Paraiso Springs Resort – Estimated Potable Water Demand and Potable Water Source

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Introduction

This technical memorandum summarizes the potable water studies conducted for the proposed Paraiso Springs Resort, located west of Soledad/Greenfield in Monterey County. The site consists of a rectangular-shaped parcel encompassing approximately 280 acres. The site is located between the crest of the Sierra De Salinas and the Salinas Valley (see Attachment 1, Location Map). Existing site improvements include a barn, a "clubhouse," many small shacks, and mobile homes. An active hot spring and associated spa and pools are also located onsite. Existing wells are located onsite.

Vegetative cover on the 280-acre site consists of native grasses, weeds, trees, and chaparral in the bottoms of Paraiso Springs Valley and Indian Valley. The slopes to the south of Paraiso Springs Valley and Indian Valley are generally oak woodland. Slopes on the north side of Paraiso Springs Valley and Indian Valley are chaparral. Drainage of the site is by sheet flow to the drainages of Paraiso Springs Valley and Indian Valley. In the Paraiso Springs Valley, drainage of site water also occurs through spring and seep discharge. These drainages are unnamed and flow to the east where they join the Arroyo Seco River. The Arroyo Seco River flows north to the Salinas River, which eventually discharges into the Monterey Bay.

The proposed site development will consist of a destination spa resort with a 103-room resort hotel (including 105 bedrooms), with spa and fitness center facilities, a hamlet day spa, 17 time-share villas, 60 time-share condominiums, 310 parking spaces, and approximately 11,100 feet of private roadways.

The Paraiso Springs Valley has a long history of groundwater use. Native Californians were the first to utilize this resource; hence, the name of Indian Valley given to the drainage to the north of Paraiso Springs Valley. The Spaniards and early Californians also took advantage of the groundwater resources of the area. In the southeast corner of Paraiso Springs Valley, the Mission Soledad had its vineyard. The Mission eventually sold the property. After the sale, the site was used for its hot spring mineral baths circa 1880s.

Numerous wells and hot springs are located onsite. The Main Well (Well No. 1) is approximately 100 feet deep and currently used for domestic water, typically pumping at a rate of 20 to 30 gallons per minute (Geoconsultants, 2004). Well No. 2 is approximately 760 feet deep and typically pumps at a rate of 200-300 gallons per minute, but is not used for domestic water (Geoconsultants, 2004). The Soda Springs well is currently being used for hot water for the spa and pool. This well is 37 feet deep and produces 30 to 40 gallons per minute at ±115^{o} F (Geosolutions, 1998).

The abundant groundwater resource of this valley was verified by the investigation referenced in *Geologic and Soil Engineering Feasibility Report for Paraiso Hot Springs Spa Resort* (Landset Engineers, December 2004). Of the 15 geotechnical borings drilled in Paraiso Springs Valley, 10 borings encountered groundwater. Depths to ground water ranged from 11.0 to 55.0 feet below the ground surface. Groundwater in the area of the current hot springs was found to be 11.0 to 18.5 feet below the ground surface. The borings west of the current hot springs encountered groundwater at greater depths the farther west they were drilled, approximately 18.5 feet to 55.0 feet. All borings that encountered groundwater were drilled in alluvium.

Potable Water Demand

The following presents the estimated peak day potable water demand for the Paraiso Springs Resort, based on the land use described above and site plan for the Project dated July 2005 (see Attachment 2, Site Plan). The preliminary design assumption is that the resort hotel rooms will be at full occupancy, all homes will be occupied, and all restaurants and other amenities will be operating at full capacity. This condition represents the most extreme demand on the water supply system.

To estimate peak day demand, water use factors provided in Table 2 of the *Non-residential Water Use Factors of Rule 24 – Calculation of Water Use Capacity and Connection Charges*, from the Monterey Peninsula Water Management District (MPWMD), were applied to all pertinent project elements.

Table 1 shows the calculations for the estimated Project peak day potable water demand. Table 2 summarizes the water demand estimate by each of the four Project development phases and for full buildout. Irrigation demand varies throughout the year. Landscape irrigation will be supplied by recycled wastewater and supplemented with potable water if recycled wastewater is unavailable. Irrigation water demand for the Project is estimated in the companion technical memorandum, *Paraiso Springs Resort – Estimated Wastewater Production and Proposed Treatment, Irrigation, and Storage*.

TABLE 1

Paraiso Resort Water Calculations

	Facility Description[a]	Type	Water Use Factor[b]	Number of Units	Sq Ft	Total Acre-feet/Year	Conversion Acre-feet to gpm	Total gpm
Phase 1 Increment								
Hotel	Hotel Rooms[c]	room	0.13	62		8.06	0.62	5.00
	Time Share Condos[d]							
	2 Bedroom	room	0.23	10		2.3	0.62	1.43
	3 Bedroom	room	0.33	8		2.64	0.62	1.64
	Time Share Villas[e]	single family						
	3 bedroom	room	0.33	3		0.99	0.62	0.61
	4 bedroom	room	0.43	2		0.86	0.62	0.53
	Subtotal					14.85		9.21
				# Of Seats				
	Main Hotel Restaurant	restaurant	0.02	125		2.5	0.62	1.55
	Coffee and Tea Cafe	coffee house	0.0002		2,000	0.4	0.62	0.25
	Spa Restaurant	restaurant	0.02	20		0.4	0.62	0.25
	Meetings/ Conference[f]							
	Banquet/Kitchen	meeting hall	0.00053		3,500	1.855	0.62	1.15
	Conference Room	conference room	0.00007		9,016	0.63112	0.62	0.39
	Culinary School[g]	restaurant	0.02	20		0.4	0.62	0.25
	Administration Support[c]	support						
	Back of House[c]	support						
	Subtotal					6.18612		3.84
Hamlet	Day Spa	spa	0.05			0.05	0.62	0.03
	General Retail Stores	retail	0.00007		3,500	0.245	0.62	0.15
	Artist Studio & Stores	retail	0.00007		6,300	0.441	0.62	0.27
	Real Estate Office	retail	0.00007		450	0.0315	0.62	0.02
	Vineyard Facilities	retail	0.00007		3,200	0.224	0.62	0.14
	Garden Center	nursery	0.00009		3,000	0.27	0.62	0.17
	Subtotal					1.2615		0.78
Spa	Spa Facilities[h]	spa	0.05			0.05	0.62	0.03
	Teahouse	spa						
	Hammans and Kniepp	spa						
	Aqua Course & Massage	spa						
	Villas and Pavilions	spa						
	Creative Center	spa						
	Subtotal					0.05		0.03
Fitness	Fitness Facilities							
	Golf School	gym	0.00007		2,000	0.14	0.62	0.09
	Basketball and Racquetball	gym	0.00007		9,400	0.658	0.62	0.41
	Lap Pool	pool	0.02		24.6	0.492	0.62	0.31
	Subtotal					1.29		0.80
Miscellaneous	Support Facilities[a]							
	Institute	educational	0.00007		4,000	0.28	0.62	0.17
	Visitor Center	retail	0.00007		750	0.0525	0.62	0.03
	Pet Spa	veterinary	0.00007		400	0.028	0.62	0.02
	Subtotal					0.3605		0.22
Potable Water Use Subtotal	Subtotal					24	0.62	14.88
Supplemental Irrigation[i]						36.21	0.62	22.45
	Totals							37.33

TABLE 1

Paraiso Resort Water Calculations

	Facility Description[a]	Type	Water Use Factor[b]	Number of Units	Sq Ft	Total Acre-feet/Year	Conversion Acre-feet to gpm	Total gpm
Phase 2 Increment								
Hotel	Hotel Rooms[c]	room	0.13	15		1.95	0.62	1.21
	Time Share Condos[d]							
	2 Bedroom	room	0.23	8		1.84	0.62	1.14
	3 Bedroom	room	0.33	6		1.98	0.62	1.23
	Time Share Villas[e]	single family						
	3 bedroom	room	0.33	2		0.66	0.62	0.41
	4 bedroom	room	0.43	2		0.86	0.62	0.53
	Subtotal					7.29		4.52
				# Of Seats				
	Main Hotel Restaurant	restaurant	0.02	50		1	0.62	0.62
	Coffee and Tea Cafe	coffee house	0		2,000	0	0.62	0.00
	Spa Restaurant	restaurant	0.02	13		0.26	0.62	0.16
	Meetings/ Conference[f]							
	Banquet/Kitchen	meeting hall	0		3,500	0	0.62	0.00
	Conference Room	conference room	0		9,016	0	0.62	0.00
	Culinary School[g]	restaurant	0			0	0.62	0.00
	Administration Support[c]	support						
	Back of House[c]	support						
	Subtotal					1.26		0.78
Hamlet	Day Spa	spa	0				0.62	0.00
	General Retail Stores	retail	0		3,500	0	0.62	0.00
	Artist Studio & Stores	retail	0		6,300	0	0.62	0.00
	Real Estate Office	retail	0		450	0	0.62	0.00
	Vineyard Facilities	retail	0		3,200	0	0.62	0.00
	Garden Center	nursery	0		3,000	0	0.62	0.00
	Subtotal		0			0		0.00
Spa	Spa Facilities[h]	spa	0				0.62	0.00
	Teahouse	spa						
	Hammans and Kniepp	spa						
	Aqua Course & Massage	spa						
	Villas and Pavilions	spa						
	Creative Center	spa						
	Subtotal					0		0.00
Fitness	Fitness Facilities							
	Golf School	gym	0		2,000	0	0.62	0.00
	Basketball and Racquetball	gym	0		9,400	0	0.62	0.00
	Lap Pool	pool	0		24.6	0	0.62	0.00
	Subtotal					0		0.00
Miscellaneous	Support Facilities[a]							
	Institute	educational	0		4,000	0	0.62	0.00
	Visitor Center	retail	0		750	0	0.62	0.00
	Pet Spa	veterinary	0		400	0	0.62	0.00
	Subtotal					0		0.00
Potable Water Use Subtotal	Subtotal					8.55	0.62	5.30
Supplemental Irrigation[i]								
	Totals					8.55		5.30

TABLE 1

Paraiso Resort Water Calculations

	Facility Description[a]	Type	Water Use Factor[b]	Number of Units	Sq Ft	Total Acre-feet/Year	Conversion Acre-feet to gpm	Total gpm
Phase 3 Increment								
Hotel	Hotel Rooms[c]	room	0.13	15		1.95	0.62	1.21
	Time Share Condos[d]							
	2 Bedroom	room	0.23	8		1.84	0.62	1.14
	3 Bedroom	room	0.33	6		1.98	0.62	1.23
	Time Share Villas[e]	single family						
	3 bedroom	room	0.33	2		0.66	0.62	0.41
	4 bedroom	room	0.43	2		0.86	0.62	0.53
	Subtotal					7.29		4.52
				# Of Seats				
	Main Hotel Restaurant	restaurant	0.02	30		0.6	0.62	0.37
	Coffee and Tea Cafe	coffee house	0		2,000	0	0.62	0.00
	Spa Restaurant	restaurant	0.02			0	0.62	0.00
	Meetings/ Conference[f]							
	Banquet/Kitchen	meeting hall	0		3,500	0	0.62	0.00
	Conference Room	conference room	0		9,016	0	0.62	0.00
	Culinary School[g]	restaurant	0			0	0.62	0.00
	Administration Support[c]	support						
	Back of House[c]	support						
	Subtotal					0.6		0.37
Hamlet	Day Spa	spa	0				0.62	0.00
	General Retail Stores	retail	0		3,500	0	0.62	0.00
	Artist Studio & Stores	retail	0		6,300	0	0.62	0.00
	Real Estate Office	retail	0		450	0	0.62	0.00
	Vineyard Facilities	retail	0		3,200	0	0.62	0.00
	Garden Center	nursery	0		3,000	0	0.62	0.00
	Subtotal					0		0.00
Spa	Spa Facilities[h]	spa	0				0.62	0.00
	Teahouse	spa						
	Hammans and Kniepp	spa						
	Aqua Course & Massage	spa						
	Villas and Pavilions	spa						
	Creative Center	spa						
	Subtotal					0		0.00
Fitness	Fitness Facilities							
	Golf School	gym	0		2,000	0	0.62	0.00
	Basketball and Racquetball	gym	0		9,400	0	0.62	0.00
	Lap Pool	pool	0		24.6	0	0.62	0.00
	Subtotal					0		0.00
Miscellaneous	Support Facilities[a]							
	Institute	educational	0		4,000	0	0.62	0.00
	Visitor Center	retail	0		750	0	0.62	0.00
	Pet Spa	veterinary	0		400	0	0.62	0.00
	Subtotal					0		0.00
Potable Water Use Subtotal	Subtotal					7.89	0.62	4.89
Supplemental Irrigation[i]								
	Totals					7.89		4.89

TABLE 1

Paraiso Resort Water Calculations

	Facility Description[a]	Type	Water Use Factor[b]	Number of Units	Sq Ft	Total Acre-feet/Year	Conversion Acre-feet to gpm	Total gpm
Full Project Buildout Summary								
Hotel	Hotel Rooms[c]	room	0.13	105		13.65	0.62	8.46
	Time Share Condos[d]			60				
	2 Bedroom	room	0.23	34		7.82	0.62	4.85
	3 Bedroom	room	0.33	26		8.58	0.62	5.32
	Time Share Villas[e]			17				
	3 bedroom	room	0.33	9		2.97	0.62	1.84
	4 bedroom	room	0.43	8		3.44	0.62	2.13
	Subtotal					36.46		22.61
				# Of Seats				
	Main Hotel Restaurant	restaurant	0.02	205		4.1	0.62	2.54
	Coffee and Tea Cafe	coffee house	0.0002		2,000	0.4	0.62	0.25
	Spa Restaurant	restaurant	0.02	33		0.66	0.62	0.41
	Meetings/ Conference[f]							
	Banquet/Kitchen	meeting hall	0.00053		3,500	1.855	0.62	1.15
	Conference Room	conference room	0.00007		9,016	0.63112	0.62	0.39
	Culinary School[g]	restaurant	0.02	20		0.4	0.62	0.25
	Administration Support[c]	support						
	Back of House[c]	support						
	Subtotal					8.04612		4.99
Hamlet	Day Spa	spa	0.05			0.05	0.62	0.03
	General Retail Stores	retail	0.00007		3,500	0.245	0.62	0.15
	Artist Studio & Stores	retail	0.00007		6,300	0.441	0.62	0.27
	Real Estate Office	retail	0.00007		450	0.0315	0.62	0.02
	Vineyard Facilities	retail	0.00007		3,200	0.224	0.62	0.14
	Garden Center	nursery	0.00009		3,000	0.27	0.62	0.17
	Subtotal					1.2615		0.78
Spa	Spa Facilities[h]	spa	0.05			0.05	0.62	0.03
	Teahouse	spa						
	Hammans and Kniepp	spa						
	Aqua Course & Massage	spa						
	Villas and Pavilions	spa						
	Creative Center	spa						
	Subtotal					0.05		0.03
Fitness	Fitness Facilities							
	Golf School	gym	0.00007		2,000	0.14	0.62	0.09
	Basketball and Racquetball	gym	0.00007		9,400	0.658	0.62	0.41
	Lap Pool	pool	0.02		24.6	0.492	0.62	0.31
	Subtotal					1.29		0.80
Miscellaneous	Support Facilities[a]							
	Institute	educational	0.00007		4,000	0.28	0.62	0.17
	Visitor Center	retail	0.00007		750	0.0525	0.62	0.03
	Pet Spa	veterinary	0.00007		400	0.028	0.62	0.02
	Subtotal					0.3605		0.22
Potable Water Use Subtotal	Subtotal					47.47	0.62	29.43
Supplemental Irrigation[i]						15.96	0.62	9.89
	Totals					63.43		39.32

[a]All facilities are as outlined on the Tentative Map.

[b]Water use factors from Table 2: Non-residential water use factors from MPWMD.

[c]There are 103 hotel units, with a total of 105 bedrooms. The water use factor of 0.13 was used because the rooms would include large tubs. Included in the 0.13 acre-feet number is administration, support, back of house, laundry and irrigation within 10 feet of the hotel units.

[d]Each Time Share Condo will have one large tub.

[e]Each Time Share Villa will have one large tub.

[f]Banquet/Kitchen space is separated from the conference room space and different water use factors are applied to each use. Conference rooms are assumed to corporate meeting-type facilities with low-moderate water use.

[g]The square footage for the culinary school has been subtracted out of the meetings and conference space because it is a specialty use and has been treated as restaurant for the purposes of water calculations.

[h]All facilities included in the main hotel spa. The different names like Kniepp or Japanese are just marketing names for the types of treatments you can expect in t part of the spa. The Hammams are the men's and women's locker rooms. The Tea House is included in the coffee house calculation above.

[i]Represents an annual average irrigation rate, not a peak rate.

TABLE 1

Paraiso Resort Water Calculations

	Facility Description[a]	Type	Water Use Factor[b]	Number of Units	Sq Ft	Total Acre-feet/Year	Conversion Acre-feet to gpm	Total gpm
Phase 4 Increment – High Water Use Scenario								
Hotel	Hotel Rooms[c]	room	0.13	13		1.69	0.62	1.05
	Time Share Condos[d]							
	2 Bedroom	room	0.23	8		1.84	0.62	1.14
	3 Bedroom	room	0.33	6		1.98	0.62	1.23
	Time Share Villas[e]	single family						
	3 bedroom	room	0.33	2		0.66	0.62	0.41
	4 bedroom	room	0.43	2		0.86	0.62	0.53
	Subtotal					7.03		4.36
				# Of Seats				
	Main Hotel Restaurant	restaurant	0			0	0.62	0.00
	Coffee and Tea Cafe	coffee house	0		2,000	0	0.62	0.00
	Spa Restaurant	restaurant	0			0	0.62	0.00
	Meetings/ Conference[f]							
	Banquet/Kitchen	meeting hall	0		3,500	0	0.62	0.00
	Conference Room	conference room	0		9,016	0	0.62	0.00
	Culinary School[g]	restaurant	0			0	0.62	0.00
	Administration Support[c]	support						
	Back of House[c]	support						
	Subtotal					0		0.00
Hamlet	Day Spa	spa	0				0.62	0.00
	General Retail Stores	retail	0		3,500	0	0.62	0.00
	Artist Studio & Stores	retail	0		6,300	0	0.62	0.00
	Real Estate Office	retail	0		450	0	0.62	0.00
	Vineyard Facilities	retail	0		3,200	0	0.62	0.00
	Garden Center	nursery	0		3,000	0	0.62	0.00
	Subtotal					0		0.00
Spa	Spa Facilities[h]	spa	0				0.62	0.00
	Teahouse	spa						
	Hammans and Kniepp	spa						
	Aqua Course & Massage	spa						
	Villas and Pavilions	spa						
	Creative Center	spa						
	Subtotal					0		0.00
Fitness	Fitness Facilities							
	Golf School	gym	0		2,000	0	0.62	0.00
	Basketball and Racquetball	gym	0		9,400	0	0.62	0.00
	Lap Pool	pool	0		24.6	0	0.62	0.00
	Subtotal					0		0.00
Miscellaneous	Support Facilities[a]							
	Institute	educational	0		4,000	0	0.62	0.00
	Visitor Center	retail	0		750	0	0.62	0.00
	Pet Spa	veterinary	0		400	0	0.62	0.00
	Subtotal					0		0.00
Potable Water Use Subtotal	Subtotal					7.03	0.62	4.36
Supplemental Irrigation[i]								
	Totals					7.03		4.36

TABLE 2
Paraiso Hot Springs Peak Day Potable Water Demand

Phase	Potable Water (gpd)	Potable Water (gpm)
Phase 1	21,430	14.88
Phase 2	7,630	5.30
Phase 3	7,040	4.89
Phase 4	6,280	4.36
Full Buildout	42,380	29.43

Notes:
gpd = gallons per day
gpm = gallons per minute

Potable Water Source

Onsite pump tests were conducted on the potable supply well, Well No. 1 or Main Well, and Well No. 2, from November 26 through December 6, 2007 (see Attachment 3) Water Well Location Map and Attachment 4, *Paraiso Springs Resort 10-day Pumping Test Results Technical Memorandum)*. These tests resulted in a sustained yield of 58.5 gallons per minute (gpm) for the Main Well and 334.8 gpm for Well No. 2. According to Monterey County's Source Capacity Test Procedures, a 10-day pumping test for wells produced from a non-alluvial formation for water systems will allow a source capacity credit of 50 percent. This means that Well No. 1, the Main Well, is allowed a capacity credit of 29.3 gpm.

Well No. 2 provides a 335-gpm sustained yield that would be reduced by 50 percent to 167 gpm, per County Source Capacity Test Procedures. Together, these wells can provide 196.3 gpm of water supply, to meet the 29.4-gpm peak potable water demand and also the supplemental irrigation water demand at buildout.

Based on the most recent water quality test data (see Attachment 5, September, 2009 and December, 2007, Water Quality Data), water from these wells cannot be used for potable purposes directly because fluoride levels exceed the public health standard of 1.0 mg/L.

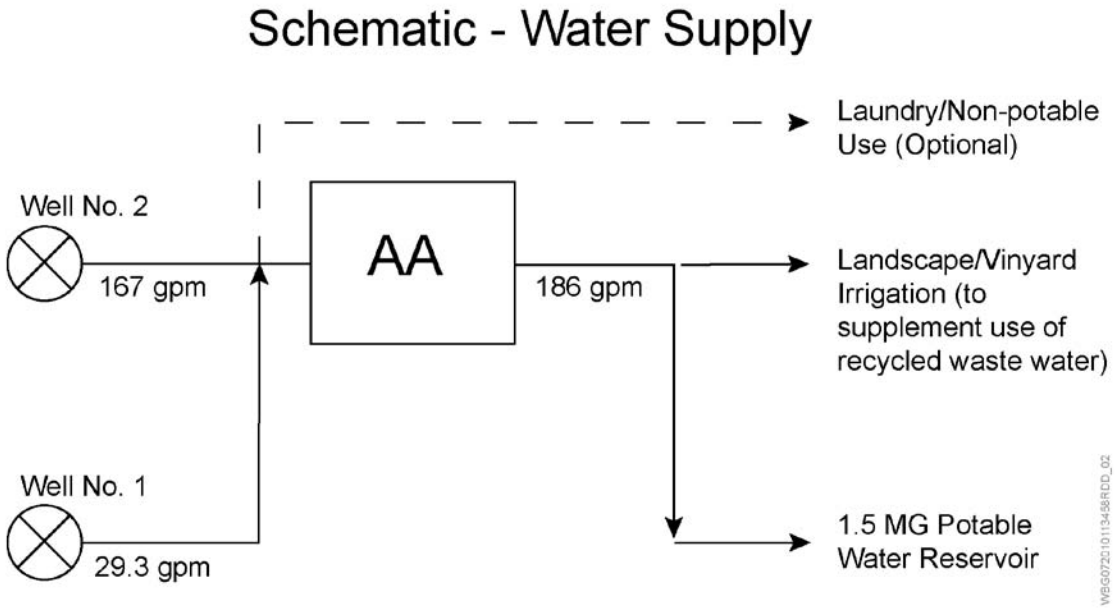
The following three options for fluoride removal were, therefore, evaluated:

- Ion exchange
- Reverse osmosis (RO)
- Activated alumina (AA)

The recommended option is activated alumina because of low initial cost and low volume of waste generated; however, a detailed evaluation of life-cycle costs has not been performed. This treatment process involves water passed through a tank containing activated aluminum supported by a bed of gravel. The activated aluminum would require regeneration approximately weekly using an acid solution. The waste regeneration solution would then be neutralized using caustic soda. Acid and caustic soda would be delivered to the site in 275-gallon totes; the totes would be stored onsite and provided with secondary containment.

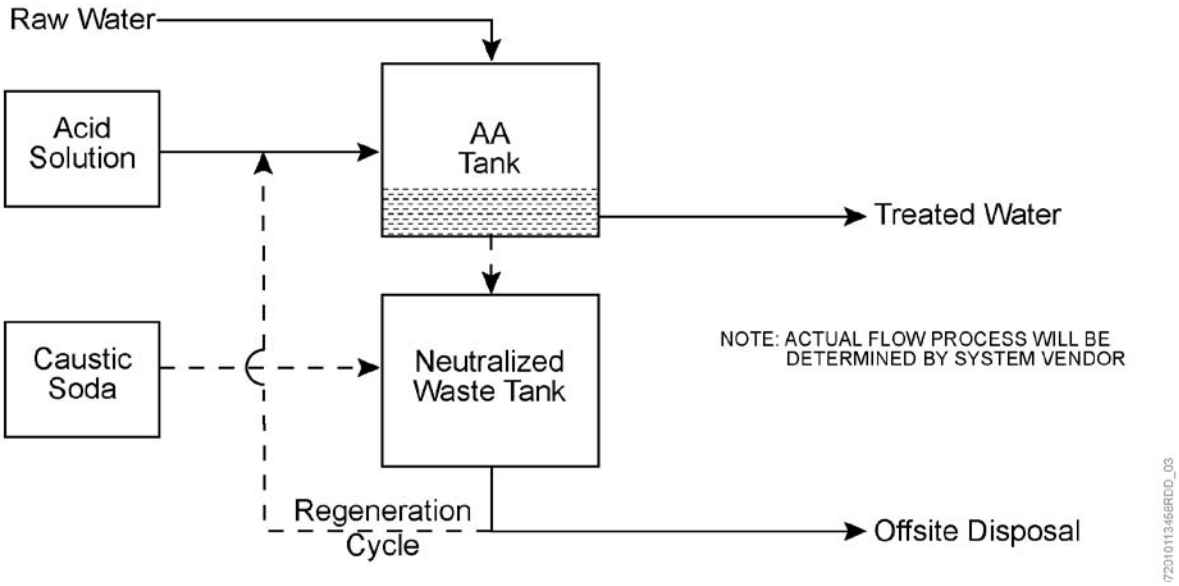
The AA regeneration process would result in an approximate 5 percent loss of water volume as neutralized waste, which would be disposed of offsite. This will further reduce the available capacity of the wells to approximately 186 gpm. However, the two wells can still provide an adequate supply of potable water for the Paraiso Springs Resort. A brochure for a representative system supplier is included as Attachment 6.

Following is a schematic diagram showing the proposed piping and AA treatment layout using both Well No. 1 and Well No. 2 for potable water use.



Schematic Diagram of Proposed Water System

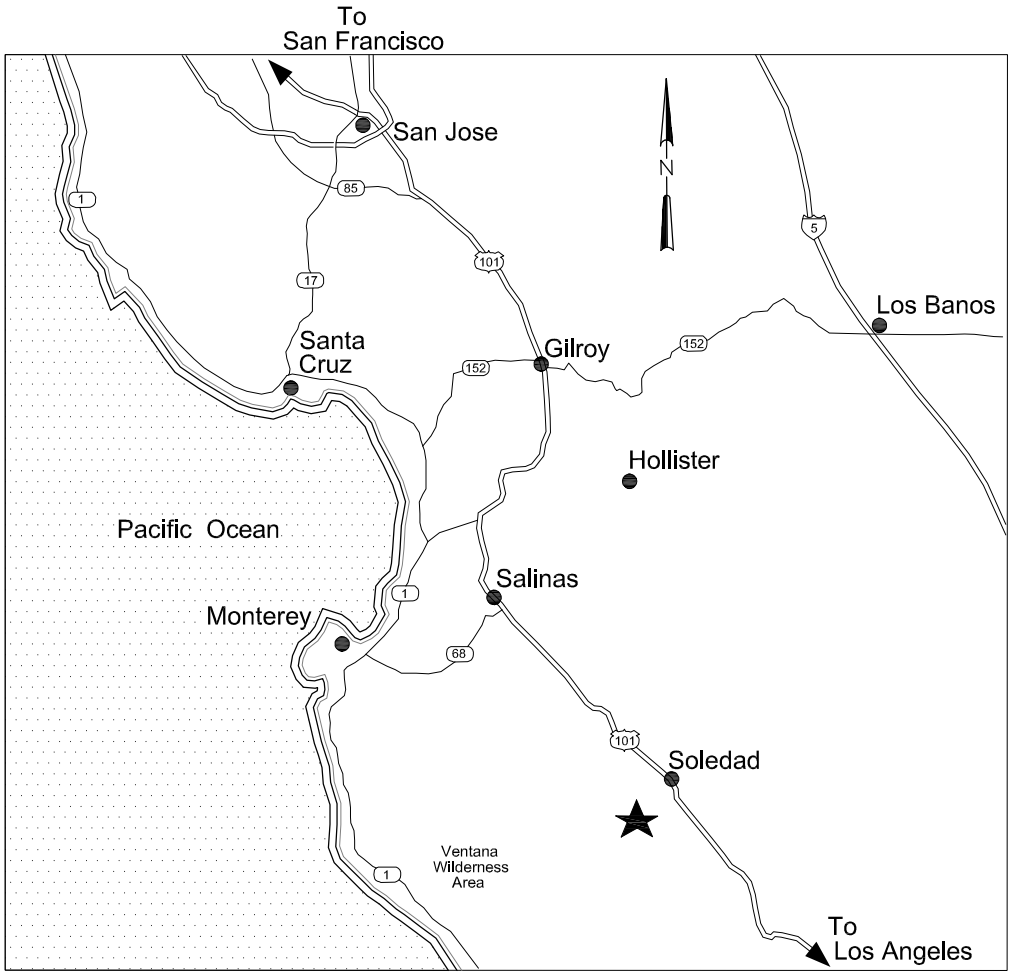
A schematic diagram of the proposed AA treatment process described above is generally outlined below. It is anticipated that this system will be supplied, maintained and operated by a qualified vendor.



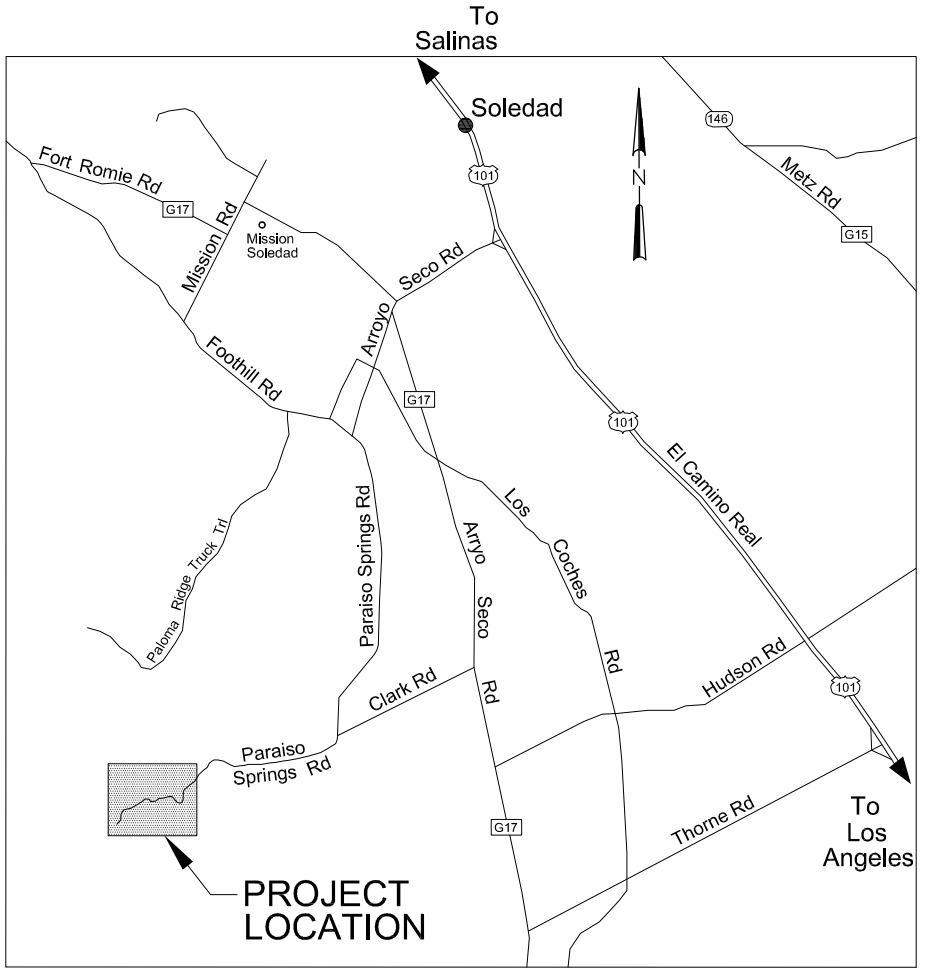
Activated Alumina Treatment Flow Diagram

The well drilling logs for the two existing potable water source wells are included as Attachment 7. However, these logs are very difficult to read. Consequently, a video survey of both Well No. 1 and Well No. 2 was conducted by Salinas Pump Company in January 2008. A summary of these surveys was compiled and is also included in Attachment 7. Based on the survey results, it is recommended that both of these wells be rehabilitated during construction of the proposed Project to increase their longevity and efficiency.

Attachment 1
Location Map



NTS



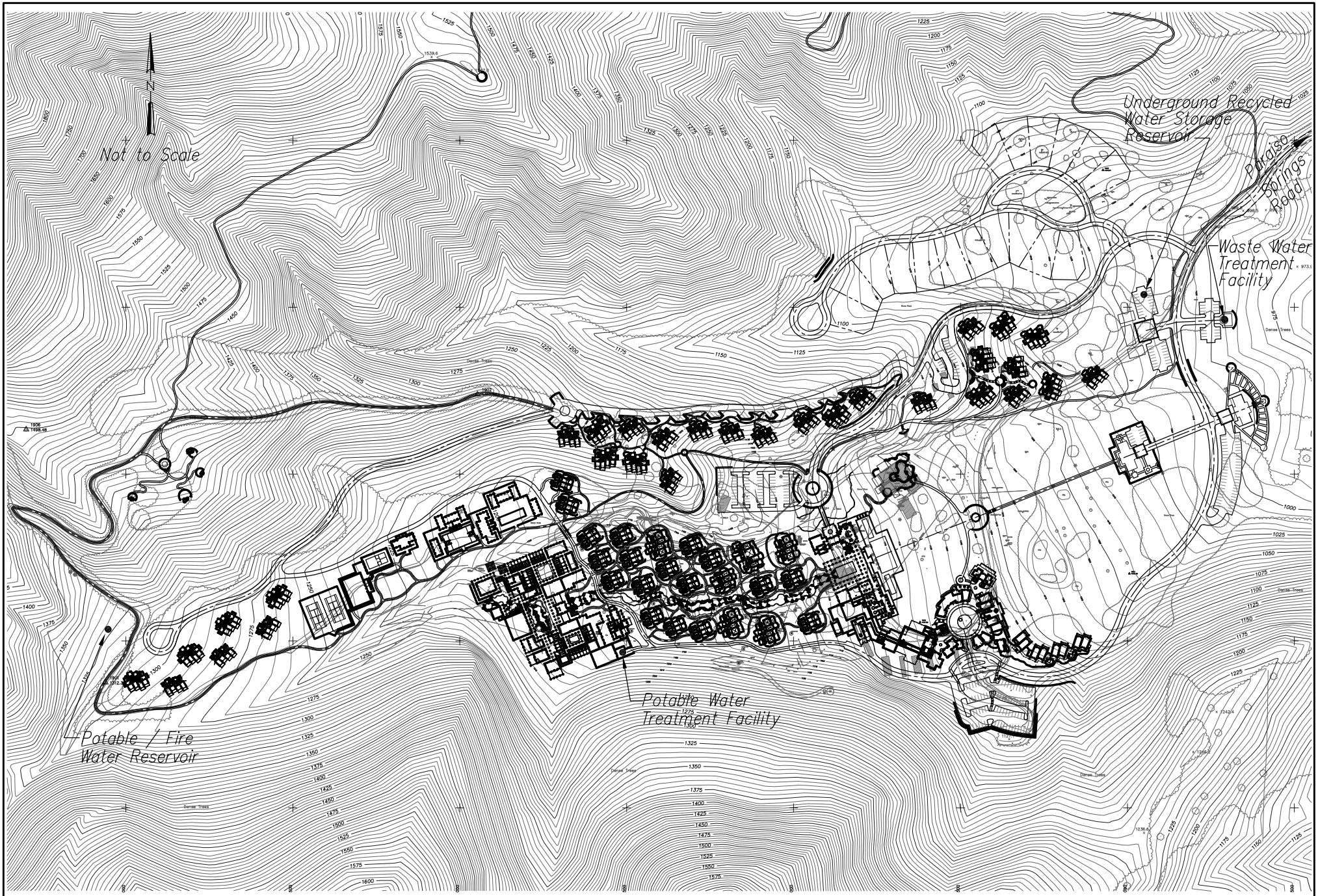
NTS

PARAISO SPRINGS RESORT

Soledad, California

Location Map

Attachment 2
Site Plan

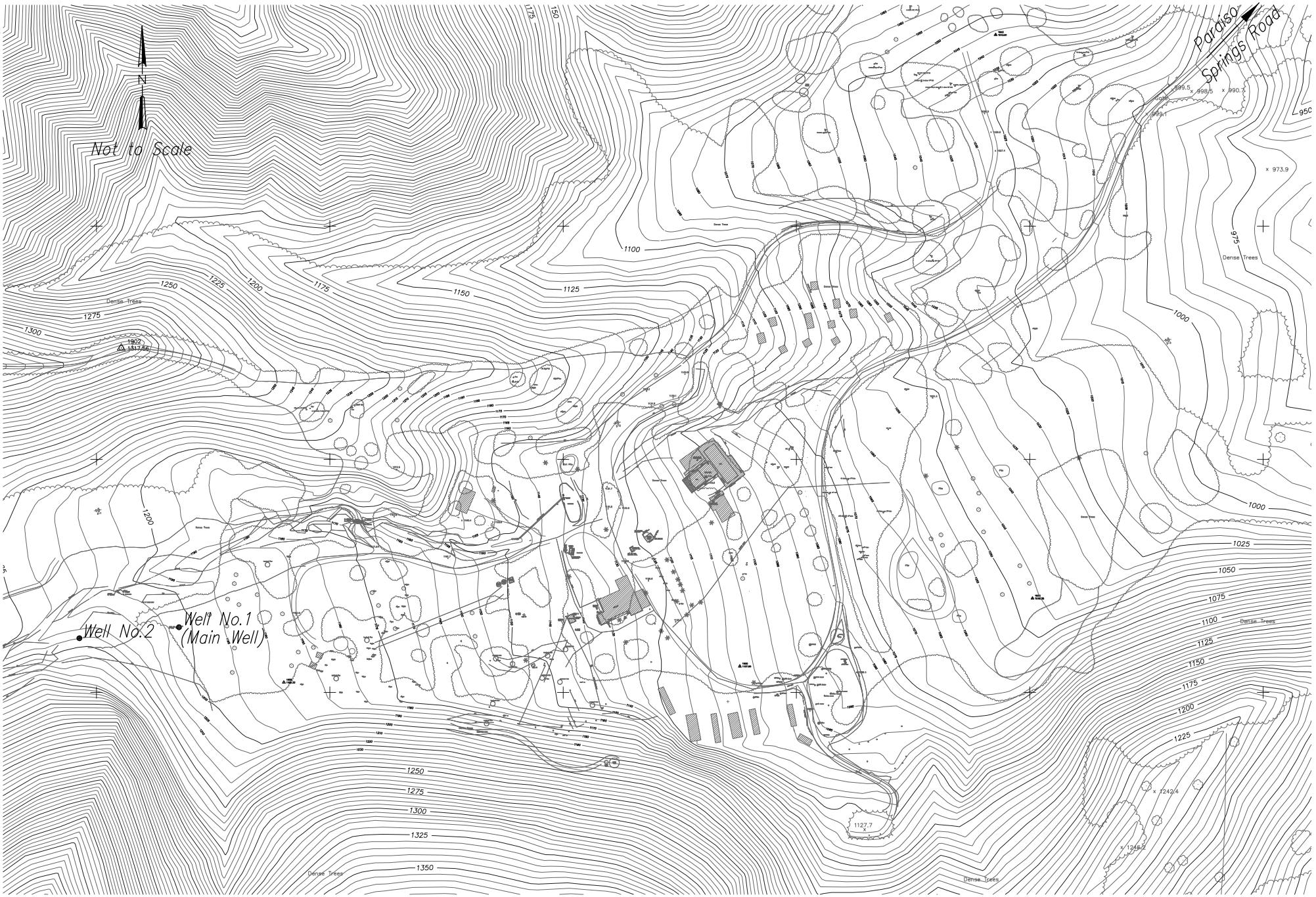


PARAISO SPRINGS RESORT

Soledad, California

Site Plan

Attachment 3
Water Well Location Map



PARAISO SPRINGS RESORT

Soledad, California

Potable Water Wells Location Map

Attachment 4
10-day Pumping Test Results

Paraiso Springs Resort 10-day Pumping Test Results

PREPARED FOR: Bill Thompson/Thompson Holdings LLC

PREPARED BY: Eli Ludwig/CH2M HILL
Nate Brown/CH2M HILL

COPIES: Dave Von Rueden/CH2M HILL

DATE: February 26, 2008

PROJECT NUMBER: 366335.A1.03

Introduction

Groundwater is anticipated to be the source of supply for the planned Paraiso Springs Resort near Soledad, California. As stated in the Monterey County Department of Environmental Health, Source Capacity Test Procedures[1]:

"All wells that are proposed to supply water for domestic use or to be connected to a water distribution system shall undergo a continuous well-capacity (pumping) test to determine the yield of the well."

Specifically, Section 15.04.140 of Title 15 (i.e., Quantity of Water Supply)[2] requires a civil engineer, hydrogeologist, or other qualified person as approved by Monterey County, to perform a source capacity (i.e., pumping) test. The pumping test shall be conducted as follows:

- Initiated after the water level has stabilized; the water level shall be monitored throughout the pumping and recovery periods
- Pumped continuously using a constant rate of water discharge over a minimum time period prescribed by Monterey County
- Witnessed by a representative of Monterey County
- Conducted so that discharge water is prevented to recharge the pumping well during the test and not allowed to pond or percolate within 200 feet from the water source

As such, Thompson Holdings LLC tasked CH2M HILL with overseeing groundwater pumping tests conducted during the fourth quarter of 2007 to evaluate groundwater yield from selected existing wells at the site. A preliminary groundwater pumping test was started on November 14, 2007, but ended prematurely due to equipment failure. A successful 10-day pumping test was conducted from November 26, 2007 through December 6, 2007 at two wells; Well #1 (also known as "Main Well") and Well #2 (also known as

[1] http://www.co.monterey.ca.us/health/EnvironmentalHealth/WaterProt/forms/sourceCapacity.pdf
[2] http://municipalcodes.lexisnexis.com/codes/montereyco/

"Fluoride Well"). Figure 1 shows a well layout map (all figures are located at the end of this technical memorandum).

In order for Monterey County to determine whether a source capacity test is adequate for evaluation of long-term reliability of the source, a report must provide at least the following minimum information:

- Calculation of specific capacity and available drawdown
- Documentation of recovery
- Calculation of sustained yield

The purpose of this technical memorandum is to document the results of the 10-day pumping test with consideration of the reporting requirements listed above.

Mobilization and Setup

With the exception of additional discharge piping provided at Well #1 and Well #2 on November 30, 2007 by CH2M HILL, equipment for the pumping tests was provided and installed by Maggiora Brothers Drilling, Inc. (Maggiora Bros) of Watsonville, California on November 26, 2007. Submersible pumps equipped with internal check valves were installed in both wells. Table 1 lists the approximate length of discharge hosing and depths of the pump intakes in Well #1 and Well #2. Discharge was directed to the east and southeast from the wells.

TABLE 1
Summary of Initial Pumping Test Setup
Paraiso Springs Resort 10-day Pumping Test Results

	Well #1	Well #2
Length of Discharge Hose (feet)[a]	200 to 400	400 to 1,000
Depth to Pump Intake (feet bgs)[b]	94.5	129.8

[a]The lengths of discharge hoses met the Monterey County requirements. Discharge water was prevented to pond, percolate, or recharge the pumping well within 200 feet from the water source. The low end of the range indicates the initial length of discharge hose used prior to November 30, 2007. The high end of the range indicates the length of discharge hose after additional hose was added on November 30, 2007.
[b]Used to compute the available drawdown during testing.
bgs = below ground surface

The wells were equipped with data-logging pressure transducers (installed in 1-inch diameter sounding tubes). The transducers were programmed to record water pressure, water temperature, and depth to water at 5-minute intervals.

Execution of Pumping Test

The pumping test was started at Well #1 on November 26, 2007 at 1:25 PM after measuring the static (i.e., nonpumping) depth to water and estimating the available static drawdown (SD) according to Equation 1:

SD = Pump Intake Depth – Pumping Head Contingency – Static Water Level Depth (1)

A Pumping Head Contingency value of 5 feet above the pump intake was assumed to be sufficient to maintain suction during pumping. The SD's at Well #1 and Well #2 were estimated as follows:

$$SD_{Well\#1} = 94.5 \text{ feet bgs} - 5 \text{ feet} - 68.7 \text{ feet bgs} = 20.8 \text{ feet}$$
$$SD_{Well\#2} = 129.8 \text{ feet bgs} - 5 \text{ feet} - 3.0 \text{ feet bgs} = 121.8 \text{ feet}$$

Depth to water and totalizer volumes were recorded as specified in the Source Capacity Test Procedures. A representative from the Monterey County Department of Environmental Health was on-site for the test start-up, periodically throughout the 10-day test, and at the end of the test. Thus, the requirement to have the pumping test witnessed by a representative of Monterey County was fulfilled. The pumping test was started at Well #2 on November 26, 2007 at 2:25 PM (Well #1 and Well #2 were pumped simultaneously from this point forward).

The pumping rates at both wells were adjusted during the initial portion of the tests with the objective of maximizing the projected sustained yield over the 10-day pumping duration. The target pumping rates for Well #1 and Well #2 were 72 and 340 gallons per minute (gpm), respectively, on the basis of previous pumping estimates. It was difficult to maintain a constant pumping rate at Well #1, as indicated by the totalizing flow meter, whose readings were very responsive to small adjustments made to the flow valve. It was determined that Well #1 would not sustain the target pumping rate for a 10-day pumping duration; thus, at approximately 2:40 PM on November 27, 2007, the pumping rate at Well #1 was reduced from approximately 70 to 58 gpm.

The pumping rate at Well #1 tended to decrease by 5 to 10 gpm over a several hour period, if the flow valve was not periodically adjusted to maintain a steady pumping rate. Thus, throughout the day on November 28, 29, and 30, the pumping rate at Well #1 was monitored and periodic adjustments were made to the flow valve to maintain a constant pumping rate, as directed by Liz Karis of Monterey County Department of Environmental Health. During the night hours, when staff were not available to make periodic adjustments to the flow valve, the pumping rate would decrease by about 5 gpm. However, on November 30, the pumping rate at Well #1 stabilized at approximately 58 gpm without further flow valve adjustments.

In addition to the pressure transducer readings, the water levels were also manually estimated every 8 hours after November 30, until the end of the 10-day pumping tests at Well #1 and Well #2. Furthermore, in additional to pumping rate readings from the instantaneous and totalizing flow meters, pumping rates were also periodically estimated manually using the following techniques to confirm that the flow meters were working properly:

- Noting the time required to fill a 55-gallon drum with discharge water
- Using the "down-and-out method" to estimate the pumping rate; involved measuring the distance (in units of inches) the outfall discharge stream of water traveled parallel to the discharge pipe, A, in falling 6 inches vertically; the pumping rate (in units of gpm)

was estimated by multiplying A by a constant that considers the inner diameter of the discharge pipe.

The manually estimated pumping rates confirmed that both flow meters were in working order. Figure 2 shows the time-series plots of drawdown observed during the execution of the pumping test.

Execution of Recovery Test

Both pumps at Well #1 and Well #2, were turned off at 2:30 PM on December 6, 2007. Recovery data were collected as specified in the Monterey County Source Capacity Test Procedures. Recovery was monitored in Well #1 and Well #2 until December 10, and December 31, 2007, respectively. Figure 3 shows the time-series plots of drawdown recovery observed during the recovery period.

Video Log Survey

Well construction data were not available for most of the existing wells on-site. Thus, a video log survey at existing wells was conducted on December 13, 2007. The purpose of the video log survey was to evaluate the overall condition of the well casing materials and to estimate the depths to the top and bottom of the screened intervals, as well as the total depths of the wells. Table 2 summarizes the well construction information that was obtained during the video log survey. However, the true depth to the bottom of each well could be deeper than indicated during the video log survey as a result of debris which has accumulated at the bottoms of some of the wells.

TABLE 2
Well Construction Details Inferred from the Video Log Survey
Paraiso Springs Resort 10-day Pumping Test Results

Well Construction Component	Well #1	Well #2
Top of Well Screen (feet bgs)	45	115
Bottom of Well Screen (feet bgs)	NE	NE
Bottom of Well (feet bgs)	101	763

feet bgs = feet below ground surface
NE = not estimated; debris was present near the bottom of the well that obscured the well screen

Well Yield Evaluation

To aid Monterey County in evaluating results from the 10-day pumping test, this section includes estimates of the 10-day sustained yield and specific capacity at Well #1 and Well #2. Estimates of available drawdown and the documentation of drawdown recovery were described in previous sections of this technical memorandum (see Figures 2 and 3). Figure 4 shows the time-series pumping rates and specific capacity data over the duration of testing for Well #1 and Well #2. Data on Figure 4 are plotted on a logarithmic y-axis to facilitate review of both pumping rate and specific capacity data for both wells on one plot.

Sustained Yield

The sustained yields achieved at Well #1 and Well #2 during the 10-day test were 58.5 and 334.8 gpm, respectively, as shown on Figure 4. Per Monterey County guidelines, a 50-percent credit for the 10-day sustained yield is granted. Therefore, the credited sustained yields at Well #1 and Well #2 from the 10-day pumping tests are anticipated to be 29.3 and 167.4 gpm, respectively.

Specific Capacity

The specific capacity (SC) of each well was computed by dividing the instantaneous pumping rate, Q (in units of gpm), by the time-series drawdown, s (in units of feet), according to Equation 2:

$$SC = \frac{Q}{s} \quad (2)$$

Figure 4 shows the time-series specific capacity data during the 10-day pumping test using Equation 2. The pumping rate of approximately 70 gpm was lowered to approximately 58 gpm at Well #1, because drawdown was approaching the available static drawdown at Well #1 after only one day of pumping (see Figure 2). The SC at Well #1 was approximately 4.5 gallons per minute per foot of drawdown (gpm/ft), just prior to reducing the pumping rate (see Figure 4). By the end of the pumping test, the SC at Well #1 had increased to approximately 22 gpm/ft (see Figure 4). For the purposes of this pumping test, a range of SC of between 4.5 and 22 gpm/ft is reported for Well #1.

At Well #2, a sustained SC of approximately 4.5 gpm/ft was observed. Both the pumping rates and responses of groundwater levels to pumping were less variable at Well #2 than those observed at Well #1.

Attachment 5A
2009 Water Quality Test Data

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

BSK Submission Number: 2009091331

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

09/30/2009

Dear Lynne Nagata,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

Certification: BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses under CA NELAP Certificate #04227CA, CA-ELAP Certificate #1180, and Nevada Certificate #CA79. For all other matrices and bacteriological analyses, this data package is in compliance with ELAP Standards for applicable certified analyses under CA-ELAP Certificate #1180. Any exceptions to applicable standards have been noted in the case narrative. Please note that certifications are applicable only to tests and/or analytes specified on each. Certification information may be obtained by contacting the laboratory or visiting our website at www.bsklabs.com. The results in this report pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from BSK Analytical Laboratories.

If additional clarification of any information is required, please contact your Client Services Representative, Dan Larkin, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Dan Larkin
Client Services Representative

Case Narrative

BSK Submission Number: 2009091331

SAMPLE AND RECEIPT INFORMATION

The sample(s) was received, prepared, and analyzed within the method specified holding times unless otherwise noted on the Certificate of Analysis. Samples, when shipped, arrived within acceptable temperature requirements of 0° to 6° Celsius unless otherwise noted on the Report of Sample Integrity. Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.

QUALITY CONTROL

All analytical quality controls are within established method criteria except when noted in the Quality Control section or on the Certificate of Analysis. All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed. QC samples may include analytes not requested in this submission.

RUN	ORDER	TEST	ANALYTE	COMMENT
179424	1166081	EPA 525.2		MS recovery was affected by the matrix for one or more analytes.

SAMPLE RESULT INFORMATION

Samples are analyzed as received (wet weight basis) unless noted here. The results relate only to the items tested. Any exceptions to be considered when evaluating these results are also listed here, if applicable. Results contained in this package shall not be reproduced, except in full, without written approval of BSK Analytical Laboratories.

ORDER	TEST	ANALYTE	COMMENT

Carbon Copies to:

DHS_EDT: Electronic Data Transfer @ STATE FORMS ,

BSK LABORATORIES
1414 Stanislaus St.
Fresno, CA 93706

EDT

ORGANIC CHEMICAL ANALYSIS (03/03)

Date of Report: 09/09/30
Sample ID No.2009091331-1162371

Laboratory Name: BSK ANALYTICAL LABORATORIES
Authorized Signature:

Name of Sampler: Mike Christensen
Employed By: Soil Control Lab

Date/Time Sample Collected:	Date/Time Sample Received:	Date Analyses Completed:
09/09/14/1600	09/09/17/1000	09|09|28

System Name: PARAISO HOT SPRINGS WS
System #: 2701001
Name or Number of Sample Source: WELL 01

User ID: 27C
Station Number: 2701001-001
Date/Time of Sample: 09|09|14|1600|
Laboratory Code: 5810
Date Analysis Completed: 09|09|28

Submitted by: _____
Phone #: _____

REGULATED ORGANIC CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED µg/L	ENTRY #	ANALYSES RESULTS	MCL µg/L	DLR µg/L
EPA 525.2	Atrazine (AATREX)	39033	ND	1	0.5
EPA 525.2	Simazine (PRINCEP)	39055	ND	4	1.
EPA 525.2	Alachlor (ALANEX)	77825	ND	2	1.
EPA 515.3	Bentazon (BASAGRAN)	38710	ND	18	2.
EPA 515.3	2,4-D	39730	ND	70	10.
EPA 515.3	2,4,5-TP (SILVEX)	39045	ND	50	1.
EPA 531.1	Carbofuran (FURADAN)	81405	ND	18	5.
EPA 515.3	Dalapon	38432	ND	200	10.
EPA 515.3	Dinoseb (DNBP)	81287	ND	7	2.
EPA 549.2	Diquat	78885	ND	20	4.
EPA 531.1	Oxamyl (Vydate)	38865	ND	50	20.
EPA 515.3	Pentachlorophenol (PCP)	39032	ND	1	0.2
EPA 515.3	Picloram	39720	ND	500	1.

UNREGULATED ORGANIC CHEMICALS

EPA 531.1	Aldicarb (TEMIK)	39053	ND		3.
EPA 531.1	Aldicarb Sulfone	A-020	ND		4.
EPA 531.1	Aldicarb Sulfoxide	A-019	ND		3.
EPA 531.1	Carbaryl (Sevin)	77700	ND		5.
EPA 515.3	Dicamba (BANVEL)	82052	ND		1.5
EPA 531.1	3-Hydroxycarbofuran	A-021	ND		3.
EPA 531.1	Methomyl	39051	ND		2.

Note: MTBE's primary MCL is 13 µg/L; the secondary MCL is 5 µg/L
MCL for Total THM was lowered to 80 µg/L, effective 1/1/04

Note: BSK DLRs for THM and HAA constituents are 0.5 µg/L, which is lower than the state DLRs. The total values on the state forms may reflect values that are reported as "ND" at the state DLR, but are detected at BSK levels.

09091331.res

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED µg/L	ENTRY #	ANALYSES RESULTS	MCL µg/L	DLR µg/L
EPA 515.3	2,4,5-T	39740	< 1.0		

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091331
BSK Sample ID #: 1162371

Report Issue Date: 09/30/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC
Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-001 Well Head 1
Sample Comments: 9090428-01

Date Sampled: 09/14/2009
Time Sampled: 1600
Date Received: 09/17/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
2,4,5-T	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
2,4,5-TP (Silvex)	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
2,4-D	EPA 515.3	**ND**	µg/L	10	1	10	09/22/09	09/25/09
Bentazon (Basagran)	EPA 515.3	**ND**	µg/L	2.0	1	2.0	09/22/09	09/25/09
Dalapon	EPA 515.3	**ND**	µg/L	10	1	10	09/22/09	09/25/09
Dicamba (Banvel)	EPA 515.3	**ND**	µg/L	1.5	1	1.5	09/22/09	09/25/09
Dinoseb (DNBP)	EPA 515.3	**ND**	µg/L	2.0	1	2.0	09/22/09	09/25/09
Pentachlorophenol (PCP)	EPA 515.3	**ND**	µg/L	0.20	1	0.20	09/22/09	09/25/09
Picloram	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
Alachlor (Alanex)	EPA 525.2	**ND**	µg/L	1.0	1	1.0	09/24/09	09/28/09
Atrazine (AAtrex)	EPA 525.2	**ND**	µg/L	0.50	1	0.50	09/24/09	09/28/09
Simazine (Princep)	EPA 525.2	**ND**	µg/L	1.0	1	1.0	09/24/09	09/28/09
3-Hydroxycarbofuran	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Aldicarb	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Aldicarb Sulfone	EPA 531.1	**ND**	µg/L	2.0	1	2.0	09/23/09	09/23/09
Aldicarb Sulfoxide	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Carbaryl	EPA 531.1	**ND**	µg/L	5.0	1	5.0	09/23/09	09/23/09
Carbofuran	EPA 531.1	**ND**	µg/L	5.0	1	5.0	09/23/09	09/23/09
Methomyl	EPA 531.1	**ND**	µg/L	2.0	1	2.0	09/23/09	09/23/09
Oxamyl	EPA 531.1	**ND**	µg/L	20	1	20	09/23/09	09/23/09
Diquat	EPA 549.2	**ND**	µg/L	4.0	1	4.0	09/21/09	09/27/09

Surrogate

DCPAA	EPA 515.3	**110**	% Rec		1	N/A	09/22/09	09/25/09
1,3-Dimethyl-2-nitrobenzene	EPA 525.2	**89**	%Rec		1	N/A	09/24/09	09/28/09
BDMC	EPA 531.1	**110**	% Rec	-	1	N/A	09/23/09	09/23/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091331
BSK Sample ID #: 1162372

Report Issue Date: 09/30/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC

Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-002 Well Head 2
Sample Comments: 9090428-02

Date Sampled: 09/14/2009
Time Sampled: 1615
Date Received: 09/17/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
2,4,5-T	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
2,4,5-TP (Silvex)	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
2,4-D	EPA 515.3	**ND**	µg/L	10	1	10	09/22/09	09/25/09
Bentazon (Basagran)	EPA 515.3	**ND**	µg/L	2.0	1	2.0	09/22/09	09/25/09
Dalapon	EPA 515.3	**ND**	µg/L	10	1	10	09/22/09	09/25/09
Dicamba (Banvel)	EPA 515.3	**ND**	µg/L	1.5	1	1.5	09/22/09	09/25/09
Dinoseb (DNBP)	EPA 515.3	**ND**	µg/L	2.0	1	2.0	09/22/09	09/25/09
Pentachlorophenol (PCP)	EPA 515.3	**ND**	µg/L	0.20	1	0.20	09/22/09	09/25/09
Picloram	EPA 515.3	**ND**	µg/L	1.0	1	1.0	09/22/09	09/25/09
Alachlor (Alanex)	EPA 525.2	**ND**	µg/L	1.0	1	1.0	09/24/09	09/28/09
Atrazine (AAtrex)	EPA 525.2	**ND**	µg/L	0.50	1	0.50	09/24/09	09/28/09
Simazine (Princep)	EPA 525.2	**ND**	µg/L	1.0	1	1.0	09/24/09	09/28/09
3-Hydroxycarbofuran	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Aldicarb	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Aldicarb Sulfone	EPA 531.1	**ND**	µg/L	2.0	1	2.0	09/23/09	09/23/09
Aldicarb Sulfoxide	EPA 531.1	**ND**	µg/L	3.0	1	3.0	09/23/09	09/23/09
Carbaryl	EPA 531.1	**ND**	µg/L	5.0	1	5.0	09/23/09	09/23/09
Carbofuran	EPA 531.1	**ND**	µg/L	5.0	1	5.0	09/23/09	09/23/09
Methomyl	EPA 531.1	**ND**	µg/L	2.0	1	2.0	09/23/09	09/23/09
Oxamyl	EPA 531.1	**ND**	µg/L	20	1	20	09/23/09	09/23/09
Diquat	EPA 549.2	**ND**	µg/L	4.0	1	4.0	09/21/09	09/27/09
Surrogate								
DCPAA	EPA 515.3	**110**	% Rec		1	N/A	09/22/09	09/25/09
1,3-Dimethyl-2-nitrobenzene	EPA 525.2	**87**	%Rec		1	N/A	09/24/09	09/28/09
BDMC	EPA 531.1	**120**	% Rec	-	1	N/A	09/23/09	09/23/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

BSK Analytical Laboratories
Engineers & Laboratories
1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

09/30/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179210

Analyst Initials: **MAYRAG**

Method Number: **531.1**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
3-Hydroxycarbofuran	LCS	N/A	26	µg/L	88		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb	LCS	N/A	25	µg/L	84		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfone	LCS	N/A	25	µg/L	83		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfoxide	LCS	N/A	27	µg/L	89		30	ND	130	70	09/23/09	*Acceptable*
Carbaryl	LCS	N/A	25	µg/L	82		30	ND	130	70	09/23/09	*Acceptable*
Carbofuran	LCS	N/A	27	µg/L	89		30	ND	130	70	09/23/09	*Acceptable*
Methomyl	LCS	N/A	25	µg/L	84		30	ND	130	70	09/23/09	*Acceptable*
Oxamyl	LCS	N/A	26	µg/L	86		30	ND	130	70	09/23/09	*Acceptable*
3-Hydroxycarbofuran	LCSD	N/A	29	µg/L	97	9.9	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb	LCSD	N/A	27	µg/L	89	6	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfone	LCSD	N/A	27	µg/L	89	6.4	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfoxide	LCSD	N/A	28	µg/L	93	4.8	30	ND	130	70	09/23/09	*Acceptable*
Carbaryl	LCSD	N/A	27	µg/L	90	9	30	ND	130	70	09/23/09	*Acceptable*
Carbofuran	LCSD	N/A	29	µg/L	95	6.7	30	ND	130	70	09/23/09	*Acceptable*
Methomyl	LCSD	N/A	26	µg/L	88	4.7	30	ND	130	70	09/23/09	*Acceptable*
Oxamyl	LCSD	N/A	27	µg/L	91	6	30	ND	130	70	09/23/09	*Acceptable*
3-Hydroxycarbofuran	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Aldicarb	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Aldicarb Sulfone	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Aldicarb Sulfoxide	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Carbaryl	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Carbofuran	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Methomyl	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
Oxamyl	LDUP	1162885	ND	µg/L	N/A			ND	30	N/A	09/23/09	*Acceptable*
3-Hydroxycarbofuran	MS	1161992	28	µg/L	95		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb	MS	1161992	28	µg/L	92		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfone	MS	1161992	27	µg/L	90		30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfoxide	MS	1161992	28	µg/L	94		30	ND	130	70	09/23/09	*Acceptable*
Carbaryl	MS	1161992	27	µg/L	89		30	ND	130	70	09/23/09	*Acceptable*
Carbofuran	MS	1161992	29	µg/L	97		30	ND	130	70	09/23/09	*Acceptable*
Methomyl	MS	1161992	27	µg/L	90		30	ND	130	70	09/23/09	*Acceptable*
Oxamyl	MS	1161992	27	µg/L	91		30	ND	130	70	09/23/09	*Acceptable*
3-Hydroxycarbofuran	MSD	1161992	28	µg/L	95	0.14	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb	MSD	1161992	28	µg/L	93	1.3	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfone	MSD	1161992	28	µg/L	93	3.7	30	ND	130	70	09/23/09	*Acceptable*
Aldicarb Sulfoxide	MSD	1161992	29	µg/L	96	2.7	30	ND	130	70	09/23/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK Analytical Laboratories
Engineers & Laboratories
1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

09/30/2009

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

NELAP Certificate #04227CA
ELAP Certificate #1180

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179210

Analyst Initials: **MAYRAG**

Method Number: **531.1**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Carbaryl	MSD	1161992	28	µg/L	92	2.7	30	ND	130	70	09/23/09	*Acceptable*
Carbofuran	MSD	1161992	30	µg/L	100	3.2	30	ND	130	70	09/23/09	*Acceptable*
Methomyl	MSD	1161992	27	µg/L	91	0.99	30	ND	130	70	09/23/09	*Acceptable*
Oxamyl	MSD	1161992	28	µg/L	94	4	30	ND	130	70	09/23/09	*Acceptable*
3-Hydroxycarbofuran	RBLK	N/A	ND	µg/L	< 3.0				3.0	N/A	09/23/09	*Acceptable*
Aldicarb	RBLK	N/A	ND	µg/L	< 3.0				3.0	N/A	09/23/09	*Acceptable*
Aldicarb Sulfone	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/23/09	*Acceptable*
Aldicarb Sulfoxide	RBLK	N/A	ND	µg/L	< 3.0				3.0	N/A	09/23/09	*Acceptable*
Carbaryl	RBLK	N/A	ND	µg/L	< 5.0				5.0	N/A	09/23/09	*Acceptable*
Carbofuran	RBLK	N/A	ND	µg/L	< 5.0				5.0	N/A	09/23/09	*Acceptable*
Methomyl	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/23/09	*Acceptable*
Oxamyl	RBLK	N/A	ND	µg/L	< 20				20	N/A	09/23/09	*Acceptable*

Surrogate Results

Analyte	QC Type		Surr. Result			UCL	LCL	Date	
BDMC	LCS	N/A	88	% Rec	92	130	70	09/23/09	*Acceptable*
BDMC	LCSD	N/A	100	% Rec	92	130	70	09/23/09	*Acceptable*
BDMC	LDUP	1162885	120	% Rec	120	130	70	09/23/09	*Acceptable*
BDMC	MS	1161992	100	% Rec	100	130	70	09/23/09	*Acceptable*
BDMC	MSD	1161992	100	% Rec	100	130	70	09/23/09	*Acceptable*
BDMC	RBLK	N/A	92	% Rec		N/A	N/A	09/23/09	*Acceptable*

StarLims Run 179210 includes the following BSK Sample ID# :

1161992 1162122 1162317 1162364 1162371 1162372 1162728 1162883 1162884 1162885 1164799 1164800 1164801 1164802 1164803 1164804

BSK StarLims Run #: 179342

Analyst Initials: **DANB**

Method Number: **549.2**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Diquat	LCS	N/A	34	µg/L	85		40	ND	150	50	09/27/09	*Acceptable*
Diquat	LCSD	N/A	37	µg/L	92	8.4	40	ND	150	50	09/27/09	*Acceptable*
Diquat	LDUP	1162122	ND	µg/L	N/A			ND	50	N/A	09/27/09	*Acceptable*
Diquat	MS	1161020	27	µg/L	67		40	ND	150	50	09/27/09	*Acceptable*
Diquat	MSD	1161020	43	µg/L	107	45	40	ND	150	50	09/27/09	*Acceptable*
Diquat	RBLK	N/A	ND	µg/L	< 4.0				4.0	N/A	09/27/09	*Acceptable*

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LCS: Laboratory Control Sample
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LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
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OOS-Low: QC Result Below LCL
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RBLK: Reagent (Method) Blank
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QC Summary Report

09/30/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179342
Analyst Initials: **DANB**
Method Number: **549.2**

StarLims Run 179342 includes the following BSK Sample ID# :

1161020 1162122 1162248 1162317 1162364 1162371 1162372 1162890 1162891 1165731 1165732 1165733 1165734 1165735 1165736

BSK StarLims Run #: 179388
Analyst Initials: **PAULK**
Method Number: **5153**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
2,4,5-T	LCS	N/A	3.3	µg/L	110		3	ND	130	70	09/25/09	*Acceptable*
2,4,5-TP (Silvex)	LCS	N/A	3.1	µg/L	102		3	ND	130	70	09/25/09	*Acceptable*
2,4-D	LCS	N/A	31	µg/L	104		30	ND	130	70	09/25/09	*Acceptable*
Bentazon (Basagran)	LCS	N/A	6.1	µg/L	101		6	ND	130	70	09/25/09	*Acceptable*
Dalapon	LCS	N/A	31	µg/L	102		30	ND	130	70	09/25/09	*Acceptable*
Dicamba (Banvel)	LCS	N/A	4.5	µg/L	103		4.38	ND	130	70	09/25/09	*Acceptable*
Dinoseb (DNBP)	LCS	N/A	6.6	µg/L	110		6	ND	130	70	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	LCS	N/A	0.56	µg/L	93		.6	ND	130	70	09/25/09	*Acceptable*
Picloram	LCS	N/A	3.1	µg/L	103		3	ND	130	70	09/25/09	*Acceptable*
2,4,5-T	LCSD	N/A	3.3	µg/L	109	1.2	3	ND	130	70	09/25/09	*Acceptable*
2,4,5-TP (Silvex)	LCSD	N/A	3.0	µg/L	101	0.32	3	ND	130	70	09/25/09	*Acceptable*
2,4-D	LCSD	N/A	30	µg/L	100	4	30	ND	130	70	09/25/09	*Acceptable*
Bentazon (Basagran)	LCSD	N/A	6.0	µg/L	99	1.3	6	ND	130	70	09/25/09	*Acceptable*
Dalapon	LCSD	N/A	29	µg/L	96	5.7	30	ND	130	70	09/25/09	*Acceptable*
Dicamba (Banvel)	LCSD	N/A	4.3	µg/L	98	5.2	4.38	ND	130	70	09/25/09	*Acceptable*
Dinoseb (DNBP)	LCSD	N/A	6.8	µg/L	113	2.3	6	ND	130	70	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	LCSD	N/A	0.64	µg/L	106	13	.6	ND	130	70	09/25/09	*Acceptable*
Picloram	LCSD	N/A	3.1	µg/L	102	1.2	3	ND	130	70	09/25/09	*Acceptable*
2,4,5-T	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
2,4,5-TP (Silvex)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
2,4-D	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Bentazon (Basagran)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Dalapon	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Dicamba (Banvel)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Dinoseb (DNBP)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
Picloram	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/25/09	*Acceptable*
2,4,5-T	MS	1161716	3.1	µg/L	102		3	ND	130	70	09/25/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
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Parent Sample: Sample used as background matrix for MS/MSD
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OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
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Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

09/30/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179388

Analyst Initials: **PAULK**

Method Number: **5153**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
2,4,5-TP (Silvex)	MS	1161716	3.2	µg/L	105		3	ND	130	70	09/25/09	*Acceptable*
2,4-D	MS	1161716	32	µg/L	105		30	ND	130	70	09/25/09	*Acceptable*
Bentazon (Basagran)	MS	1161716	6.0	µg/L	99		6	ND	130	70	09/25/09	*Acceptable*
Dalapon	MS	1161716	32	µg/L	107		30	ND	130	70	09/25/09	*Acceptable*
Dicamba (Banvel)	MS	1161716	4.6	µg/L	103		4.38	ND	130	70	09/25/09	*Acceptable*
Dinoseb (DNBP)	MS	1161716	6.1	µg/L	102		6	ND	130	70	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	MS	1161716	0.48	µg/L	80		.60	ND	130	70	09/25/09	*Acceptable*
Picloram	MS	1161716	2.8	µg/L	93		3	ND	130	70	09/25/09	*Acceptable*
2,4,5-T	MSD	1161716	3.2	µg/L	108	5.7	3	ND	130	70	09/25/09	*Acceptable*
2,4,5-TP (Silvex)	MSD	1161716	3.2	µg/L	106	0.95	3	ND	130	70	09/25/09	*Acceptable*
2,4-D	MSD	1161716	31	µg/L	104	1.1	30	ND	130	70	09/25/09	*Acceptable*
Bentazon (Basagran)	MSD	1161716	6.1	µg/L	101	2.4	6	ND	130	70	09/25/09	*Acceptable*
Dalapon	MSD	1161716	30	µg/L	101	6	30	ND	130	70	09/25/09	*Acceptable*
Dicamba (Banvel)	MSD	1161716	4.5	µg/L	102	1.6	4.38	ND	130	70	09/25/09	*Acceptable*
Dinoseb (DNBP)	MSD	1161716	6.1	µg/L	101	1.1	6	ND	130	70	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	MSD	1161716	0.47	µg/L	78	2.1	.60	ND	130	70	09/25/09	*Acceptable*
Picloram	MSD	1161716	2.7	µg/L	89	4.8	3	ND	130	70	09/25/09	*Acceptable*
2,4,5-T	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/25/09	*Acceptable*
2,4,5-TP (Silvex)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/25/09	*Acceptable*
2,4-D	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/25/09	*Acceptable*
Bentazon (Basagran)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/25/09	*Acceptable*
Dalapon	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/25/09	*Acceptable*
Dicamba (Banvel)	RBLK	N/A	ND	µg/L	< 1.5				1.5	N/A	09/25/09	*Acceptable*
Dinoseb (DNBP)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/25/09	*Acceptable*
Pentachlorophenol (PCP)	RBLK	N/A	ND	µg/L	< 0.20				0.20	N/A	09/25/09	*Acceptable*
Picloram	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/25/09	*Acceptable*

Surrogate Results

Analyte	QC Type		Surr. Result			UCL	LCL	Date	
DCPAA	LCS	N/A	110	% Rec	110	130	70	09/25/09	*Acceptable*
DCPAA	LCSD	N/A	110	% Rec	110	130	70	09/25/09	*Acceptable*
DCPAA	LDUP	1161992	110	% Rec	110	130	70	09/25/09	*Acceptable*
DCPAA	MS	1161716	110	% Rec	110	130	70	09/25/09	*Acceptable*
DCPAA	MSD	1161716	110	% Rec	110	130	70	09/25/09	*Acceptable*

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Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
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QC Summary Report

09/30/2009

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

NELAP Certificate #04227CA
ELAP Certificate #1180

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179388

Analyst Initials: **PAULK**

Method Number: **5153**

Surrogate Results

Analyte	QC Type		Surr. Result		UCL	LCL	Date	
DCPAA	RBLK	N/A	110	% Rec	N/A	N/A	09/25/09	*Acceptable*

StarLims Run 179388 includes the following BSK Sample ID# :

1161716 1161992 1162122 1162317 1162364 1162371 1162372 1162726 1162883 1162884 1165872 1165873 1165874 1165875 1165876 1165877

BSK StarLims Run #: 179424

Analyst Initials: **DANB**

Method Number: **525**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alachlor (Alanex)	LCS	N/A	5.9	µg/L	118		5	ND	130	70	09/28/09	*Acceptable*
Atrazine (AAtrex)	LCS	N/A	5.7	µg/L	114		5	ND	130	70	09/28/09	*Acceptable*
Benzo(a)pyrene	LCS	N/A	1.3	µg/L	130		1	ND	130	70	09/28/09	*Acceptable*
bis(2-ethylhexyl) adipate	LCS	N/A	6.4	µg/L	128		5	ND	130	70	09/28/09	*Acceptable*
bis(2-ethylhexyl) phthalate	LCS	N/A	6.2	µg/L	124		5	ND	130	70	09/28/09	*Acceptable*
Bromacil (Hyvar)	LCS	N/A	ND	µg/L	124		5	ND	130	70	09/28/09	*Acceptable*
Butachlor	LCS	N/A	2.9	µg/L	116		2.5	ND	130	70	09/28/09	*Acceptable*
Diazinon	LCS	N/A	2.5	µg/L	100		2.5	ND	110	10	09/28/09	*Acceptable*
Dimethoate (Cygon)	LCS	N/A	ND	µg/L	124		5	ND	130	70	09/28/09	*Acceptable*
Metolachlor	LCS	N/A	6.1	µg/L	122		5	ND	130	70	09/28/09	*Acceptable*
Metribuzin	LCS	N/A	5.8	µg/L	116		5	ND	130	70	09/28/09	*Acceptable*
Molinate (Ordram)	LCS	N/A	5.7	µg/L	114		5	ND	130	70	09/28/09	*Acceptable*
Propachlor	LCS	N/A	5.3	µg/L	106		5	ND	130	70	09/28/09	*Acceptable*
Simazine (Princep)	LCS	N/A	5.5	µg/L	110		5	ND	130	70	09/28/09	*Acceptable*
Thiobencarb (Bolero)	LCS	N/A	5.4	µg/L	108		5	ND	130	70	09/28/09	*Acceptable*
Alachlor (Alanex)	LCSD	N/A	5.6	µg/L	112	5.2	5	ND	130	70	09/28/09	*Acceptable*
Atrazine (AAtrex)	LCSD	N/A	5.5	µg/L	110	3.6	5	ND	130	70	09/28/09	*Acceptable*
Benzo(a)pyrene	LCSD	N/A	1.2	µg/L	120	8	1	ND	130	70	09/28/09	*Acceptable*
bis(2-ethylhexyl) adipate	LCSD	N/A	5.8	µg/L	116	9.9	5	ND	130	70	09/28/09	*Acceptable*
bis(2-ethylhexyl) phthalate	LCSD	N/A	5.7	µg/L	114	8.4	5	ND	130	70	09/28/09	*Acceptable*
Bromacil (Hyvar)	LCSD	N/A	ND	µg/L	120	3.2	5	ND	130	70	09/28/09	*Acceptable*
Butachlor	LCSD	N/A	2.8	µg/L	112	3.6	2.5	ND	130	70	09/28/09	*Acceptable*
Diazinon	LCSD	N/A	2.4	µg/L	96	4	2.5	ND	110	10	09/28/09	*Acceptable*
Dimethoate (Cygon)	LCSD	N/A	ND	µg/L	118	5	5	ND	130	70	09/28/09	*Acceptable*
Metolachlor	LCSD	N/A	5.7	µg/L	114	6.8	5	ND	130	70	09/28/09	*Acceptable*
Metribuzin	LCSD	N/A	5.5	µg/L	110	5.3	5	ND	130	70	09/28/09	*Acceptable*
Molinate (Ordram)	LCSD	N/A	5.6	µg/L	112	1.8	5	ND	130	70	09/28/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK Analytical Laboratories
Engineers & Laboratories
1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

09/30/2009

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

NELAP Certificate #04227CA
ELAP Certificate #1180

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179424

Analyst Initials: **DANB**

Method Number: **525**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Propachlor	LCSD	N/A	5.0	µg/L	100	5.9	5	ND	130	70	09/28/09	*Acceptable*
Simazine (Princep)	LCSD	N/A	5.3	µg/L	106	3.8	5	ND	130	70	09/28/09	*Acceptable*
Thiobencarb (Bolero)	LCSD	N/A	5.2	µg/L	104	3.8	5	ND	130	70	09/28/09	*Acceptable*
Alachlor (Alanex)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Atrazine (AAtrex)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Benzo(a)pyrene	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
bis(2-ethylhexyl) adipate	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
bis(2-ethylhexyl) phthalate	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Bromacil (Hyvar)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Butachlor	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Diazinon	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Dimethoate (Cygon)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Metolachlor	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Metribuzin	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Molinate (Ordram)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Propachlor	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Simazine (Princep)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Thiobencarb (Bolero)	LDUP	1161992	ND	µg/L	N/A			ND	30	N/A	09/28/09	*Acceptable*
Alachlor (Alanex)	MS	1161381	6.2	µg/L	124		5	ND	130	70	09/28/09	*Acceptable*
Atrazine (AAtrex)	MS	1161381	2.4	µg/L	48		5	ND	130	70	09/28/09	*OOS-Low*
Benzo(a)pyrene	MS	1161381	1.4	µg/L	140		1		130	70	09/28/09	*OOS-High*
bis(2-ethylhexyl) adipate	MS	1161381	6.5	µg/L	130		5		130	70	09/28/09	*Acceptable*
bis(2-ethylhexyl) phthalate	MS	1161381	6.4	µg/L	128		5		130	70	09/28/09	*Acceptable*
Bromacil (Hyvar)	MS	1161381	ND	µg/L	140		5		130	70	09/28/09	*OOS-High*
Butachlor	MS	1161381	2.9	µg/L	116		2.5		130	70	09/28/09	*Acceptable*
Diazinon	MS	1161381	2.7	µg/L	108		2.5		110	10	09/28/09	*Acceptable*
Dimethoate (Cygon)	MS	1161381	ND	µg/L	128		5		130	70	09/28/09	*Acceptable*
Metolachlor	MS	1161381	6.5	µg/L	130		5		130	70	09/28/09	*Acceptable*
Metribuzin	MS	1161381	6.3	µg/L	126		5		130	70	09/28/09	*Acceptable*
Molinate (Ordram)	MS	1161381	5.9	µg/L	118		5		130	70	09/28/09	*Acceptable*
Propachlor	MS	1161381	6.0	µg/L	120		5		130	70	09/28/09	*Acceptable*
Simazine (Princep)	MS	1161381	2.5	µg/L	50		5	ND	130	70	09/28/09	*OOS-Low*
Thiobencarb (Bolero)	MS	1161381	5.9	µg/L	118		5		130	70	09/28/09	*Acceptable*
Alachlor (Alanex)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/28/09	*Acceptable*
Atrazine (AAtrex)	RBLK	N/A	ND	µg/L	< 0.50				0.50	N/A	09/28/09	*Acceptable*
Benzo(a)pyrene	RBLK	N/A	ND	µg/L	< 0.10				0.10	N/A	09/28/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK Analytical Laboratories
Engineers & Laboratories
1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

09/30/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091331**
Client : **Soil Control Lab**
Date Submitted : **09/17/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179424

Analyst Initials: **DANB**

Method Number: **525**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
bis(2-ethylhexyl) adipate	RBLK	N/A	ND	µg/L	< 3.0				3.0	N/A	09/28/09	*Acceptable*
bis(2-ethylhexyl) phthalate	RBLK	N/A	ND	µg/L	< 3.0				3.0	N/A	09/28/09	*Acceptable*
Bromacil (Hyvar)	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/28/09	*Acceptable*
Butachlor	RBLK	N/A	ND	µg/L	< 0.38				0.38	N/A	09/28/09	*Acceptable*
Diazinon	RBLK	N/A	ND	µg/L	< 0.25				0.25	N/A	09/28/09	*Acceptable*
Dimethoate (Cygon)	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/28/09	*Acceptable*
Metolachlor	RBLK	N/A	ND	µg/L	< 0.50				0.50	N/A	09/28/09	*Acceptable*
Metribuzin	RBLK	N/A	ND	µg/L	< 0.50				0.50	N/A	09/28/09	*Acceptable*
Molinate (Ordram)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/28/09	*Acceptable*
Propachlor	RBLK	N/A	ND	µg/L	< 0.50				0.50	N/A	09/28/09	*Acceptable*
Simazine (Princep)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/28/09	*Acceptable*
Thiobencarb (Bolero)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/28/09	*Acceptable*

Run	Test	Analyte	Comment
179424	525		MS recovery was affected by the matrix for one or more analytes.

Surrogate Results

Analyte	QC Type		Surr. Result			UCL	LCL	Date	
1,3-Dimethyl-2-nitrobenzene	LCS	N/A	86	%Rec	88	130	70	09/28/09	*Acceptable*
1,3-Dimethyl-2-nitrobenzene	LCSD	N/A	94	%Rec	88	130	70	09/28/09	*Acceptable*
1,3-Dimethyl-2-nitrobenzene	LDUP	1161992	85	%Rec	86	130	70	09/28/09	*Acceptable*
1,3-Dimethyl-2-nitrobenzene	MS	1161381	91	%Rec	93	130	70	09/28/09	*Acceptable*
1,3-Dimethyl-2-nitrobenzene	RBLK	N/A	88	%Rec		N/A	N/A	09/28/09	*Acceptable*

StarLims Run 179424 includes the following BSK Sample ID# :

1161381 1161992 1162122 1162317 1162334 1162335 1162364 1162371 1162372 1162727 1166077 1166078 1166079 1166080 1166081

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

Sample Integrity

Pg. 1 of 2

CLI 2009091331 SOIL CNTRL 917075

09/17/2009 TAT: Standard

Date Received 9/17/09

Section 1- Sampled Same Day

Sample Transport: Walk In SJVC BSK-Courier Transported In: Ice Chest Box Hand

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2- Sampled Previously

Sample Transport: CAO UPS SJVC Walk-In BSK-Courier GSO Fed Exp. Other:_____

No. Coolers/Ice Chests: 1 Temperature(s): 2°

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other:_____

Were ice chest custody seals present? Y N Intact: Y N

Section 3- COC Info.	Completed Yes	Completed No	Info From Container		Completed Yes	Completed No	Info From Container
Was COC Received	—			Analysis Requested	—		
Date Sampled	—			Any hold times less than 72hr		—	
Time Sampled	—			Client Name	—		
Sample ID	—			Address	—		
Special Storage/Handling Ins.		—		Telephone #	—		

Section 4- Bottles / Analysis	Yes	No	N/A	Comment
Did all bottles arrive unbroken and intact?:		—		—
Were bottle custody seals present?		—		
Were bottle custody seals intact?		—		
Did all bottle labels agree with COC?:	—			
Were correct containers used for the tests requested?:	—			
Were correct preservations used for the tests requested?:	—			
Was a sufficient amount of sample sent for tests indicated?:	—			
Were bubbles present in VOA Vials?: (**Volatile Methods Only**)		—		
Were Ascorbic Acid Bottles received with the VOAs		—		

Section 5- Comments / Discrepancies

Sample(s) Split/Preserve: Yes No Container: 250 Preservation: $Na_2S_2O_3$ + MCAA Init.: BB

Was Client Service Rep. notified of discrepancies: Yes No N/A CSR: Notified By: Ryan H

Explanations / Comments

250 AG W 500 THIO & 250 MCAA + this received together.

- we have sufficient volume for TU tests requested

WA 9/17/09

Report Comment Entered: D.D 9/17/09

SR-FL-0002-02

Labeled by: BB 1655

Labels checked by: WA 1726

Sample Integrity Pg 2 of 2

SR-FL-0002-02 BSK Bottles Yes No

2009091331 09/17/2009
SOIL CNTRL TAT: Standard
917075

8oz (A) 16oz (B) 32oz (C) Amber Glass (AG)

Container(s) Received	1	2					
Bacti $Na_2S_2O_3$							
None (p) White Cap							
None (p) Blue Cap							
HNO_3 (p) Red Cap							
H_2SO_4 (p) Yellow Cap							
NaOH (p) Green Cap							
Other:							
Dissolved Oxygen 300ml (g)							
250ml (AG) None							
250ml (AG) H_2SO_4 COD Yellow Label							
250ml (AG) $Na_2S_2O_3$ 515,547 Blue Label		1					
250ml (AG) $Na_2S_2O_3$+ MCAA 531.1 Orange Label	1	1					
250ml (AG) NH_4Cl 552 Purple Label							
250ml (AG) EDA DBPs Brown Label							
250ml (AG) Other:							
500ml (AG) None							
500ml (AG) H_2SO_4 TPH-Diesel Yellow Label							
1 Liter (AG) None							
1 Liter (AG) H_2SO_4 O&G Yellow Label							
1 Liter (AG) $Na_2S_2O_3$ 548 / 525 / 521 Blue Label	2	2					
1 Liter (P) $Na_2S_2O_3$+ H_2SO_4 549	1	1					
1 Liter (AG) NaOH+ZnAc Sulfide							
1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label							
1 Liter (AG) CuSO4/Trizma 529 Turquoise Label							
1 Liter (AG) Na_2SO_3 / HCL 525 UCMR Neon Green Label							
1 Liter (AG) Ammonium Chloride 535 Purple Label							
40ml VOA Vial Clear – HCL	*3	*3					
40ml VOA Vial Amber – $Na_2S_2O_3$							
40ml VOA Vial Clear – None							
40ml VOA Vial Clear - $Na_2S_2O_3$ 504, 505							
40ml VOA Vial Clear – H_3PO_4							
Other:							
Asbestos 32oz Plastic/Foil							
Radiological GA / GB (½ Gal Plastic)							
Radiological 226 / 228 (32 oz plastic N-BSK)							
Radon 200ml Clear (g)							
Low Level Hg/Metals Double Baggie							
THM-FP 4-40ml VOA None							
250 Clear Glass Jar							
500 Clear Glass Jar							
1 Liter Clear Glass Jar							
Plastic Bag							
Soil Tube Brass / Steel / Plastic							
Tedlar Bags							

MA 9/17/09

Soil Control Lab

42 Hangar Way : Watsonville, CA 95076
Phone: (831) 724-5422
Fax: (831) 724-3188

CHAIN-OF-CUSTODY

J-

2009091331 09/17/2009
SOIL CNTRL TAT: Standard
917075

Client/Company Name:	Soil Control Lab
Attn:	Lynne Nagata
Address:	42 Hangar Way
	Watsonville, CA 95076
Phone:	831-724-5422
Fax:	831-724-3188
E-mail:	lynne@controllabs.com
Project Name:	Thompson Holdings, LLC
Project Number:	9090428

Comments/Special Instructions:
* Partial SOC's: Atrazine, 2,4-D, Diquat, Simazine, Alachlor, Bentazon, Carbofuran
Requires EDT: User ID: 27C
System #2701001 * unable to send EDT for well Head 2 - Not in database
Sampler: Mike Christensen

Soil Control Lab Use Only:
Cooler #: VOA Packer #: 9.0
Lab Sent To: BSK 9/30/09

Lab Use Only: ID Number	Client Sample Identification	Sample Information: Sampling Date	Sampling Time	Matrix	Bottle or Container Information: Sample Preservative	Bottle Type	Bottle Size	No. of Bottles	Partial SOC's * (EPA 515, 525, 531, 549)	VOC's by EPA 524.2	Storage Location:	Freezer #:	Refrigerator #:	Shelf #:	Sample Condition
9090428-01	2701001-001 Well Head #1	09/14/09	16:00	DW	Na2S2O3	AG	250 ml	1	X						
	2701001-001 Well Head #1	09/14/09	16:00	DW	Na2S2O3	AG	1 Liter	2	X			116257			
	2701001-001 Well Head #1	09/14/09	16:00	DW	Na2S2O3	AG	250 ml	1	X						
	2701001-001 Well Head #1	09/14/09	16:00	DW	Na2S2O3	Plastic	1 Liter	1	X						
	2701001-001 Well Head #1	09/14/09	16:00	DW	HCl	VOA	40 ml	3		X					
9090428-02	2701001-002 Well Head #2	09/14/09	16:15	DW	Na2S2O3	AG	250 ml	1	X						
	2701001-002 Well Head #2	09/14/09	16:15	DW	Na2S2O3	AG	1 Liter	2	X						
	2701001-002 Well Head #2	09/14/09	16:15	DW	Na2S2O3	AG	250 ml	1	X			116257			
	2701001-002 Well Head #2	09/14/09	16:15	DW	Na2S2O3	Plastic	1 Liter	1	X						
	2701001-002 Well Head #2	09/14/09	16:15	DW	HCl	VOA	40 ml	3		X					

Sampler's Signature and Printed Name: **Mike Christensen**

Relinquished By (Signature and Printed Name):	Date	Time	Transported By:	Received By (Signature and Printed Name):	Date:	Time:
Lynne Nagata	9/16/2009	16:00	UPS			
					9/17/09	1000

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

BSK Submission Number: 2009091440

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

10/02/2009

Dear Lynne Nagata,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

Certification: BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses under CA NELAP Certificate #04227CA, CA-ELAP Certificate #1180, and Nevada Certificate #CA79. For all other matrices and bacteriological analyses, this data package is in compliance with ELAP Standards for applicable certified analyses under CA-ELAP Certificate #1180. Any exceptions to applicable standards have been noted in the case narrative. Please note that certifications are applicable only to tests and/or analytes specified on each. Certification information may be obtained by contacting the laboratory or visiting our website at www.bsklabs.com. The results in this report pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from BSK Analytical Laboratories.

If additional clarification of any information is required, please contact your Client Services Representative, Dan Larkin, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Dan Larkin
Client Services Representative

Quality Control Reviewer

Case Narrative

BSK Submission Number: 2009091440

SAMPLE AND RECEIPT INFORMATION

The sample(s) was received, prepared, and analyzed within the method specified holding times unless otherwise noted on the Certificate of Analysis. Samples, when shipped, arrived within acceptable temperature requirements of 0° to 6° Celsius unless otherwise noted on the Report of Sample Integrity. Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.

QUALITY CONTROL

All analytical quality controls are within established method criteria except when noted in the Quality Control section or on the Certificate of Analysis. All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed. QC samples may include analytes not requested in this submission.

RUN	ORDER	TEST	ANALYTE	COMMENT
179234	1164983	EPA 314.0	Perchlorate (ClO4)	MSD recovery was affected by the matrix.
179503	1166735	EPA 200.8	Selenium (Se) - Total	Detected in the method blank,however only samples with results of ND or 10x were reported. All other affected samples will be rerun.

SAMPLE RESULT INFORMATION

Samples are analyzed as received (wet weight basis) unless noted here. The results relate only to the items tested. Any exceptions to be considered when evaluating these results are also listed here, if applicable. Results contained in this package shall not be reproduced, except in full, without written approval of BSK Analytical Laboratories.

ORDER	TEST	ANALYTE	COMMENT
1162823	EPA 314.0	Perchlorate (ClO4)	Sample was diluted due to matrix interference.
1162824	EPA 314.0	Perchlorate (ClO4)	Sample was diluted due to matrix interference.

Carbon Copies to:

DHS_EDT: Electronic Data Transfer @ STATE FORMS

EDT

BSK LABORATORIES
1414 Stanislaus St.
Fresno, CA 93706

GENERAL MINERAL & PHYSICAL & INORGANIC ANALYSIS (3/03)

Date of Report: 09/10/02
Laboratory Name: BSK ANALYTICAL LABORATORIES

Sample ID No.2009091440-1162823

Authorized Signature:

Name of Sampler: Mike Christensen
Employed By: Soil Control Lab

Date/Time Sample Collected: 09/09/14/1600
Date/Time Sample Received:09/09/18/1150
Date Analyses Completed: 09|09|24

System Name: PARAISO HOT SPRINGS WS
System #: 2701001
Name or Number of Sample Source: WELL 01

****

User ID: 27C
Date/Time of Sample: 09|09|14|1600|

Station Number: 2701001-001
Laboratory Code: 5810
Date Analysis Completed: 09|09|24

Submitted by: _____
Phone #: _____

****

INORGANIC CHEMICALS

MCL	REPORTING UNITS	CHEMICAL	ENTRY#	ANALYSIS RESULTS	DLR
2200	umhos +	Specific Conductance (E.C.)	00095	1400	

ADDITIONAL ANALYSES

6	µg/L	Perchlorate	A-031	ND	4.

* 250-500-600 ** 900-1600-2200 *** 500-1000-1500
+ Indicates Secondary Drinking Water Standards

09091440.res

BSK LABORATORIES
1414 Stanislaus St.
Fresno, CA 93706

EDT

RADIOACTIVITY ANALYSIS (03/03)

Date of Report: 09/10/02
Laboratory Name: BSK ANALYTICAL LABORATORIES

Sample ID No.2009091440-1162821

Authorized Signature:

Name of Sampler: Mike Christensen

Employed By: Soil Control Lab

Date/Time Sample Collected: 09/09/14/1600

Date/Time Sample Received:09/09/18/1150

Date Analyses Completed: 09|10|01

System Name: PARAISO HOT SPRINGS WS

System #: 2701001

Name or Number of Sample Source: WELL 01

****

User ID: 27C

Date/Time of Sample: 09|09|14|1600|

Station Number: 2701001-001

Laboratory Code: 5810

Date Analysis Completed: 09|10|01

Submitted by: _____

Phone #: _____

****

PAGE 1 OF 1

MCL	REPORTING UNITS	CHEMICAL	STORET CODE	ANALYSIS RESULTS	DLR
15	pCi/l	Gross Alpha	01501	5.0	3
	pCi/l	Gross Alpha Counting Error	01502	0.33	
20	pCi/l	Uranium	28012	2.3	1.0

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091440
BSK Sample ID #: 1162821

Report Issue Date: 10/02/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC
Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-001 Well Head 1
Sample Comments: 9090428-01

Date Sampled: 09/14/2009
Time Sampled: 1600
Date Received: 09/18/2009

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Uranium (U)	EPA 200.8	**2.3**	pCi/L	0.67	1	0.67	10/01/09	10/01/09

Radiological

Analyte	Method	Result	Units	MDC	Prep Date/Time	Analysis Date/Time
Gross Alpha	EPA 00-02	**5.0**	pCi/L	1.30	09/24/09	09/25/09
Gross Alpha 1.65 Sigma Uncertainty	EPA 00-02	**0.33**	+/-			

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091440
BSK Sample ID #: 1162822

Report Issue Date: 10/02/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC

Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-002 Well Head 2
Sample Comments: 9090428-02

Date Sampled: 09/14/2009
Time Sampled: 1615
Date Received: 09/18/2009

Radiological

Analyte	Method	Result	Units	MDC	Prep Date/Time	Analysis Date/Time
Gross Alpha	EPA 00-02	**ND**	pCi/L	1.30	09/24/09	09/25/09
Gross Alpha 1.65 Sigma Uncertainty	EPA 00-02	**0.11**	+/-			

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

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Engineers & Laboratories

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Fresno, California 93706
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Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091440
BSK Sample ID #: 1162823

Report Issue Date: 10/02/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC
Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-001 Well Head 1
Sample Comments: 9090428-01

Date Sampled: 09/14/2009
Time Sampled: 1600
Date Received: 09/18/2009

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Conductivity - Specific (EC) @25°C	SM 2510 B	**1400**	µmho/cm	1.0	1	1.0	09/18/09	09/18/09
Perchlorate (ClO4)	EPA 314.0	**ND**	µg/L	2.0	2	4.0	09/24/09	09/24/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

BSK Analytical Laboratories
Engineers & Laboratories

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Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009091440
BSK Sample ID #: 1162824

Report Issue Date: 10/02/2009

Project ID: 9090428
Project Desc: Thompson Holdings LLC
Submission Comments:
Sample Type: Liquid
Sample Description: 2701001-002 Well Head 2
Sample Comments: 9090428-02

Date Sampled: 09/14/2009
Time Sampled: 1616
Date Received: 09/18/2009

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Conductivity - Specific (EC) @25°C	SM 2510 B	**1300**	µmho/cm	1.0	1	1.0	09/18/09	09/18/09
Perchlorate (ClO4)	EPA 314.0	**ND**	µg/L	2.0	2	4.0	09/24/09	09/24/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

BSK Analytical Laboratories
Engineering & Laboratories

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Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

10/02/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091440**
Client : **Soil Control Lab**
Date Submitted : **09/18/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179014

Analyst Initials: **MTHOMPSON**

Method Number: **ALK**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alkalinity (as CaCO3)	LCS	N/A	100	mg/L	101		100.	ND	120	80	09/18/09	*Acceptable*
Alkalinity (as CaCO3)	LCSD	N/A	100	mg/L	102	0.66	100.	ND	120	80	09/18/09	*Acceptable*
Alkalinity (as CaCO3)	LDUP	1162852	230	mg/L	2.1			220	10	N/A	09/18/09	*Acceptable*
Bicarbonate (as CaCO3)	LDUP	1162852	220	mg/L	1.9			210	10	N/A	09/18/09	*Acceptable*
Carbonate (as CaCO3)	LDUP	1162852	10	mg/L	10			9.2	10	N/A	09/18/09	*Acceptable*
Conductivity - Specific (EC) @25°C	LDUP	1162852	440	µmho/c	1.1			430	20	N/A	09/18/09	*Acceptable*
Hydroxide (as CaCO3)	LDUP	1162852	ND	mg/L	N/A			ND	10	N/A	09/18/09	*Acceptable*
pH	LDUP	1162852	8.4	Std. Unit	0.23			8.4	20	N/A	09/18/09	*Acceptable*
Alkalinity (as CaCO3)	RBLK	N/A	ND	mg/L	< 3.0				3.0	N/A	09/18/09	*Acceptable*
Bicarbonate (as CaCO3)	RBLK	N/A	ND	mg/L	< 3.0				3.0	N/A	09/18/09	*Acceptable*
Carbonate (as CaCO3)	RBLK	N/A	ND	mg/L	< 1.0				1.0	N/A	09/18/09	*Acceptable*
Conductivity - Specific (EC) @25°C	RBLK	N/A	ND	µmho/c	< 1.0				1.0	N/A	09/18/09	*Acceptable*
Hydroxide (as CaCO3)	RBLK	N/A	ND	mg/L	< 1.0				1.0	N/A	09/18/09	*Acceptable*

StarLims Run 179014 includes the following BSK Sample ID# :

1162718 1162719 1162818 1162823 1162824 1162826 1162827 1162828 1162829 1162830 1162831 1162832 1162835 1162836 1162837 1162838 1162839 1162840 1162851 1162852 1163624 1163625 1163626 1163627

BSK StarLims Run #: 179224

Analyst Initials: **RHIANNONJ**

Method Number: **ALPHA_00-02**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Gross Alpha	LCS	N/A	27	pCi/L	89		30	0	120	80	09/25/09	*Acceptable*
Gross Alpha	LCSD	N/A	36	pCi/L	118	27	30	0	120	80	09/25/09	*Acceptable*
Gross Alpha	MS	1161975	140	pCi/L	112		120	2.5	130	70	09/25/09	*Acceptable*
	MS	1162883	100	pCi/L	83		120	ND	130	70	09/25/09	*Acceptable*
Gross Alpha	MSD	1161975	120	pCi/L	101	10	120	2.5	130	70	09/25/09	*Acceptable*
	MSD	1162883	120	pCi/L	97	14	120	ND	130	70	09/25/09	*Acceptable*
Gross Alpha	RBLK	N/A	0	pCi/L	< N/A				N/A	N/A	09/25/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

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Fresno, California 93706
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Fax (559) 485-6935

QC Summary Report

10/02/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091440**
Client : **Soil Control Lab**
Date Submitted : **09/18/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

StarLims Run 179224 includes the following BSK Sample ID# :

1161975 1162317 1162743 1162744 1162745 1162755 1162756 1162757 1162821 1162822 1162867 1162883 1162884 1162885 1162886 1164938 1164939 1164940 1164941 1164942 1164943 1164944

BSK StarLims Run #: 179234

Analyst Initials: **DIANNEL**

Method Number: **CLO4_IC**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Perchlorate (ClO4)	LCS	N/A	23	µg/L	93		25.00	ND	115	85	09/24/09	*Acceptable*
Perchlorate (ClO4)	LCSD	N/A	25	µg/L	99	6	25.00	ND	115	85	09/24/09	*Acceptable*
Perchlorate (ClO4)	MS	1162835	15	µg/L	101		15.00	ND	120	80	09/24/09	*Acceptable*
	MS	1163435	7.8	µg/L	103		7.5	ND	120	80	09/24/09	*Acceptable*
Perchlorate (ClO4)	MSD	1162835	16	µg/L	105	3.4	15.00	ND	120	80	09/24/09	*Acceptable*
	MSD	1163435	5.7	µg/L	75	31	7.5	ND	120	80	09/24/09	*OOS-Low*
Perchlorate (ClO4)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/24/09	*Acceptable*

Run	Test	Analyte	Comment
179234	CLO4_IC	Perchlorate	MSD recovery was affected by the matrix.

StarLims Run 179234 includes the following BSK Sample ID# :

1159585 1162823 1162824 1162835 1162837 1162839 1162856 1162865 1162866 1163433 1163434 1163435 1164863 1164977 1164978 1164979 1164980 1164981 1164982 1164983

BSK StarLims Run #: 179503

Analyst Initials: **MARGARETS**

Method Number: **SB_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Antimony (Sb)	LCS	N/A	99	µg/L	98		100	ND	115	85	09/29/09	*Acceptable*
Arsenic (As)	LCS	N/A	97	µg/L	97		100	ND	115	85	09/29/09	*Acceptable*
Beryllium (Be)	LCS	N/A	110	µg/L	107		100	ND	115	85	09/29/09	*Acceptable*
Cadmium (Cd)	LCS	N/A	98	µg/L	98		100	ND	115	85	09/29/09	*Acceptable*
Chromium - Total (Cr)	LCS	N/A	100	µg/L	99		100	ND	115	85	09/29/09	*Acceptable*
Copper (Cu)	LCS	N/A	100	µg/L	99		100	ND	115	85	09/29/09	*Acceptable*
Lead (Pb)	LCS	N/A	100	µg/L	100		100	ND	115	85	09/29/09	*Acceptable*
Mercury (Hg)	LCS	N/A	1.9	µg/L	97		2	ND	115	85	09/29/09	*Acceptable*
Nickel (Ni)	LCS	N/A	100	µg/L	104		100	ND	115	85	09/29/09	*Acceptable*
Selenium (Se) - Total	LCS	N/A	110	µg/L	108		100	2.1	115	85	09/29/09	*Acceptable*
Silver (Ag)	LCS	N/A	110	µg/L	106		100	ND	125	75	09/29/09	*Acceptable*
Thallium (Tl)	LCS	N/A	110	µg/L	107		100	ND	115	85	09/29/09	*Acceptable*
Uranium (U)	LCS	N/A	110	µg/L	107		100	ND	115	85	09/29/09	*Acceptable*

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK Analytical Laboratories
Engineers & Laboratories
1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

10/02/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091440**
Client : **Soil Control Lab**
Date Submitted : **09/18/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179503

Analyst Initials: **MARGARETS**

Method Number: **SB_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Antimony (Sb)	LCSD	N/A	99	µg/L	98	0.02	100	ND	115	85	09/29/09	*Acceptable*
Arsenic (As)	LCSD	N/A	99	µg/L	98	1.9	100	ND	115	85	09/29/09	*Acceptable*
Beryllium (Be)	LCSD	N/A	110	µg/L	113	6	100	ND	115	85	09/29/09	*Acceptable*
Cadmium (Cd)	LCSD	N/A	99	µg/L	99	1.4	100	ND	115	85	09/29/09	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	97	µg/L	96	3	100	ND	115	85	09/29/09	*Acceptable*
Copper (Cu)	LCSD	N/A	98	µg/L	97	2	100	ND	115	85	09/29/09	*Acceptable*
Lead (Pb)	LCSD	N/A	100	µg/L	102	2.2	100	ND	115	85	09/29/09	*Acceptable*
Mercury (Hg)	LCSD	N/A	2.0	µg/L	102	5.6	2	ND	115	85	09/29/09	*Acceptable*
Nickel (Ni)	LCSD	N/A	96	µg/L	96	8.4	100	ND	115	85	09/29/09	*Acceptable*
Selenium (Se) - Total	LCSD	N/A	110	µg/L	107	0.72	100	2.1	115	85	09/29/09	*Acceptable*
Silver (Ag)	LCSD	N/A	99	µg/L	98	7.9	100	ND	125	75	09/29/09	*Acceptable*
Thallium (Tl)	LCSD	N/A	100	µg/L	102	4.7	100	ND	115	85	09/29/09	*Acceptable*
Uranium (U)	LCSD	N/A	110	µg/L	108	1.7	100	ND	115	85	09/29/09	*Acceptable*
Antimony (Sb)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/29/09	*Acceptable*
Arsenic (As)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	09/29/09	*Acceptable*
Beryllium (Be)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/29/09	*Acceptable*
Cadmium (Cd)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/29/09	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/29/09	*Acceptable*
Copper (Cu)	RBLK	N/A	ND	µg/L	< 5.0				5.0	N/A	09/29/09	*Acceptable*
Lead (Pb)	RBLK	N/A	ND	µg/L	< 5.0				5.0	N/A	09/29/09	*Acceptable*
Mercury (Hg)	RBLK	N/A	ND	µg/L	< 0.40				0.40	N/A	09/29/09	*Acceptable*
Nickel (Ni)	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/29/09	*Acceptable*
Selenium (Se) - Total	RBLK	N/A	2.1	µg/L	2.12				2.0	N/A	09/29/09	*OOS-High*
Silver (Ag)	RBLK	N/A	ND	µg/L	< 10				10	N/A	09/29/09	*Acceptable*
Thallium (Tl)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/29/09	*Acceptable*
Uranium (U)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	09/29/09	*Acceptable*

Run	Test	Analyte	Comment
179503	SE_MS_TS	Selenium	Detected in the method blank, however only samples with results of ND or 10x is reported. All affected samples will be rerun.

StarLims Run 179503 includes the following BSK Sample ID# :

1162655 1162659 1162660 1162818 1162822 1162825 1162835 1162836 1166735 1166736 1166737

BSK StarLims Run #: 179645

Analyst Initials: **MARGARETS**

Method Number: **SB_MS_TS**

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

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Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

QC Summary Report

10/02/2009

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : **2009091440**
Client : **Soil Control Lab**
Date Submitted : **09/18/2009**
Project ID : **9090428**

Project Desc : **Thompson Holdings LLC**

BSK StarLims Run #: 179645

Analyst Initials: **MARGARETS**

Method Number: **SB_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Antimony (Sb)	LCS	N/A	100	µg/L	100		100	ND	115	85	10/01/09	*Acceptable*
Arsenic (As)	LCS	N/A	98	µg/L	98		100	ND	115	85	10/01/09	*Acceptable*
Uranium (U)	LCS	N/A	100	µg/L	105		100	ND	115	85	10/01/09	*Acceptable*
Antimony (Sb)	LCSD	N/A	99	µg/L	99	0.99	100	ND	115	85	10/01/09	*Acceptable*
Arsenic (As)	LCSD	N/A	100	µg/L	100	2.7	100	ND	115	85	10/01/09	*Acceptable*
Uranium (U)	LCSD	N/A	100	µg/L	104	0.52	100	ND	115	85	10/01/09	*Acceptable*
Antimony (Sb)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	10/01/09	*Acceptable*
Arsenic (As)	RBLK	N/A	ND	µg/L	< 2.0				2.0	N/A	10/01/09	*Acceptable*
Uranium (U)	RBLK	N/A	ND	µg/L	< 1.0				1.0	N/A	10/01/09	*Acceptable*

StarLims Run 179645 includes the following BSK Sample ID# :

1162743 1162821 1163915 1163916 1167592 1167593 1167594

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

Sample Integrity

Pg. 1 of 2

CLI 2009091440 09/18/2009
SOIL CNTRL
TAT: Standard
918062

Date Received 9/18/09

Section 1- Sampled Same Day

Sample Transport: ~~Walk In~~ ~~SJVC~~ ~~BSK-Courier~~ Transported In: Ice Chest Box Hand

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2- Sampled Previously

Sample Transport: CAO UPS SJVC Walk-In BSK-Courier GSO Fed Exp. Other:_____

No. Coolers/Ice Chests: 1 Temperature(s): 0

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other:_____

Were ice chest custody seals present? Y N Intact: Y N

Section 3- COC Info.	Completed Yes	Completed No	Info From Container		Completed Yes	Completed No	Info From Container
Was COC Received	✓			Analysis Requested	✓		
Date Sampled	✓			Any hold times less than 72hr		✓	
Time Sampled	✓			Client Name	✓		
Sample ID	✓			Address	✓		
Special Storage/Handling Ins.		✓		Telephone #	✓		

Section 4- Bottles / Analysis	Yes	No	N/A	Comment
Did all bottles arrive unbroken and intact?:	✓			
Were bottle custody seals present?		✓		
Were bottle custody seals intact?		✓		
Did all bottle labels agree with COC?:	✓			
Were correct containers used for the tests requested?:	✓			
Were correct preservations used for the tests requested?:	✓			
Was a sufficient amount of sample sent for tests indicated?:	✓			
Were bubbles present in VOA Vials?: (**Volatile Methods Only**)			✓	
Were Ascorbic Acid Bottles received with the VOAs			✓	

Section 5- Comments / Discrepancies

Sample(s) Split/Preserved: Yes No Container: 32A NBSK Preservation: HNO3 Init: JWH 1450

Was Client Service Rep. notified of discrepancies: Yes No N/A CSR: Notified By:

Explanations / Comments

Report Comment Entered:

SR-FL-0002-02

Labeled by: JWH 1456

Labels checked by: MA 1459

Sample Integrity Pg 2 of 2

SR-FL-0002-02

BSK Bottles Yes (No)

2009091440 09/18/2009
SOIL CNTRL TAT: Standard
918062

8oz (A) 16oz (B) 32oz (C) Amber Glass (AG)

Container(s) Received	1-2	3-4
Bacti $Na_2S_2O_3$		
None (p) White Cap		1B
None (p) Blue Cap		
HNO_3 (p) Red Cap	2C	
H_2SO_4 (p) Yellow Cap		
NaOH (p) Green Cap		
Other:		
Dissolved Oxygen 300ml (g)		
250ml (AG) None		
250ml (AG) H_2SO_4 COD Yellow Label		
250ml (AG) $Na_2S_2O_3$ 515,547 Blue Label		
250ml (AG) $Na_2S_2O_3$+ MCAA 531.1 Orange Label		
250ml (AG) NH_4Cl 552 Purple Label		
250ml (AG) EDA DBPs Brown Label		
250ml (AG) Other:		
500ml (AG) None		
500ml (AG) H_2SO_4 TPH-Diesel Yellow Label		
1 Liter (AG) None		
1 Liter (AG) H_2SO_4 O&G Yellow Label		
1 Liter (AG) $Na_2S_2O_3$ 548 / 525 / 521 Blue Label		
1 Liter (P) $Na_2S_2O_3$+ H_2SO_4 549		
1 Liter (AG) NaOH+ZnAc Sulfide		
1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label		
1 Liter (AG) CuSO4/Trizma 529 Turquoise Label		
1 Liter (AG) Na_2SO_3 / HCL 525 UCMR Neon Green Label		
1 Liter (AG) Ammonium Chloride 535 Purple Label		
40ml VOA Vial Clear – HCL		
40ml VOA Vial Amber – $Na_2S_2O_3$		
40ml VOA Vial Clear – None		
40ml VOA Vial Clear - $Na_2S_2O_3$ 504, 505		
40ml VOA Vial Clear – H_3PO_4		
Other:		
Asbestos 32oz Plastic/Foil		
Radiological GA / GB (½ Gal Plastic)		
Radiological 226 / 228 (32 oz plastic N-BSK)		
Radon 200ml Clear (g)		
Low Level Hg/Metals Double Baggie		
THM-FP 4-40ml VOA None		
250 Clear Glass Jar		
500 Clear Glass Jar		
1 Liter Clear Glass Jar		
Plastic Bag		
Soil Tube Brass / Steel / Plastic		
Tedlar Bags		

9/18/09
SS

Soil Control Lab
42 Hangar Way : Watsonville, CA 95076
Phone: (831) 724-5422
Fax: (831) 724-3188

CHAIN-OF-CUSTODY

2009091440 SOIL CNTRL 918062

09/18/2009

TAT: Standard

Client/Company Name:	Soil Control Lab
Attn:	Lynne Nagata
Address:	42 Hangar Way
	Watsonville, CA 95076
Phone:	831-724-5422
Fax:	831-724-3188
E-mail:	lynne@controllabs.com
Project Name:	Thompson Holdings, LLC
Project Number:	9090428

Comments/Special Instructions:
* If Gross Alpha result plus 0.84 x counting error is greater than 5 pCi/Liter, please run Uranium.
Requires EDT - User ID: 27C
System #2701001
Sampler: Mike Christensen

Soil Control Lab Use Only:
Cooler #: VOA Packer #:
Lab Sent To: BSK

Lab Use Only: Storage Location: Freezer #: Refrigerator #: Shelf #:

Lab Use Only: ID Number	Client Sample Identification	Sample Information: Sampling Date	Sampling Time	Matrix	Bottle or Container Information: Sample Preservative	Bottle Type	Bottle Size	No. of Bottles	Gross Alpha *	Perchlorate						Sample Condition
9090428-01	2701001-001 Well Head #1	09/14/09	16:00	Water	None	HDPE	1 Liter	2	X						1162821	
-02	2701001-002 Well Head #2 (*)	09/14/09	16:15	Water	None	HDPE	1 Liter	2	X						22	
-01	2701001-001 Well Head #1	09/14/09	16:00	Water	None	HDPE	250 ml	1		X					23	
-02	2701001-002 Well Head #2 (*)	09/14/09	16:16	Water	None	HDPE	250 ml	1		X					24	

D... 10/5/09

Sampler's Signature and Printed Name: **Mike Christensen**

(*) well 2 not in write-on database at the time report was finalized

Relinquished By (Signature and Printed Name):	Date	Time	Transported By:	Received By (Signature and Printed Name):	Date:	Time:
[signature] Lynne Nagata	9/17/2009	16:00	UPS			
			UPS	[signature]	9/18/09	1150

BSK Analytical Laboratories
Engineering Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289
BSK Sample ID #: 1173894

Report Issue Date: 10/21/2009

Project ID: 9100437
Project Desc: Thompson Holdings LLC

Submission Comments:
Sample Type: Liquid
Sample Description: Well Head 1
Sample Comments: 9100437-01

Date Sampled: 10/15/2009
Time Sampled: 0800
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,1-Trichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
1,1,2-Trichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloroethene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloropropene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,3-Trichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,3-Trichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,4-Trichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,4-Trimethylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3,5-Trimethylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,4-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2,2-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2-Butanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
2-Chlorotoluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2-Hexanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
4-Chlorotoluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
4-Methyl-2-pentanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
Acetone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
Benzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromochloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromodichloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
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PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
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P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code: * 1173894 - 210.0000 *

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Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289
BSK Sample ID #: 1173894

Report Issue Date: 10/21/2009

Project ID: 9100437
Project Desc: Thompson Holdings LLC

Submission Comments:
Sample Type: Liquid
Sample Description: Well Head 1
Sample Comments: 9100437-01

Date Sampled: 10/15/2009
Time Sampled: 0800
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Bromoform	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromomethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Carbontetrachloride	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloroform	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
cis-1,2-Dichloroethene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
cis-1,3-Dichloropropene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dibromochloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dibromomethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dichlorodifluoromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Ethyl t-Butyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	10/20/09	10/20/09
Ethylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Hexachlorobutadiene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Isopropylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
m,p-Xylenes	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Methylene Chloride	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Methyl-t-Butyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	10/20/09	10/20/09
Naphthalene	EPA 524.2	ND	µg/L	1.0	1	1.0	10/20/09	10/20/09
n-Butylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
n-Propylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
o-Xylene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
p-Isopropyltoluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
sec-Butylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Styrene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
t-Amyl Methyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	10/20/09	10/20/09
tert-Butylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Tetrachloroethene (PCE)	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Toluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
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MDC: Min Detectable Concentration

Report Authentication Code: * 1173894-210.0000 *

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289
BSK Sample ID #: 1173894

Report Issue Date: 10/21/2009

Project ID: 9100437
Project Desc: Thompson Holdings LLC
Submission Comments:
Sample Type: Liquid
Sample Description: Well Head 1
Sample Comments: 9100437-01

Date Sampled: 10/15/2009
Time Sampled: 0800
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total 1,3-Dichloropropene	EPA 524.2	**ND**	µg/L	0.50	1	0.50		
Total Trihalomethanes	EPA 524.2	**ND**	µg/L	-	-	N/A		
Total Xylene Isomers	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
trans-1,2-Dichloroethene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
trans-1,3-Dichloropropene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Trichloroethene (TCE)	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Trichlorofluoromethane	EPA 524.2	**ND**	µg/L	5.0	1	5.0	10/20/09	10/20/09
Vinyl Chloride	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Surrogate								
1,2-Dichlorobenzene-d4	EPA 524.2	**110**	% Rec	-	1	N/A	10/20/09	10/20/09
4-Bromofluorobenzene	EPA 524.2	**100**	% Rec	-	1	N/A	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
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Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289
BSK Sample ID #: 1173895

Report Issue Date: 10/21/2009

Project ID: 9100437
Project Desc: Thompson Holdings LLC

Submission Comments:

Sample Type: Liquid
Sample Description: Well Head 2
Sample Comments: 9100437-02

Date Sampled: 10/15/2009
Time Sampled: 0815
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,1-Trichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
1,1,2-Trichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloroethene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,1-Dichloropropene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,3-Trichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,3-Trichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,4-Trichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2,4-Trimethylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichloroethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,2-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3,5-Trimethylbenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,3-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
1,4-Dichlorobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2,2-Dichloropropane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2-Butanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
2-Chlorotoluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
2-Hexanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
4-Chlorotoluene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
4-Methyl-2-pentanone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
Acetone	EPA 524.2	ND	µg/L	10	1	10	10/20/09	10/20/09
Benzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromobenzene	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromochloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromodichloromethane	EPA 524.2	ND	µg/L	0.50	1	0.50	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
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Report Authentication Code: * 1173895-210.0000 *

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Certificate of Analysis

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ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289

BSK Sample ID #: 1173895

Report Issue Date: 10/21/2009

Project ID: 9100437

Project Desc: Thompson Holdings LLC

Submission Comments:

Sample Type: Liquid
Sample Description: Well Head 2
Sample Comments: 9100437-02

Date Sampled: 10/15/2009
Time Sampled: 0815
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Bromoform	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Bromomethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Carbontetrachloride	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chlorobenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloroethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloroform	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Chloromethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
cis-1,2-Dichloroethene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
cis-1,3-Dichloropropene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dibromochloromethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dibromomethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Dichlorodifluoromethane	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Ethyl t-Butyl Ether	EPA 524.2	**ND**	µg/L	3.0	1	3.0	10/20/09	10/20/09
Ethylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Hexachlorobutadiene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Isopropylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
m,p-Xylenes	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Methylene Chloride	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Methyl-t-Butyl Ether	EPA 524.2	**ND**	µg/L	3.0	1	3.0	10/20/09	10/20/09
Naphthalene	EPA 524.2	**ND**	µg/L	1.0	1	1.0	10/20/09	10/20/09
n-Butylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
n-Propylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
o-Xylene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
p-Isopropyltoluene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
sec-Butylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Styrene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
t-Amyl Methyl Ether	EPA 524.2	**ND**	µg/L	3.0	1	3.0	10/20/09	10/20/09
tert-Butylbenzene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Tetrachloroethene (PCE)	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Toluene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code: * 1173895-210.0000 *

BSK Analytical Laboratories
Engineers & Laboratories

1414 Stanislaus Street
Fresno, California 93706
(559) 497-2888
Fax (559) 485-6935

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Lynne Nagata
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

BSK Submission #: 2009101289

BSK Sample ID #: 1173895

Report Issue Date: 10/21/2009

Project ID: 9100437

Project Desc: Thompson Holdings LLC

Submission Comments:

Sample Type: Liquid
Sample Description: Well Head 2
Sample Comments: 9100437-02

Date Sampled: 10/15/2009
Time Sampled: 0815
Date Received: 10/16/2009

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total 1,3-Dichloropropene	EPA 524.2	**ND**	µg/L	0.50	1	0.50		
Total Trihalomethanes	EPA 524.2	**ND**	µg/L	-	-	N/A		
Total Xylene Isomers	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
trans-1,2-Dichloroethene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
trans-1,3-Dichloropropene	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Trichloroethene (TCE)	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Trichlorofluoromethane	EPA 524.2	**ND**	µg/L	5.0	1	5.0	10/20/09	10/20/09
Vinyl Chloride	EPA 524.2	**ND**	µg/L	0.50	1	0.50	10/20/09	10/20/09
Surrogate								
1,2-Dichlorobenzene-d4	EPA 524.2	**110**	% Rec	-	1	N/A	10/20/09	10/20/09
4-Bromofluorobenzene	EPA 524.2	**100**	% Rec	-	1	N/A	10/20/09	10/20/09

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code: * 1173895-210.0000 *

EMSL Analytical, Inc
2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone: (510) 895-3675 Fax: (510) 895-3680 Email: milpitaslab@emsl.com

Attn: **Lynne Nagata**
Soil Control Lab
42 Hangar Way
Watsonville, CA 95076

Fax: (831) 724-3188 Phone: (831) 724-5422

Project: **9090428 - Thompson Holdings, LLC - Paraiso Hot Springs**

Customer ID: SCLB78
Customer PO: 9090428
Received: 09/16/09 10:00 AM
EMSL Order: 090907552

EMSL Proj:
Analysis Date: 9/18/2009

Test Report: Determination of Asbestos Structures in Water Performed by the 100.2 Method (EPA/600/R-94/134)

Sample ID	Sample Prep Date	# Fibers Asbestos	# Fibers Non-Asbestos	Type(s) Of Asbestos	Analytical Sensitivity (MFL)	Confidence Limits	Concentration Of Asbestos Fibers (MFL)	Comments
9090428-01, 2701001-001 *090907552-0001*	09/16/09	0	0		2.00	0.00-7.30	<2.00	CA ELAP NOTES: Aliquot 1000:5 ml; EFA 1288.25 sq. mm; Area examined 0.130 sq. mm. Analytical sensitivity of 0.2 MFL cannot be practically achieved due to the presence of a high quantity of non-fibrous particulate matter.
9090428-02, 2701001-002 *090907552-0002*	09/16/09	0	0		0.99	0.00-3.70	<0.99	CA ELAP NOTES: Aliquot 1000:10 ml; EFA 1288.25 sq. mm; Area examined 0.130 sq. mm. Analytical sensitivity of 0.2 MFL cannot be practically achieved due to the presence of a high quantity of non-fibrous particulate matter.

Analyst(s)

Rui Cindy Geng (2)

Baojia Ke, Laboratory Manager
or other approved signatory

Sample collection and containers provided by the client, acceptable bottle blank level is defined as <=0.01MFL>10um. ND=None Detected. This report may not be reproduced, except in full, without written permission by EMSL Analytical, Inc. This report relates only to those items tested.Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical, Inc San Leandro 2235 Polvorosa Ave , Suite 230, San Leandro CA CA ELAP 1620, HI reciprocity, ID CA 01477, WA C2007

THIS IS THE LAST PAGE OF THE REPORT.

090907552

ASBESTOS CHAIN OF CUSTODY FORM

EMSL Job Number: 090907552

EMSL ANALYTICAL, INC.
2235 POLVOROSA AVE STE 230
SAN LEANDRO, CA
Tel: 510-895-3675
Fax: 510-895-3680

Your Name:	Lynne Nagata	**EMSL Client Number:**	
Company:	Soil Control Lab		
Street:	42 HANGAR WAY		
City/State/Zip:	Watsonville, CA 95076		
Phone:	831-724-5422 **Fax:** 831-724-3188	**Email:**	lynne@controllabs.com
Project Name	Thompson Holdings, LLC	**Project #:**	9090428
Project Location:	Paraiso Hot Springs	**Project State (US):**	CA

TURNAROUND TIME – STANDARD

☐ 3 Hours	☐ 6 Hours	☐ 12 Hours	☐ 24 Hours	☐ 48 Hours	☐ 72 Hours	☐ 4 Days	☐ 5 Days	☐ 6-10 Days

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call lab (713) 686-3635 for price prior to sending samples. You will be asked to sign an authorization form for this service. *12 hours (must arrive by 11:00a.m. Mon -Fri.)

SAMPLE MATRIX

☐ Air	☐ Bulk	☐ Soil	☐ Wipe	☐ Micro-Vac	☐ Drinking Water	☐ Wastewater	☐ Other

PCM - AIR
- ☐ NIOSH 7400 (A) Issue 2: August 1994
- ☐ OSHA w/TWA

PLM - BULK
- ☐ EPA 600/R-93/116
- ☐ NY Stratified Point Count
- ☐ NIOSH 9002
- ☐ PLM NOB (Gravimetric) NYS 198.1
- ☐ EPA Point Count (400 Points)
- ☐ EPA Point Count (1,000 Points)

TEM - AIR
- ☐ AHERA 40 CFR, Part 763 Subpart E
- ☐ NIOSH 7402 Issue 2
- ☐ EPA Level II

TEM BULK
- ☐ Drop Mount (Qualitative)
- ☐ Chatfield SOP-1988-02
- ☐ TEM NOB (Gravimetric) NY 198.4

TEM MICROVAC
- ☐ ASTM D 5755-95 (Quantitative)

TEM WIPE
- ☐ ASTM D-6480-99
- ☐ Qualitative

TEM WATER
- ☐ ~~EPA 100.1~~ Drinking Water
- ☐ EPA 100.2
- ☐ NYS 198.2
- ☐ Other:_____

SOILS
- ☐ EPA Protocol Qualitative
- ☐ EPA Protocol Quantitative
- ☐ EMSL MSD 9000 Method fibers/gram
- ☐ Superfund EPA 540-R097-028 (dust generation)

SOIL, ROCK, VERMICULITE via CARB 435
- ☐ PLM CARB 435 Level A
- ☐ PLM CARB 435 Level B
- ☐ TEM CARB 435 Level B
- ☐ TEM CARB 435 Level C
- ☐ TEM CARB 435 Level D
- ☐ TEM CARB 435 Level E
- ☐ TEM CARB 435 Level F

Client requires EDT forms – User ID: 27C, System and source numbers listed below; sampler: Mike Christensen

SAMPLE NUMBER	SAMPLE DESCRIPTION / LOCATION	VOLUME Air (L)	AREA (Inches sq.)	DATE SAMPLED	SAMPLED BY
9090428-01	Well Head #1, 2701001-001	6°C		9/14/09, 16:00	Mike Christensen
9090428-02	Well Head #2, 2701001-002	5°C		9/14/09, 16:15	Mike Christensen

Relinquished: Lynne Nagata Lynne Nagata **Date:** 9/15/09 **Time:** 16:00

Received: TSLawrence **Date:** 9/16/09 **Time:** 1000 UPS

If you have any questions about completing this COC please contact your EMSL Regional Account Manager – Andrea Norman 602.276.4344 Page of

Attachment 5B
2007 Water Quality Test Data

MONTEREY COUNTY HEALTH DEPARTMENT
Consolidated Chemistry Laboratory
1270 Natividad Road Salinas, CA 93906
Phone (831)755-4516 Fax (831) 755-4652
ELAP Certification Number: 1395

Paraiso L.L.C.\Paraiso Hot Springs
34358 Paraiso Springs Rd.
Soledad, CA 93960

Attn: Josie

Page 1 of 1

Thursday, December 20, 2007

Lab Number: AB03028
Sample Site: WELL #1
Source Code: 2701001-001
Sample ID: 2701001

Client Code: PARAISO
Collection Date/Time: 12/3/2007 15:10
Submittal Date/Time: 12/3/2007 16:03
Sample Collector: ORTIZ-LOPEZ J

Sample Comments: Routine Drinking Water. Copy forwarded to Monterey County Environmental Health

Analyte	Method	Unit	Result	PQL	Date Analyzed
Title 22 (GM-GP-IO)	Attached	Attached	Completed	Attached	12/4/2007

Lab Number: AB03029
Sample Site: WELL #2
Source Code:
Sample ID: 2701001

Client Code: PARAISO
Collection Date/Time: 12/3/2007 15:15
Submittal Date/Time: 12/3/2007 16:03
Sample Collector: ORTIZ-LOPEZ J

Sample Comments: Routine Drinking Water. Copy forwarded to Monterey County Environmental Health

Analyte	Method	Unit	Result	PQL	Date Analyzed
Title 22 (GM-GP-IO)	Attached	Attached	Completed	Attached	12/4/2007

Report Approved by

G. R. Gulbert, M.S., P.H.M.
Laboratory Director

mg/L : Milligrams per liter (=ppm)
PQL : Practical Quantitation Limit
DLR : Detection Limit for Reporting

ug/L : Micrograms per liter (=ppb)
MCL : Maximum Contaminant Level
ND : Not Detected
N/A : Not Applicable

* : Primary Standards
** : Secondary Standards
*** : Action Level

BSK ANALYTICAL LABORATORIES

BSK Submission Number: 2007120093

12/11/2007

MONTEREY COUNTY LAB
RECEIVED
DEC 18 2007

ACCREDITED IN ACCORDANCE WITH nelac

Gerry Guibert
Monterey CHD
1270 Natividad Rd. Rm A15
Salinas, CA 93906

Dear Gerry Guibert,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

Certification: BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses under CA NELAP Certificate #04227CA, CA-ELAP Certificate #1180, and Nevada Certificate #CA79. For all other matrices and bacteriological analyses, this data package is in compliance with ELAP Standards for applicable certified analyses under CA-ELAP Certificate #1180. Any exceptions to applicable standards have been noted in the case narrative. Please note that certifications are applicable only to tests and/or analytes specified on each. Certification information may be obtained by contacting the laboratory or visiting our website at www.bsklabs.com. The results in this report pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from BSK Analytical Laboratories.

If additional clarification of any information is required, please contact your Client Services Representative, Stephanie Dollahite, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Stephanie Dollahite
Client Services Representative

Case Narrative

BSK Submission Number: 2007120093

SAMPLE AND RECEIPT INFORMATION

The sample(s) was received, prepared, and analyzed within the method specified holding times unless otherwise noted on the Certificate of Analysis. Samples, when shipped, arrived within acceptable temperature requirements of 0° to 6° Celsius unless otherwise noted on the Report of Sample Integrity. Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.

QUALITY CONTROL

All analytical quality controls are within established method criteria except when noted in the Quality Control section or on the Certificate of Analysis. All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed. QC samples may include analytes not requested in this submission.

RUN	ORDER	TEST	ANALYTE	COMMENT
143688	926261	SM 2320 B	Alkalinity (as CaCO3)	The LDUP RPD was out of range due to suspected matrix effects.
143688	926261	SM 2320 B	Bicarbonate (as CaCO3)	The LDUP RPD was out of range due to suspected matrix effects.
143688	926261	SM 2320 B	Carbonate (as CaCO3)	The LDUP RPD was out of range due to suspected matrix effects.
144003	928516	SM 4500-CN E	Cyanide (CN)	LCS recovery was out of the acceptance range, however the LCSD recovery was within the acceptance range, therefore the data was reported.
144003	928518	SM 4500-CN E	Cyanide (CN)	MS and MSD recoveries were affected by the matrix.

SAMPLE RESULT INFORMATION

Samples are analyzed as received (wet weight basis) unless noted here. The results relate only to the items tested. Any exceptions to be considered when evaluating these results are also listed here, if applicable. Results contained in this package shall not be reproduced, except in full, without written approval of BSK Analytical Laboratories.

ORDER	TEST	ANALYTE	COMMENT
926016	EPA 300.0	Nitrite (NO2-N)	One or more analytes were diluted due to matrix interference.
926017	EPA 300.0	Nitrite (NO2-N)	One or more analytes were diluted due to matrix interference.

Carbon Copies to:

DHS_EDT: Electronic Data Transfer @ STATE FORMS

EDT

BSK LABORATORIES
1414 Stanislaus St.
Fresno, CA 93706

GENERAL MINERAL & PHYSICAL & INORGANIC ANALYSIS (3/03)

Date of Report: 07/12/11
Laboratory Name: BSK ANALYTICAL LABORATORIES

Authorized Signature:

Sample ID No.2007120093-926016

Name of Sampler: Josie Ortiz Lopez Employed By: Monterey CHD

Date/Time Sample Collected: 07/12/03/1510

Date/Time Sample Received:07/12/04/0825

Date Analyses Completed: 07|12|10

System Name: PARAISO HOT SPRINGS WS System #: 2701001
Name or Number of Sample Source: WELL 01

****

User ID: 27C
Date/Time of Sample: 07|12|03|1510|

Station Number: 2701001-001
Laboratory Code: 5810
Date Analysis Completed: 07|12|10

Submitted by: _____ Phone #: _____

****

INORGANIC CHEMICALS

MCL	REPORTING UNITS		CHEMICAL	ENTRY#		ANALYSIS RESULTS	DLR
	mg/L		Hardness, (Total) as CACO3	00900		130	
	mg/L		Calcium (Ca)	00916		24	
	mg/L		Magnesium (Mg)	00927		17	
	mg/L		Sodium (Na)	00929		16	
	mg/L		Potassium (K)	00937	<	2.0	
Total Cations			Meq/L Value: 3.29				
	mg/L		Alkalinity (Total) (as CaCO3 equivalents)	00410		220	
	mg/L		Hydroxide (as OH)	71830	<	1.0	
	mg/L		Carbonate (as CO3)	00445	<	1.0	
	mg/L		Bicarbonate (as HCO3)	00440		270	
600	mg/L	+	Sulfate (SO4)	00945		400	0.5
600	mg/L	+	Chloride (Cl)	00940		52	
45	mg/L		Nitrate (NO3)	71850		5.1	2.
2	mg/L		**Fluoride (F) (Natural-Source)**	00951		**2.8**	**0.1**
Total Anions			Meq/L Value: 14.42				
	StdUnit		pH, Laboratory	00403		8.1	
2200	umhos	+	Specific Conductance (E.C.)	00095		1200	
1500	mg/L	+	Total Filterable Residue @ 180 C (TDS)	70300		890	
15	UNITS		Color, Apparent (Unfiltered)	00081	<	1.0	
3	TON		Odor Threshold at 60 C	00086		1.0	1.

* 250-500-600 ** 900-1600-2200 *** 500-1000-1500
\+ Indicates Secondary Drinking Water Standards

07120093.res

ACCREDITED IN ACCORDANCE WITH nelac

INORGANIC CHEMICALS 2007120093-926016

MCL	REPORTING UNITS	CHEMICAL	ENTRY#	ANALYSIS RESULTS	DLR
5	NTU	Turbidity, Laboratory	82079	0.31	
0.5	mg/L +	MBAS	38260	< 0.050	
1000	µg/L	Aluminum (Al)	01105	ND	50.
6	µg/L	Antimony (Sb)	01097	ND	6.
10	µg/L	Arsenic (As)	01002	ND	2.
1000	µg/L	Barium (Ba)	01007	ND	100.
4	µg/L	Beryllium (Be)	01012	ND	1.
5	µg/L	Cadmium (Cd)	01027	ND	1.
50	µg/L	Chromium (Total Cr)	01034	ND	10.
1000	µg/L +	Copper (Cu)	01042	ND	50.
300	µg/L +	Iron (Fe)	01045	ND	100.
	µg/L	Lead (Pb)	01051	ND	5.
50	µg/L +	Manganese (Mn)	01055	ND	20.
2	µg/L	Mercury (Hg)	71900	ND	1.
100	µg/L	Nickel (Ni)	01067	ND	10.
50	µg/L	Selenium (Se)	01147	ND	5.
100	µg/L +	Silver (Ag)	01077	ND	10.
2	µg/L	Thallium (Tl)	01059	ND	1.
5000	µg/L	Zinc (Zn)	01092	ND	50.

ADDITIONAL ANALYSES

		Langelier Index at 60 C	71813	0.64	
		Agressiveness Index	82383	12	
1000	µg/L	Nitrite as Nitrogen(N)	00620	ND	400.
150	µg/L	Cyanide	01291	ND	100.

+ Indicates Secondary Drinking Water Standards

BSK ANALYTICAL LABORATORIES

07120093.res

ACCREDITED IN ACCORDANCE WITH nelac

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Gerry Guibert
Monterey CHD
1270 Natividad Rd. Rm A15
Salinas, CA 93906

BSK Submission #: 2007120093
BSK Sample ID #: 926016

Report Issue Date: 12/11/2007

Project ID: Project Desc: Paraiso Hot Springs

Submission Comments:
Sample Type: Liquid
Sample Description: Well 1
Sample Comments: AB)3028

Date Sampled: 12/03/2007
Time Sampled: 1510
Date Received: 12/04/2007

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Aggressive Index		12	-		1	N/A	12/10/07	12/10/07
Alkalinity (as CaCO3)	SM 2320 B	220	mg/L	3.0	1	3.0	12/04/07	12/04/07
Aluminum (Al)	EPA 200.7	ND	mg/L	0.050	1	0.050	12/04/07	12/07/07
Antimony (Sb)	EPA 200.8	ND	µg/L	2	1	2.0	12/04/07	12/07/07
Arsenic (As)	EPA 200.8	ND	µg/L	2	1	2.0	12/04/07	12/07/07
Barium (Ba)	EPA 200.7	0.065	mg/L	0.050	1	0.050	12/04/07	12/07/07
Beryllium (Be)	EPA 200.8	ND	µg/L	1.0	1	1.0	12/04/07	12/07/07
Bicarbonate (as CaCO3)	SM 2320 B	220	mg/L	3.0	1	3.0	12/04/07	12/04/07
Cadmium (Cd)	EPA 200.8	ND	µg/L	1.0	1	1.0	12/04/07	12/07/07
Calcium (Ca)	EPA 200.7	24	mg/L	0.10	1	0.10	12/04/07	12/07/07
Carbonate (as CaCO3)	SM 2320 B	ND	mg/L	1.0	1	1.0	12/04/07	12/04/07
Chloride (Cl)	EPA 300.0	52	mg/L	1.0	3	3.0	12/04/07	12/04/07
Chromium - Total (Cr)	EPA 200.8	ND	µg/L	10	1	10	12/04/07	12/07/07
Color (A.P.H.A)	SM 2120 B	ND	units	1.0	1	1.0	12/04/07 1626	12/04/07 1626
Conductivity - Specific (EC) @ 25°C	SM 2510 B	1200	µmho/cm	1.0	1	1.0	12/04/07	12/04/07
Copper (Cu)	EPA 200.8	ND	µg/L	50	1	50	12/04/07	12/07/07
Cyanide (CN)	SM 4500-CN-F	ND	µg/L	20	1	20	12/04/07	12/04/07
Fluoride	EPA 300.0	2.8	mg/L	0.10	5	0.50	12/05/07	12/05/07
Hardness (as CaCO3)	SM 2340 B	130	mg/L	1.0	1	1.0	12/10/07	12/10/07
Hydroxide (as CaCO3)	SM 2320 B	ND	mg/L	1.0	1	1.0	12/04/07	12/04/07
Iron (Fe)	EPA 200.7	0.056	mg/L	0.050	1	0.050	12/04/07	12/07/07
Langelier Index (Saturation Index)	SM 2330 B	0.64	-	-	1	N/A	12/10/07	12/10/07
Lead (Pb)	EPA 200.8	ND	µg/L	5.0	1	5.0	12/04/07	12/07/07
Magnesium (Mg)	EPA 200.7	17	mg/L	0.10	1	0.10	12/04/07	12/07/07
Manganese (Mn)	EPA 200.7	ND	mg/L	0.010	1	0.010	12/04/07	12/07/07
MBAS, Calculated as LAS, mol wt 340	SM 5540 C	ND	mg/L	0.050	1	0.050	12/05/07 10:45	12/05/07 10:45
Mercury (Hg)	EPA 200.8	ND	µg/L	0.40	1	0.40	12/04/07	12/07/07
Nickel (Ni)	EPA 200.8	ND	µg/L	10	1	10	12/04/07	12/07/07
Nitrate (NO3)	EPA 300.0	5.1	mg/L	1.0	3	3.0	12/04/07 11:55	12/04/07 11:55

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Gerry Guibert
Monterey CHD
1270 Natividad Rd. Rm A15
Salinas, CA 93906

BSK Submission #: 2007120093
BSK Sample ID #: 926016
Project ID:
Project Desc: Paraiso Hot Springs
Submission Comments:
Sample Type: Liquid
Sample Description: Well 1
Sample Comments: AB03028

Report Issue Date: 12/11/2007
Date Sampled: 12/03/2007
Time Sampled: 1510
Date Received: 12/04/2007

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Nitrite (NO2-N)	EPA 300.0	**ND**	mg/L	0.050	3	0.15	12/04/07 11:55	12/04/07 11:55
Odor	SM 2150 B	**1.0**	TON	1.0	1	1.0	12/04/07 1626	12/04/07 1626
pH at 22.32°C	SM 4500-H+ B	**8.1**	Std. Unit	-	1	N/A	12/04/07 19:41	12/04/07 19:41
Potassium (K)	EPA 200.7	**ND**	mg/L	2	1	2.0	12/04/07	12/07/07
Selenium (Se) - Total	EPA 200.8	**2.0**	µg/L	2	1	2.0	12/04/07	12/07/07
Silver (Ag)	EPA 200.8	**ND**	µg/L	10	1	10	12/04/07	12/07/07
Sodium (Na)	EPA 200.7	**16**	mg/L	1.0	1	1.0	12/04/07	12/07/07
Sulfate (SO4)	EPA 300.0	**400**	mg/L	2	7	14	12/04/07	12/04/07
Thallium (Tl)	EPA 200.8	**ND**	µg/L	1.0	1	1.0	12/04/07	12/07/07
Total Dissolved Solids (TDS)	SM 2540 C	**890**	mg/L	5.0	1	5.0	12/05/07	12/06/07
Turbidity	SM 2130 B	**0.31**	NTU	0.10	1	0.10	12/04/07 1626	12/04/07 1626
Zinc (Zn)	EPA 200.7	**ND**	mg/L	0.050	1	0.050	12/04/07	12/07/07

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)
Report Authentication Code:

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Case Narrative for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.
MDC: Min Detectable Concentration

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BSK ANALYTICAL LABORATORIES

Certificate of Analysis

NELAP Certificate #04227CA
ELAP Certificate #1180

Gerry Guibert
Monterey CHD
1270 Natividad Rd. Rm A15
Salinas, CA 93906

BSK Submission #: 2007120093
BSK Sample ID #: 926017
Project ID:
Project Desc: Paraiso Hot Springs
Report Issue Date: 12/11/2007

Submission Comments:
Sample Type: Liquid
Sample Description: Well 2
Sample Comments: AB03029

Date Sampled: 12/03/2007
Time Sampled: 1515
Date Received: 12/04/2007

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Aggressive Index		12	-		1	N/A	12/10/07	12/10/07
Alkalinity (as CaCO3)	SM 2320 B	39	mg/L	3.0	1	3.0	12/04/07	12/04/07
Aluminum (Al)	EPA 200.7	ND	mg/L	0.050	1	0.050	12/04/07	12/07/07
Antimony (Sb)	EPA 200.8	ND	µg/L	2	1	2.0	12/04/07	12/07/07
Arsenic (As)	EPA 200.8	ND	µg/L	2	1	2.0	12/04/07	12/07/07
Barium (Ba)	EPA 200.7	0.069	mg/L	0.050	1	0.050	12/04/07	12/07/07
Beryllium (Be)	EPA 200.8	ND	µg/L	1.0	1	1.0	12/04/07	12/07/07
Bicarbonate (as CaCO3)	SM 2320 B	22	mg/L	3.0	1	3.0	12/04/07	12/04/07
Cadmium (Cd)	EPA 200.8	ND	µg/L	1.0	1	1.0	12/04/07	12/07/07
Calcium (Ca)	EPA 200.7	23	mg/L	0.10	1	0.10	12/04/07	12/07/07
Carbonate (as CaCO3)	SM 2320 B	17	mg/L	1.0	1	1.0	12/04/07	12/04/07
Chloride (Cl)	EPA 300.0	48	mg/L	1.0	3	3.0	12/04/07	12/04/07
Chromium - Total (Cr)	EPA 200.8	ND	µg/L	10	1	10	12/04/07	12/07/07
Color (A.P.H.A)	SM 2120 B	ND	units	1.0	1	1.0	12/04/07 1629	12/04/07 1629
Conductivity - Specific (EC) @ 25°C	SM 2510 B	1300	µmho/cm	1.0	1	1.0	12/04/07	12/04/07
Copper (Cu)	EPA 200.8	ND	µg/L	50	1	50	12/04/07	12/07/07
Cyanide (CN)	SM 4500-CN E	ND	mg/L	0.020	1	0.020	12/07/07	12/08/07
Fluoride	EPA 300.0	9.1	mg/L	0.10	8	0.80	12/05/07	12/05/07
Hardness (as CaCO3)	SM 2340 B	110	mg/L	1.0	1	1.0	12/10/07	12/10/07
Hydroxide (as CaCO3)	SM 2320 B	ND	mg/L	1.0	1	1.0	12/04/07	12/04/07
Iron (Fe)	EPA 200.7	ND	mg/L	0.050	1	0.050	12/04/07	12/07/07
Langelier Index (Saturation Index)	SM 2330 B	0.56	-	-	1	N/A	12/10/07	12/10/07
Lead (Pb)	EPA 200.8	ND	µg/L	5.0	1	5.0	12/04/07	12/07/07
Magnesium (Mg)	EPA 200.7	12	mg/L	0.10	1	0.10	12/04/07	12/07/07
Manganese (Mn)	EPA 200.7	ND	mg/L	0.010	1	0.010	12/04/07	12/07/07
MBAS, Calculated as LAS, mol wt 340	SM 5540 C	ND	mg/L	0.050	1	0.050	12/05/07 10:45	12/05/07 10:45
Mercury (Hg)	EPA 200.8	ND	µg/L	0.40	1	0.40	12/04/07	12/07/07
Nickel (Ni)	EPA 200.8	ND	µg/L	10	1	10	12/04/07	12/07/07
Nitrate (NO3)	EPA 300.0	ND	mg/L	1.0	3	3.0	12/04/07 12:03	12/04/07 12:03

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR
pCi/L: Picocurie per Liter

H: Analyzed outside of hold time
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Report Authentication Code:

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Gerry Guibert
Monterey CHD
1270 Natividad Rd. Rm A15
Salinas, CA 93906

BSK Submission #: 2007120093
BSK Sample ID #: 926017
Project ID:
Project Desc: Paraiso Hot Springs
Submission Comments:
Sample Type: Liquid
Sample Description: Well 2
Sample Comments: AB03029

Report Issue Date: 12/11/2007
Date Sampled: 12/03/2007
Time Sampled: 1515
Date Received: 12/04/2007

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Nitrite (NO2-N)	EPA 300.0	ND	mg/L	0.050	3	0.15	12/04/07 12:03	12/04/07 12:03
Odor	SM 2150 B	20	TON	1.0	1	1.0	12/04/07 1629	12/04/07 1629
pH at 22.23°C	SM 4500-H+ B	8.9	Std. Unit	-	1	N/A	12/04/07 19:49	12/04/07 19:49
Potassium (K)	EPA 200.7	2.4	mg/L	2	1	2.0	12/04/07	12/07/07
Selenium (Se) - Total	EPA 200.8	ND	µg/L	2	1	2.0	12/04/07	12/07/07
Silver (Ag)	EPA 200.8	ND	µg/L	10	1	10	12/04/07	12/07/07
Sodium (Na)	EPA 200.7	20	mg/L	1.0	1	1.0	12/04/07	12/07/07
Sulfate (SO4)	EPA 300.0	480	mg/L	2	8	16	12/04/07	12/04/07
Thallium (Tl)	EPA 200.8	ND	µg/L	1.0	1	1.0	12/04/07	12/07/07
Total Dissolved Solids (TDS)	SM 2540 C	850	mg/L	5.0	1	5.0	12/05/07	12/06/07
Turbidity	SM 2130 B	0.10	NTU	0.10	1	0.10	12/04/07 1629	12/04/07 1629
Zinc (Zn)	EPA 200.7	ND	mg/L	0.050	1	0.050	12/04/07	12/07/07

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
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MDC: Min Detectable Concentration

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

Attachment 6
Representative Activated Alumina Treatment System Vendor Brochure

Basin Water™

Worry-Free Water™
For Your Community

Protect

your community from
groundwater contamination and drought

Basin Water helps you serve your community by providing a dependable supply of safe drinking water from groundwater sources that have been impaired due to contamination. We offer proven, cost-effective solutions for wells ranging from 50 to 6,000 GPM and higher. If contaminated groundwater is keeping you from providing reliable, affordable drinking water to your community, let Basin Water help you deliver.

High-efficiency ion exchange arsenic removal facility

High-efficiency ion exchange nitrate removal unit

High-efficiency ion exchange uranium removal unit

The difference is the Service

Basin Water offers a distinctive solution. We make a long-term commitment to you to provide your community with safe drinking water out of your own wells. You get the total package: planning, financing, hardware, software, and service including upgrades and waste disposal.

Your service agreement with Basin Water is all-inclusive and ongoing. If the quality of your source water changes, if regulations tighten, if your needs increase — no matter what happens — we are committed to work with you to deliver a consistent supply of drinking water that meets both government regulations and your expectations.

We also shoulder the burden of maintenance, including handling service calls 24/7 to maximize uptime. We even take care of waste disposal. You do not have to expend your time and effort.

As technologies improve, Basin Water optimizes your system on an ongoing basis. You won't be stuck owning an obsolete system. If there are hardware or software upgrades that make sense, we handle them. You always have the best-available solution for your water source, your contaminants, and your community.

Turn your water problems over to Basin Water and get a complete solution.

Eliminate

unwanted contaminants & unbudgeted expenses

A Better Solution

Basin Water offers a service-based approach to removing contaminants from drinking water. We can employ a wide range of technologies and approaches, so you get the right solution for your situation. Because we're flexible in our approach, we can rapidly adapt to meet changing circumstances, whether it's a change in your water or a change in regulations. We can even address the removal of multiple contaminants.

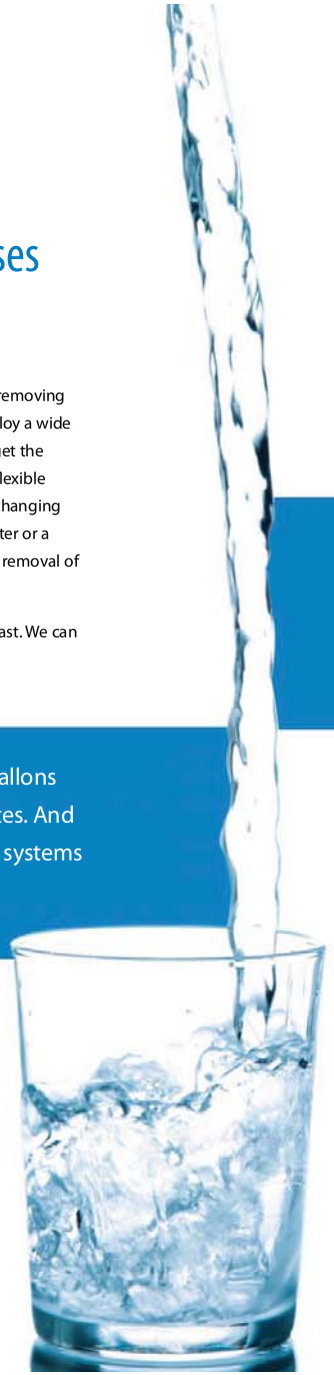
Unlike other solutions, Basin Water can deploy fast. We can have equipment on-site in as little as 12 weeks.

Basin Water is currently providing treatment capacity for over 80 million gallons per day of safe drinking water to communities throughout the United States. And now Basin Water offers solutions for lower-flow wells below 350 GPM. Our systems are field-proven and cost-effective.

Guaranteed Performance

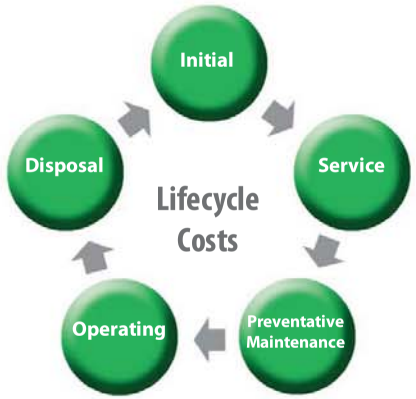
The treatment volume and objective that you contract for is what you get, with no excuses. If regulations or the quality of your well water changes, Basin Water has the flexibility to meet the new treatment or regulatory requirements. We guarantee compliance and provide the basis for you to plan your costs.

High-efficiency ion exchange arsenic removal facility



Low Lifecycle Costs

Basin Water selects the best technology to meet your needs and delivers that technology through a long-term relationship enabling you to predict and budget your operating costs. Your contract with Basin Water includes planning and design, through implementation and permitting, to ongoing maintenance and residual disposal. The result: low total lifecycle costs.



24/7 Service

Your Basin Water system runs automatically. We use remote monitoring tools to allow us to access and evaluate your system operations. Should any issues arise, our technicians will provide on-site response and are on call 24/7 to keep your water supply dependable.

Financing To Fit Your Needs

Basin Water offers flexible financing options to meet the needs of your community and your budget. We offer purchase or lease options with our long-term water service agreements. Equipment ownership can be structured to fit your capital budget. We are committed to helping you serve your community with a reliable supply of safe, affordable drinking water.

Internal view of ion exchange unit

BasinWater removes any element of doubt.

Arsenic The key difference is a range of flow-rates: Basin Water can treat water flow-rates from 50 GPM to 6000 GPM and higher. For higher flows, Basin Water employs either high-efficiency ion exchange or coagulation filtration technology to optimize the advantage to the customer. Our ion-exchange system produces a fraction of the waste generated by conventional arsenic removal systems, resulting in lower operating costs. For lower flows, Basin Water employs a system based upon arsenic-selective media and offers the option of off-site regeneration at our central facility. Basin Water also manages the disposal of the waste residuals.

Nitrate The key difference is our efficiency: Basin Water has proprietary technologies that produce recovery rates that are among the highest in the industry. Characterization of the raw water allows Basin Water engineers to design a system that will optimize the ion-exchange removal and regeneration process, maximizing treated water delivered to your customers while minimizing salt consumption and waste brine generation.

Radionuclides The key difference is the total solution: Basin Water offers a radionuclides removal program that includes the delivery of new media and managing the disposition of spent media.

Chromium The key difference is experience: Basin Water has long been involved in hexavalent chromium removal applications. Basin Water offers either permanent installations or a service-exchange system. Under the service-exchange model, chromium removal resin regeneration takes place in Basin Water's facility, and the chromium is recovered.

Organics The key difference is our process approach: Basin Water offers a range of solutions including an advanced process to remove organics that combines ultra-filtration with photocatalytic oxidation reduction. There are a number of organic contaminants that impact groundwater. These include 1,4 Dioxane, methyl tertiarybutylether (MTBE), perchloroethylene (PCE), and trichloroethylene (TCE). Additionally, naturally occurring organic material (tannins and lignens) can pose color, taste and odor problems.

Perchlorate The key difference is choice: Basin Water offers a dual-treatment solution with either on-site regenerable resin or disposable resin. We have developed a patented technology to eliminate perchlorate waste and allow reuse of perchlorate-selective ion-exchange resin. Elimination of perchlorate waste without incineration offers significant environmental and economic benefits.

Basin Water Advantages

- We define the water chemistry and treatment objective prior to pairing your needs with any particular process or technology
- We perform analysis and treatment simulation validation studies
- Multiple treatment technologies
- Exclusive access to high-performance contaminant removal media
- Efficient process-control technology combined with standardized design approaches per contaminant or across multiple contaminants
- Both on-site and off-site regeneration are available to ensure low total lifecycle costs for a wide range of flow-rates and water chemistries
- Commitment to ensuring regenerate and disposal volumes are met — including guaranteed cost of operation for the defined water chemistry and operating conditions
- Commitment to maintain the deployed system over the life of the asset including both hardware and software components

Put Basin Water to work for you, your agency, and your customers.

Basin Water

Headquarters:
8731 Prestige Court
Rancho Cucamonga, California 91730

Administrative Offices:
9302 Pittsburgh Avenue, Suite 210
Rancho Cucamonga, California 91730

Mailing Address:
P.O. Box 1400
Rancho Cucamonga, California 91729

Branch Office:
2070 Airways Boulevard
Memphis, Tennessee 38114

Branch Office:
2850 S. 36th Street, Suite A6
Phoenix, Arizona 85034

Branch Office:
Two Kingwood Place
700 Rockmead Drive, Suite 105
Kingwood, Texas 77339

Tel: (888) 481-6811 • (909) 481-6800 • Fax: (909) 481-6801 • Email: info@basinwater.com
www.basinwater.com

Attachment 7
Well Drilling Logs and Drilling Survey Summary

WELL #2

WELL COMPLETION REPORT

No. 411677

Monterey County Health Dept.

Permit Date ...

GEOLOGIC LOG

DESCRIPTION

Describe material, grain size, color, etc.

Sand, sand shale

WELL OWNER

Name: Paraiso Inc.

Mailing Address: Paraiso Springs Rd.

Soledad, Ca 93960

WELL LOCATION

Address: Paraiso Springs

City: Soledad

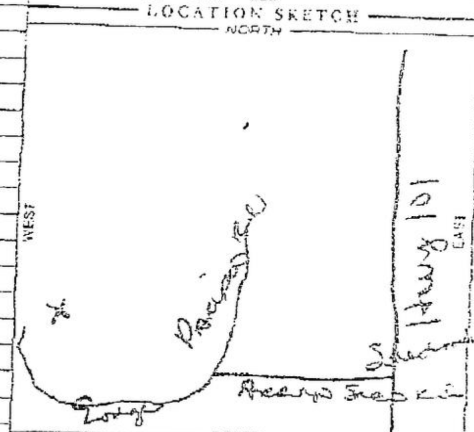
County: Monterey

APN Book ______ Page ______ Parcel ______

Township ______ Range ______ Section ______

Latitude ______ NORTH Longitude ______

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

DRILLING METHOD Rotary FLUID ______

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ______ (Ft.) & DATE MEASURED ______

ESTIMATED YIELD* ______ (GPM) & TEST TYPE ______

TEST LENGTH ______ (Hrs.) TOTAL DRAWDOWN ______

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 660 (Feet)

TOTAL DEPTH OF COMPLETED WELL 640 (Feet)

CASING(S)

BORE-HOLE DIA. (inches)	BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (inches)
10	x				PVC	5		
10		x			PVC	5		
10		x			PVC	5		
10		x			PVC	5		
10		x			PVC	5		
10		x			PVC	5		

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	CEMENT	BENTONITE	FILL
0 to 70	x		
70 to 640			

ATTACHMENTS

Geologic Log
Well Construction Diagram
Geophysical Log(s)
Soil/Water Chemical Analyses
Other

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Salinas Pump Co. Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 772 Vertin Ave. Salinas, Ca 93901

Signed [signature] 8/28/02
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

MAIN WELL #1

THE RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

No

State Well No.
Other Well No.

Paraiso Springs
Paraiso Springs Rd
Soledad, Ca. 93960

LOCATION OF WELL:
Monterey
Paraiso Springs Rd

TYPE OF WORK (check):
Deepening ☐ Reconditioning ☐ Destroying ☐

PROPOSED USE (check):
Industrial ☐ Municipal ☐
Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Other ☐

CASING INSTALLED:
OTHER:
DOUBLE ☐

If gravel packed

To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
104	8"	8 Ga	22"	0	104

Size of gravel: 3/4 Pea

Welded

PERFORATIONS OR SCREEN:

To ft.	Perf. per row	Rows per ft.	Size in. x in.
104	6	6	1/8 Std Louvre

CONSTRUCTION:
Surface seal provided? Yes ☒ No ☐ To what depth 40 ft.
Were any strata sealed against pollution? Yes ☐ No ☒

Concrete w/gravel shute

WATER LEVELS:
Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing ft.

WELL TESTS:
Was well test made? Yes ☐ No ☒
Was electric log made of well? Yes ☐ No ☒

WELL LOG:
Total depth 109 ft. Depth of completed well
Formation: Describe by color, character, size of material, and structure
0 ft. to 6' Top Soil
6' - 80' Sand
80' - 95' Brown Sand
95' - 105' Rock
105'-109' Rock

Work started 12/1 19 76 Completed 12/11 19 76

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME SALINAS PUMP CO.
(Person, firm, or corporation) (Typed or printed)

Address 1128 Madison Lane
Salinas, Ca. 93901

[Signed] [signature]
(Well Driller)

License No. 273053 Dated December

SKETCH LOCATION OF WELL ON REVERSE SIDE

WELL #1: VIDEO SURVEY SUMMARY

Static DTW (ft btoc)	69.71 ft BGS on 11/26/2007 12:05:00 PM
Casing ID at surface (inches)	8.0 inch, 8 Gage spiral casing
Casing Material	Steel
Screen Type and Material	8.0 inch, 1/8 Std louver spiral steel casing
Video Survey Date	12/13/2007 5:00
Zero Datum	Top of casing
Logging Contractor	Newman Surveys, LLC
Equipment Used	3-3/4 Inch Color Side Scan Camera
Operator	Craig Newman
Contact Phone Number	831.722.2388
Cost	$650-1st, $300-2nd, $250-3rd, $200-4th
Video Total Depth (ft)	100.8
Expected Total Depth (ft)	104 (perforations expected to 104 ft)
Date Well Constructed	12/11/1976
Drilling Contractor	Salinas Pump Co.

Depth	Well Construction Notes	Comments
19.5	Casing joint	
40.0	Casing joint	
45.5	Top of louvers	
64.3		Water level
80.0		From 64 ft to 80 ft, minor build up in the louvers, from 80 ft to 87 ft, heavy build up in louvers and casing
84.0	Casing joint	
87.0		Very heavy build up to 100 ft, louvers are difficult to see and are completely covered by build up. Build up appears to be biological but it may also be geochemical or precipitation of minerals.
92.0		Electrical wire cable debris at bottom of well: 92 ft to 99 ft. Cable appears corroded and old, may be pump cable.
94.0		Difficult to see louvers and casing joints
99.0		Electrical wire cable
100.8	Bottom of video survey	Debris at bottom of well

Summary: The steel well casing appears to be in good condition, however, heavy biological fouling and geochemical precipitation build up occurs throughout the entire section of the louvers. Louvers are completely blocked or covered in places so much that you cannot see them with the video camera. Well efficiency may be dramatically increased with well rehabilitation, development or over pumping. The video log did not reach the anticipated depth of 104 ft, therefore, approximately 4 ft of debris are at the bottom of the well.

WELL #2: VIDEO SURVEY SUMMARY

Static DTW (ft btoc)	2.01 ft BGS on 11/26/2007 12:45:00 PM
Casing ID at surface (inches)	6.0 inch, telescopes to 5.0 inch at 525 ft
Casing Material	PVC, glued joints
Screen Type and Material	Saw cut vertical slots, saw cut horizontal slots, factory horizontal slots, PVC
Video Survey Date	12/13/2007 5:00
Zero Datum	Top of casing
Logging Contractor	Newman Surveys, LLC
Equipment Used	3-3/4 Inch Color Side Scan Camera
Operator	Craig Newman
Contact Phone Number	831.722.2388
Cost	$650-1st, $300-2nd, $250-3rd, $200-4th
Video Total Depth (ft)	762.9
Expected Total Depth (ft)	640 Based on the Driller's Report
Date Well Constructed	06/28/1992
Drilling Contractor	Salinas Pump Co.

Depth	Well Construction Notes	Comments
2.1	Top of 6 inch Tee joint	6 inch Tee stub out oriented towards the creek. May be used for discharge during artesian conditions. Stub out appears secure and sealed ~ 2 ft away from well casing.
2.6	Bottom of 6 inch Tee joint	
9.9		Water level
34.0	Casing joint	
54.0	Casing joint	
74.1	Casing joint	
94.2	Casing joint	
108.9		CH2M HILL's temporary pressure transducer: removed on 12/31/2007
114.0	Casing joint	
114.9	Top of perforations	Saw cut 0.5 ft long vertical slots, 3 vertical slots every 1 ft (1 ft of blank, 1 ft of slots)
132.9	Bottom of perforations	
134.0	Casing joint	
136.0		White PVC casing has black discoloring, probably due to the Well #2 test pump during the Nov-Dec 2007 source capacity assessment aquifer test. Electrical submersible pump set at around 130 ft.
154.0	Casing joint	
174.0	Casing joint	
194.0	Casing joint	
214.0	Casing joint	

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Depth	Well Construction Notes	Comments
234.0	Casing joint	
235.0	Top of perforations	Saw cut 0.5 ft long vertical slots, 3 vertical slots every 1 ft (1 ft of blank, 1 ft of slots)
253.5	Casing joint	
272.3	Bottom of perforations	
273.0	Casing joint	
293.0	Casing joint	
313.0	Casing joint	
332.0	Casing joint	
349.0	Casing joint	
350.0	Casing joint	
369.0	Casing joint	
370.0	Top of perforations	Saw cut 0.5 ft long vertical slots, 3 vertical slots every 1 ft (1 ft of blank, 1 ft of slots)
388.1	Bottom of perforations	
389.0	Casing joint	
389.4	Top of perforations	Saw cut horizontal slots, 3 different sets of slots around the perimeter of the casing, 1 inch vertical spacing between slots with no breaks
409.0	Casing joint	
429.0	Casing joint	
449.0	Casing joint	
469.0	Casing joint	
470.0		Saw cut horizontal slots, 3 different sets of slots around the perimeter of the casing, 1 inch vertical spacing between slots with 1 ft blank then 1 ft of slots - etc
489.0	Casing joint	
505.0	Bottom of perforations, casing joint	
525.0	Casing joint	Casing ID telescopes from 6 inch ID to 5 inch ID reduction
530.0	Casing joint	
530.4	Top of perforations	Factory cut horizontal slots, 3 different sets of slots around the perimeter of the casing, 0.3 inch veridical spacing between slots, 6 inches of slots with 2 inch breaks between slots
549.0	Casing joint	Some biological fouling: build up is black color
569.0	Casing joint	
590.0	Casing joint	
610.0	Casing joint	
630.0	Casing joint	
650.0	Casing joint	
670.0	Casing joint	

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Depth	Well Construction Notes	Comments
690.0	Casing joint	
710.0	Casing joint	
715.0		Some biological fouling: build up is black color and focused in the slots
720.0		No biological build up
730.0	Casing joint	
750.0	Casing joint	
762.9	Bottom of video survey	Debris in bottom of well and slots. Debris is soft and appears to be sand and mud

Summary: The PVC well casing appears to be in good condition. Some sections of the well have perforations that are saw cut and the deeper section (below 530 ft) of the well has factory cut slots. The well casing telescopes from 6 inch ID to 5 inch ID at 525 ft. Little biological fouling or build up occurs along in the well casing and in the slots. The video log went below the anticipated depth of 640 ft, however debris was observed at the bottom of the well. If the deepest casing joint is 20 ft long, then the bottom of the well may be at 770, or 7 ft of debris in the bottom of the well assuming the well does not have a sump.