.59	2.69	0.2	1.79
RV-150	Cinder Road	3186.92	11/17/10	3186.96	0.04	0.74	0.2	0.24
RV-160	18-28 GTH	3187.67	NM ⁵	NM	NA	NA	0.2	NA
RV-180	LLR North Well	3158.88	11/18/10	3158.99	0.11	0.51	0.2	0.31

1) GWE: Groundwater elevation measured in feet above mean sea level. Baseline GWEs set 1/25/10 and approved by Inyo County Water Department

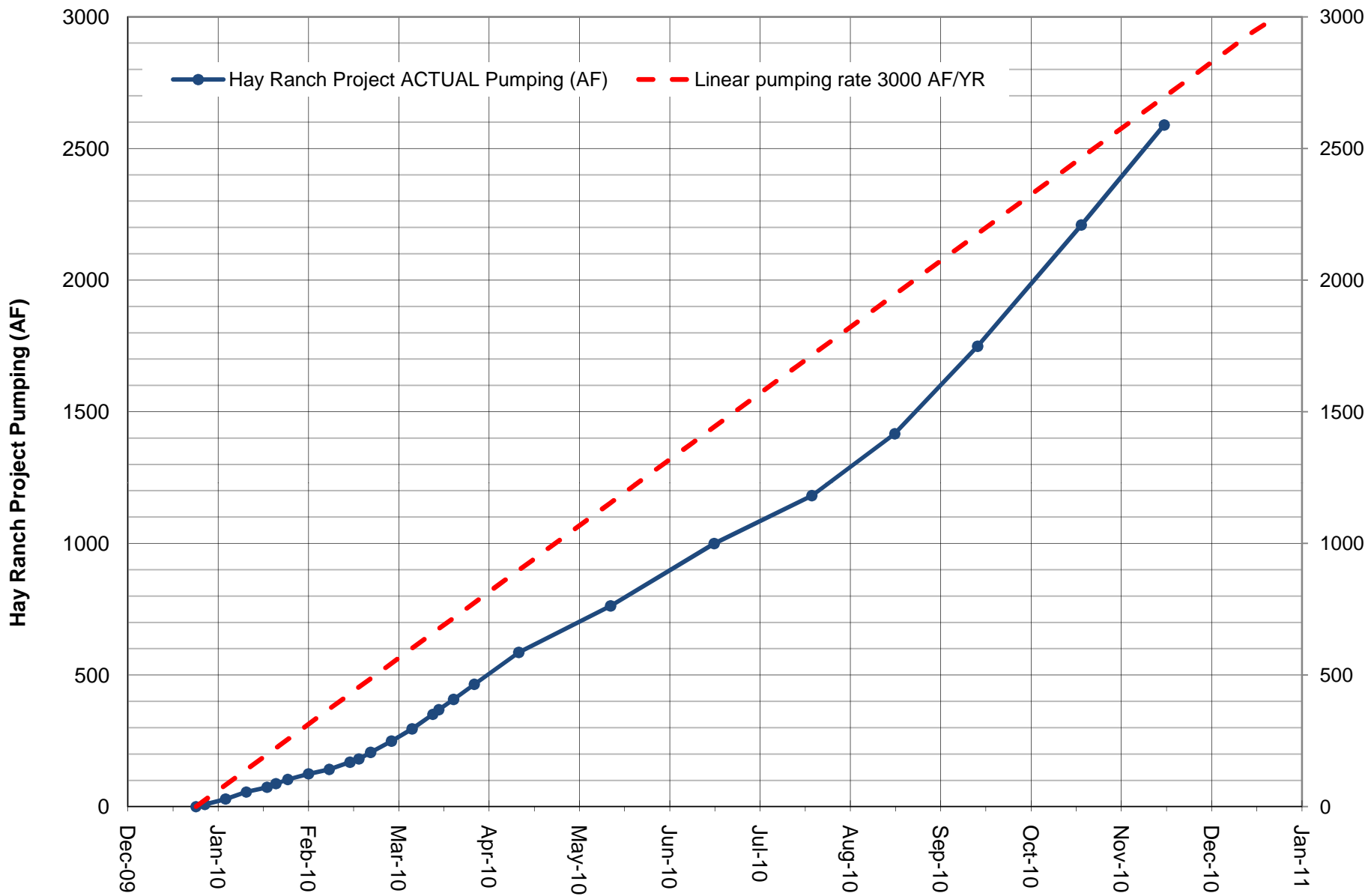
2) Max DD: Maximum Acceptable Drawdown from HMMP Table 3-1

3) Cal Pumice Well baseline groundwater elevation has not been set

4) Trigger Levels and Maximum Acceptable Drawdown levels for Red Hill Well have not been set

5) RV 160 18-28 GTH Well was inaccessible during the November field event

FIGURE 1
HYPOTHETICAL AND ACTUAL HAY RANCH PROJECT PUMPING



Note: Coso Operating Co. initiated Hay Ranch Project pumping on 12/25/09.
The "linear pumping rate" shown above is a hypothetical pumping rate that reaches 3000 Acre Feet (AF) in one year with pumping evenly distributed at 8.2 AF/day.