



Rice Pesticides Program 2015 Annual Monitoring Report

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Prepared for

California Rice Commission

California Rice

Prepared by

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Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

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Introduction

The California Rice Commission (CRC) manages the Rice Pesticide Program (RPP) on behalf of its growers through the collection and analysis of water quality monitoring at historical monitoring sites established as the result of decades of assessment monitoring. The RPP historical sites were used as the basis for the commodity specific coalition, also managed by the CRC, established in the Rice Waste Discharge Requirements (Rice WDR) Order.

Compliance with the RPP is measured through the Central Valley Regional Water Quality Control Board (CVRWQC) approved management practices as provided in Resolution No. R5-2010-9001. The management practices are designed to achieve attainment of the thiobencarb Performance Goal in the agricultural drains, and the applicable water quality objective (WQO) as the secondary maximum contaminant level (MCL) in waters designated as having the municipal and domestic beneficial use (MUN). Monitoring is conducted under the RPP to determine attainment of the Performance Goal and the secondary MCL WQO.

The RPP includes a multi-week regime of sampling at representative agricultural drain locations and at a site in the Sacramento River. Sampling for the RPP is based on the timing and frequency of discharge from rice fields during the peak use season for thiobencarb. The monitoring schedule was developed from understanding the rice-growing season, analysis of historical data, environmental and analytical monitoring, and infield studies of the thiobencarb degradation curve (Div. of Ag. Sci. 1982) (Cronacchia, *et al.* DPR. 1984). In addition, the Cities of Sacramento and West Sacramento analyze samples for thiobencarb concentration in their intake supplies.

The monitoring calendar focuses sampling on the actual period of thiobencarb use, and begins the last Tuesday in April. However, weather conditions and other factors may delay planting and the ensuing pesticide application, so modifications are made to the monitoring start date to ensure that the sampling brackets the thiobencarb use season from April through June, and in some years, into July. In 2015, monitoring was conducted once per week for the first 3 weeks, increased to twice per week for the following 4 weeks (corresponding with peak usage), and was decreased to once per week for the final 3 weeks, for a total of 10 weeks of sampling (See Table 1).

Included in this technical memorandum are the RPP monitoring and reporting requirements, special actions in 2015, summary of monitoring results, comparison of compliance with the WQO, Performance Goal exceedances, acres treated with thiobencarb, mechanisms of transport, analysis, drought influences and alternatives to address exceedances with charts for monitoring results, historical thiobencarb detections, flow and precipitation data, air temperatures and wind speed.

Monitoring and Reporting Requirements

Monitoring commensurate with the requirements was conducted during the thiobencarb use season (see Table 1).

Table 1. RPP Monitoring and Reporting Requirements, 2015

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Constituent	Units	Sample Type	Sampling Frequency		
			Weeks 1–3	Weeks 4–7	Weeks 8–10
Thiobencarb	µg/L	Grab	Weekly	Biweekly	Weekly

The following sampling sites are included in the RPP:

- CBD1: Colusa Basin Drain above Knights Landing
- CBD5: Colusa Basin Drain #5 in the Colusa National Wildlife Refuge
- BS1: Butte Slough at Lower Pass Road
- SSB: Sacramento Slough Bridge near Karnak
- SR1: Sacramento River at Village Marina/ Crawdads Cantina

Program Background

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) establishes a numeric water quality objective for thiobencarb that is protective of MUN beneficial use designations, and the Performance Goal for agricultural drains:

- MUN Water Quality Objective: 1.0 microgram per liter (µg/L)
- Agricultural Drain Performance Goal: 1.5 µg/L

The RPP is a prohibition of discharge program with monitoring to measure effectiveness of management practices on a basin-wide approach. The standard language in the CVRWQCB Resolution, approved 2007-2009, reads, *“If the water quality objective for thiobencarb is not met, the CRC, after consultation with DPR, will return before the Board with actions to be implemented to achieve the water quality objective for the following rice season.”* (Resolution No. R5-2007-0018).

In 2010, the CVRWQCB Resolution was modified to add more stringent language specific to the Performance Goal for agricultural drains to read, *“If the performance goal or water quality objective for thiobencarb is not met or increasing thiobencarb concentrations are observed in waters designated for municipal or domestic water supply, the California Rice Commission, after consultation with DPR, will submit to the Executive Officer proposed actions to be implemented to achieve the performance goal or water quality objective. The addition of new management practices or modifications of previously approved practices will include an opportunity for input from interested parties before a revision of the current resolution or issuance of a new resolution by the Executive Officer. These actions must be approved by the Executive Officer as part of management practices under the Rice Pesticides Program.”* (Resolution No. R5-2010-9001).

Additionally, the resolution expanded industry funded surveillance inspections to the county agricultural commissioners (CACs), initially available to Butte, Colusa and Glenn Counties. These inspections were expanded in number and geography, and offered to Placer, Sacramento, Sutter, Tehama, Yolo and Yuba Counties. The CVRWQCB Resolution was modified to add, *“The California Rice Commission will increase the funding of additional county surveillance at non-traditional hours to double the level of 2009 and extend the program to counties not previously funded. Surveillance inspections will increase to approximately 1.5 times the current level with the new funding.”* (Resolution No. R5-2010-9001).

Summary of 2015 Monitoring Results

Results of the season's thiobencarb sampling are summarized in Table 2.

Table 2. Summary of Detections (RPP and City Monitoring), 2015

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Site	Site Type	Thiobencarb	
		Detections Exceeding the Basin Plan Performance Goal	Range of Detected Concentrations
Intake and River Sites			
SRR ^a	Intake	NA	ND
WSR ^b	Intake	NA	ND to 0.1 µg/L
SR1 ^c	River	NA	ND
Total river/intake site detections:		NA	ND
Agricultural Drain Sites			
CBD5 ^c	Drain	5	ND to 5.25 µg/L
BS1 ^c	Drain	0	ND
CBD1 ^c	Drain	1	ND to 1.53 µg/L
SSB ^c	Drain	0	ND to 0.62 µg/L
Total drain site detections:		6	ND to 5.25 µg/L

^a City of Sacramento intake site (as reported by the city)

^b City of West Sacramento intake site (as reported by the city)

^c RPP site

Notes:

ND = non-detect (below the method reporting limit)

NA = not applicable

Special Actions in 2015

The CRC immediately sent letters to growers in Colusa and Glenn Counties when exceedances were detected at CBD5. This mailing was followed by an industry wide e-newsletter alerting growers and Pest Control Advisors to the exceedances and impacts on the use of thiobencarb.

Thiobencarb exceedances and the county surveillance program places emphasis on individual CAC oversight. The RPP is a prohibition of discharge program rather than point source, and does not require monitoring up the drain to determine the source for exceedances. In 2015, the CRC did special monitoring at seven sites on two occasions to demonstrate the influence from Colusa and Glenn Counties to CBD5.

The special monitoring of seven sites contributing to CBD5 took place on June 3 and 17, 2015. The site selection criteria were based on the watershed drainage assessment the CRC completed for the Irrigated Lands Regulatory Program (ILRP) in 2004 (CRC 2004). From the special monitoring, one exceedance at 2.8 µg/L was noted at Road 68 (Glenn County) on June 17. The results at Willow Creek (Glenn County), Lurline Creek (Colusa County) and Freshwater Creek (Colusa County) showed detections over 1.0 µg/L (See Table 3).

Table 3. Rice Pesticides Program 2015, Thiobencarb Special Monitoring Results*Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances*

Sampling Date	Monitoring Sites and Results						
	Site N	RD 68	Site Q	Site P	Site I	Site K	Site L
3-Jun-15	1.1	0.98	ND	ND	ND	1.5	1.4
17-Jun-15	ND	2.8	ND	1.1	ND	ND	1.1

Monitoring Site Locations:

Site N = Willow Creek at Road 61, Glenn County

RD 68 = Road 68 and Logan Creek, Glenn County

Site Q = Glenn Colusa Irrigation District at Two Mile Road, Colusa County

Site P = Stone Corral Creek at Four Mile Road, Colusa County

Site I = Colusa Basin Drain Maxwell Road, Colusa County

Site K = Lurline Creek at Lurline Road, Colusa County

Site L = Freshwater Creek at San Jose Road, Colusa County

In September 2015, the CRC met with Sacramento Valley CACs to review the RPP program history and watershed monitoring approach. The meeting provided an opportunity to discuss the rice season and overall thiobencarb usage in a group setting. The discussion centered on the flows and depth at the monitoring sites, the thiobencarb usage, stakeholder relationships, and perspective from the CACs on the 2015 program effectiveness. The Sacramento Valley CACs are familiar with water quality protection measures through the ILRP and the WDR Orders, where the approach is more closely aligned with point source monitoring and does not include a prohibition of discharge. As a result of the September meeting, the CRC began an evaluation of monitoring site exceedances in comparison to the Sacramento River and city intake results (See Table 4).

Table 4. Annual City Intake Detections in Comparison to Performance Goal Exceedances 2003-2015*Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances*

Sampling Year	Intake and River Site Detections (Date/Result, in µg/L)			Ag. Drain Site Exceedances (Date/Result, in µg/L)	Treated Acres	Planted Acres
	WSR	SRR	SR1	Performance Goal Exceedances		
2003	02-June/0.11 16-June/0.16 19-June/0.13	ND	ND	12-June/1.7 CBD1 17-June/2.3 CBD1	154,928	507,000
2004	ND	ND	ND	04-May/3.6 CBD5 27-May/1.6 CBD1	136,132	590,000
2005 ^a	21-June/0.11	01-June/0.10	31-May/0.04 02-June/0.03 07-June/0.04 09-June/0.04 14-June/0.07 21-June/0.05	No exceedances	118,786	526,000
2006	05-June/0.24 14-June/0.13	09-June/0.10 14-June/0.16	6-June/0.06 8-June/0.17 13-June/0.12 15-June/0.06 20-June/0.03 27-June/0.02	No exceedances	79,109	523,000
2007	23-May/0.17	ND	27-May/0.13	No exceedances	74,251	533,000

Table 4. Annual City Intake Detections in Comparison to Performance Goal Exceedances 2003-2015*Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances*

Sampling Year	Intake and River Site Detections (Date/Result, in µg/L)			Ag. Drain Site Exceedances (Date/Result, in µg/L)	Treated Acres	Planted Acres
	WSR	SRR	SR1	Performance Goal Exceedances		
2008	15-May/0.31 29-May/0.16	15-May/0.12	22-May/0.62	22-May/1.8 CBD1 27-May/1.99 BS1	67,483	517,000
2009	21-May/0.11 25-May/0.68 28-May/0.22	15-May/0.29 28-May/0.18	25-May/0.31 28-May/0.27	19-May/1.81 CBD1 26-May/1.54 (Valent), 1.84 (EMA) CBD1 28-May/1.75 CBD1	72,660	556,000
2010	ND	ND	ND	08-June/1.58 (Valent), 1.8 (EMA) CBD1	75,172	553,000
2011	01-June/0.12	ND	ND	No exceedances	71,824	580,000
2012	ND	ND	ND	No exceedances	78,478	556,000
2013	ND	ND	21-May/0.11 23-May/0.05 30-May/0.11	21-May/3.97 CBD5 21-May/1.72 CBD1 23-May/1.77 CBD1	84,533	556,000
2014	ND	ND	27-May/0.06 29-May/0.04 03-June/0.05	29-May/3.8 CBD5 03-June/2.2 CBD5 24-June/1.7 CBD5	106,487 ^b	431,000
2015	27-May/0.1	ND	ND	19-May/1.89 CBD5 21-May/5.25 CBD5 26-May/2.41 CBD5 26-May/1.53 CBD1 28-May/1.94 CBD5 02-June/1.56 CBD5	144,552 ^b	375,000 (est.)

^a Storm Event Monitoring at RD1000 for Natomas Mutual Central Water District June 11–13 and 18^b Preliminary acreage from DPR

Notes:

CLS = California Laboratory Services

ND = Non-detect at the lab specific RL. RLs for each lab are reported by year below:

2003: Valent's RL = < 0.5 µg/L, APPL's RL = 0.5 µg/L

2004, 2006, 2007, 2008, 2009: Valent's RL = < 0.5 µg/L, EMA's RL = 0.5 µg/L

2005: Valent's RL = < 0.5 µg/L, APPL's RL = < 0.1 µg/L; on May 3 RL = < 0.5 µg/L

2010: Valent's RL = < 0.5 µg/L, McCampbell's RL = 0.5 µg/L, CLS's RL = 0.5 µg/L

2011: Valent's RL = < 0.5 µg/L, CLS's RL = 0.5 µg/L

2012, 2013, 2014, 2015: Valent's RL = < 0.5 µg/L, CLS's RL = 0.15 µg/L

RLs at WSR and SRR = < 0.1 µg/L; 2014 Test America's RL = 0.48 µg/L

RL = reporting limit

Compliance with River and MUN Water Quality Objective

In 2015, the river and intake samples analyzed on behalf of the CRC and the Cities of Sacramento (SRR) and West Sacramento (WSR) all showed non-detect for thiobencarb. The only exception was one instance of thiobencarb at the method detection level of 0.1 µg/L at the WSR intake.

The river and intake monitoring results demonstrate attainment of the Basin Plan MUN water quality objective. Based on these results, the established management practices are protective of drinking water associated with the MUN beneficial use designation of the Sacramento River.

In Table 4, the annual City intake detections and agricultural drain exceedances are shown for the range of years the CRC has managed the RPP, from 2003 to 2015. In evaluating the monitoring results, the secondary MCL has not been in violation since the CRC began managing the program in 2003. The monitoring results demonstrate success of managing a prohibition of discharge program through a watershed approach, despite the challenges from current drought related weather conditions.

Agricultural Drain Performance Goal Exceedances

The 2015 water quality sampling program detected five exceedances of the Performance Goal at the agricultural drain site CBD5, and one at CBD1. During the 10-week sampling season, consisting of seventy-five samples, thiobencarb was detected twelve times above the lab detection level of 0.5 µg/L, six of which were above the 1.5 µg/L Performance Goal. No thiobencarb was detected in the first 3 weeks or the final 2 weeks of sampling. There were no detections at sites BS1 and SR1 during the monitoring period. The peak detection of 5.25 µg/L occurred at site CBD5 on May 21. Of the twelve samples with detected thiobencarb, two samples at SSB had detections below the Performance Goal (both 0.62 µg/L), two samples at CBD1 had detections below the Performance Goal (0.65 and 1.39 µg/L), and two samples at CBD5 had detections below the Performance Goal (0.73 and 1.01 µg/L). All of the remaining samples had results below the laboratory detection level of 0.5 µg/L.

Acres Treated

The Department of Pesticide Regulation (DPR) reports the acres treated with thiobencarb in the annual Pesticide Use Report (PUR) current to 2013 (DPR 1990-2013). The data is audited and error checked before it is finalized in the PUR. The CRC receives the current year pesticide use data in December, which is considered preliminary. However, not much variance exists between the current and final pesticide use data. The pesticide use results in all RPP annual monitoring reports are considered preliminary, based on initial data provided by the county agricultural commissioners (CACs) to DPR. In 2015, the rice acreage treated with thiobencarb is estimated to be 144,552 acres, versus 106,487 acres in 2014 (based on the preliminary DPR estimates). Based on these estimates, the 2015 acreage is the highest since the year 2003.

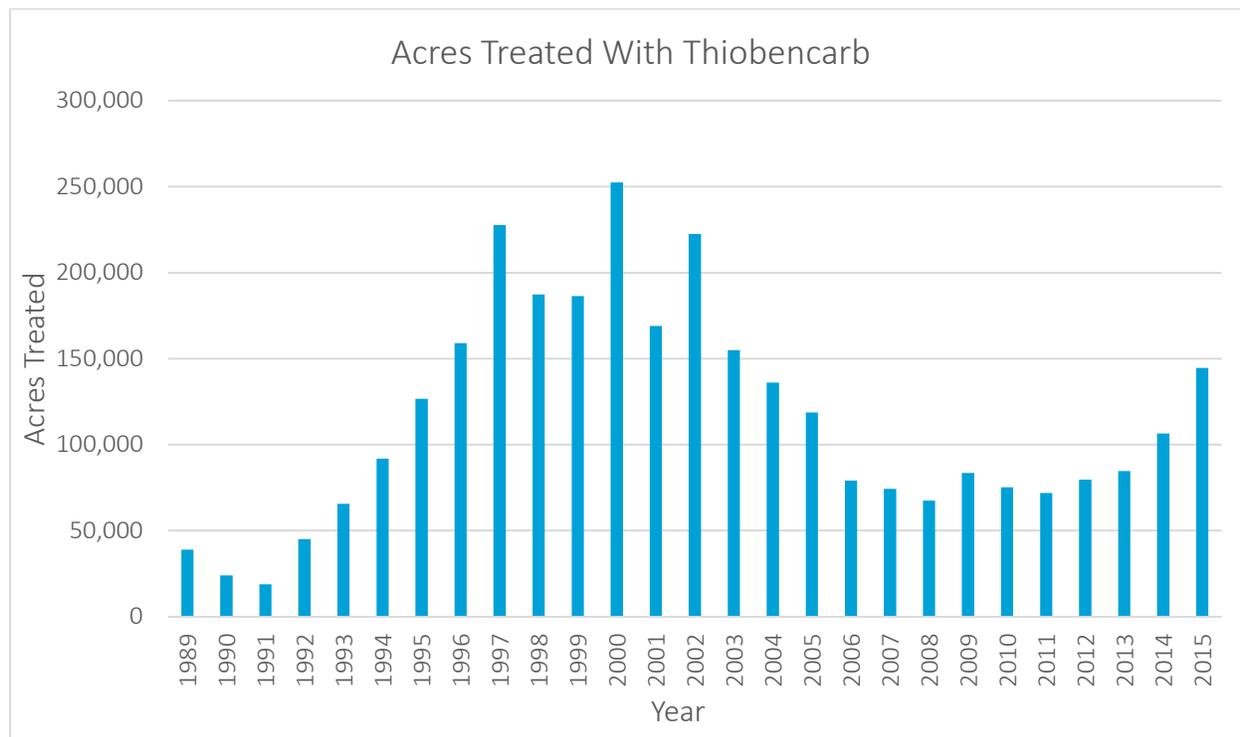


Figure 1. Thiobencarb Acres Treated, 1989-2015 (Source: DPR 1989-2015)

Malathion, a pesticide previously monitored under the RPP, was used on a minimal number of acres in 2015. Usage was limited to Butte, Glenn, Sacramento, and Sutter counties, and represented a small fraction of rice acres at 2,589 acres treated or 0.63 percent of the planted acres (as reported by the CACs). The malathion usage data was not available before the stakeholder meeting held on November 9, 2015. Malathion use has been under 100 acres since 2009, and zero usage in the last two years. Through recommendation by the CVRWQCB Staff, the CRC has not monitored malathion under the RPP. In 2015, the malathion use went up due to an unprecedented armyworm outbreak where some growers lost 20 percent of the crop. Fortunately, the malathion applications occurred mid to late season when the water is held on the fields, and the insecticide has a voluntary 4-day waterholding requirement. Rice was not the only crop devastated by the outbreak, which was the largest infestation in over 25 years of observation. The armyworm outbreak was possibly caused by the drought where a dry, warm winter allowed the pupae to successfully overwinter. Armyworm is usually an insignificant rice pest with treatment on less than a fraction of one percent of the total planted acres. The likelihood of another significant armyworm outbreak is low. If the armyworm is present in significant numbers in 2016, the CRC can request emergency access to insecticides categorized as organophosphorus (OP) alternatives. Due to the unusual nature of the armyworm outbreak and potential access to alternative insecticides, the CRC sees no justification in monitoring malathion in 2016. The CRC will assess the situation if armyworm numbers are present at significant levels this next season.

Mechanisms of Transport

Several mechanisms of transport could cause or contribute to discharges of thiobencarb, such as seepage, drift, and tailwater discharge. Water quality management practices are adopted to prevent adverse impacts from each of these mechanisms of transport. Mandatory management practices are in place to address each of these mechanisms, and include:

- Mandatory grower education
- Water holds
- Pesticide use compliance inspections and enforcement
- Water quality sampling

Seepage is addressed through proper maintenance of levees and berms, coupled with the CAC seepage inspections and enforcement actions. Drift is addressed through label requirements and additional permit restrictions imposed on aerial applications. Tailwater discharge is addressed through mandatory water hold requirements, coupled with the CAC enforcement through inspections. The CACs implement water hold and seepage inspections with the CRC funding additional off-hours inspections on weekends and holidays during application season. The effectiveness of these management practices is wholly dependent upon implementation by individual rice farmers. The CRC's program of water quality sampling is described above.

Analysis

The RPP includes an aggressive regime of surface water quality sampling. Through routine sampling, the program was able to detect exceedances of the Performance Goal in the agricultural drains. Further, through CAC inspections, including off-hour inspections funded by the CRC, alleged violations of water holds were observed, and enforcement actions have been initiated.

Data are not currently available to assess the alignment of the detected water quality exceedances relative to any potential water hold violations. Through conversations with the CAC offices, it is assumed that early water releases from the fields impacted the monitoring results at CBD5. At the time of this writing, the CACs are coordinating with DPR on finalizing enforcement actions against specific growers that are believed to have violated label and water hold requirements.

Based on the information available to the CRC at this time, it is suspected that exceedances of the Performance Goal could be a result of the following factors, either independently or concurrently (Bennett et al. DPR 1998) (Lou 2010):

- Non-compliance with the waterholding requirements
- Aerial drift over the drains
- Use in compliance with required water holds, but in excess of the assimilative capacity of the water body during low flows encountered during this fourth year of drought

Drought Influences

California is experiencing a multi-year drought of historic proportions. In 2014, an evaluation was undertaken to assess if low flow conditions at the Colusa National Wildlife Refuge could have been a contributor to the exceedances at the CBD5 monitoring site. The CBD5 flow measurements were at 1 to 5 cubic feet per second (cfs), which is typical for that drain location. The flow measurement dropped to 0.1 to 1.0 cfs five times throughout the season, but no correlation to the exceedances at CBD5 was determined. However, in 2015, the CRC reassessed the flow measurements at the Department of Water Resources (DWR) CBD site in the same area (off Hwy 20). A correlation exists between the monitoring results and flow at the CBD site. Therefore, it does appear that decreased flows contributed to the Performance Goal exceedances at CBD5, which provides the CRC rationale to evaluate use-to-flow variances resulting from weather conditions and drought requirements.

The CRC evaluated conditions from a normal rain year with no exceedances to the current conditions at CBD5. Comparing field sheets from 2007 to 2015, showed sampling occurred at an average water depth of 18 feet in 2007, as compared to an average sampling depth of 3.6 feet in 2015. Flows rates at the CBD5 site remain consistently low between 0.1 and 5 cfs during 2015. The combination of low flows and water depth at the monitoring site appears to be a significant factor contributing to the higher concentrations of thioencarb. A separate analysis would be necessary to determine the impact of water levels influencing thioencarb concentrations at the monitoring site.

Emergency drought requirements implemented by many water districts may also have had an impact on monitoring results this year. The no spill prohibition, which eliminates all field water releases even after water hold period requirements are met, was widely implemented as a water saving measure this year. Under normal conditions, the rice field water releases into the system for recirculation and re-use throughout the water district. The CRC is considering an assessment to compare the percent thioencarb usage to the flows from 2002 to 2015. The objective would be to determine if thioencarb usage could be tied to drought or low flow conditions.

In 2009, the CRC analyzed flow rates in the Colusa Basin Drain (CBD) from 2007 to 2009. The distance from CBD5 to CBD1 is 33 miles and the estimated flow takes 13 days to travel that distance. In communication with the California Department of Water Resources and The Sacramento Maintenance Yard, flow measurements in the CBD are best calculated in the winter and difficult to measure due to numerous side diversions. The rationale for this exercise came from the assumption that exceedances from CBD5 impacted the results at CBD1. Because of the long residence time between the two CBD sites, it is assumed that the impact of CBD5 on CBD1 is small. This was demonstrated in the 2015 results, where CBD5 had a number of exceedances that did not correlate 13 days later with the exceedance at CBD1. During drought years such as 2014 and 2015, the flow rate in the CBD is even lower with longer travel time.

Alternatives to Address Exceedances

The CRC is considering the following alternatives in response to the repeated exceedances of the thiobencarb agricultural drain Performance Goal:

1. No action
2. Increase educational outreach efforts
3. Perform additional targeted water quality monitoring studies
4. Increase inspection activities
5. Use limitations resulting from non-compliance
6. Assessment of use-to-flow variances resulting from weather conditions and drought requirements.

Narrative

1. No action was deemed an inappropriate alternative, given the number of exceedances, the reoccurrence of these exceedances within recent seasons, and the level of high exceedances in 2015. The CRC firmly acknowledges the need to address these Performance Goal exceedances.
2. Increased educational outreach efforts will be implemented. However, this measure alone is thought to be insufficient in this circumstance, as growers are already required to attend mandatory grower education as a condition of the permitted use of thiobencarb. To augment the grower meetings, additional outreach was implemented in 2015. The CRC mailed a letter to the rice growers in Colusa and Glenn Counties and concurrently an e-communication. The Colusa CAC office also sent an email to all rice growers in the county. Reaction to the outreach was significant with almost one thousand views of the CRC e-communication in one hour. The CRC has also been invited to speak at CAC sponsored grower meetings early in 2016. The message will be not to use thiobencarb if the grower is incapable of following the management practices. In addition, the CACs are considering additional outreach on local management practices.
3. Perform additional water quality monitoring at two additional locations that influence the CBD5 site. The CRC considers proactive measures are warranted to address the Performance Goal exceedances. In response to this type of action, DPR implemented several targeted studies and analysis over the years with varied results (Helliker, 2002; Lou, 2010).
4. Increasing inspection activities is an option that requires additional consultation with the DPR Enforcement Branch to evaluate appropriate increased inspections. The CAC Surveillance funding is specifically for off-hours, weekend and holiday inspections. Possible coordination between the CRC and DPR on programs such as the Pesticide Regulatory Activities Monthly Report (PRAMR), which compiles a summary of statewide and individual county enforcement workload activities may provide value.
5. Use limitations resulting from non-compliance is an option. The CRC would need to consult further with the DPR Enforcement Branch to evaluate limiting pesticide applications for individuals found to repeatedly use thiobencarb in noncompliance with pesticide use requirements. The CRC Board of Directors supports the CACs in either revoking or not issuing thiobencarb permits to repeat offenders. Unfortunately, there usually are no repeat offenders of thiobencarb water holding requirements. As an alternative, the CRC Board of Directors suggested prohibiting use by growers in targeted areas draining to CBD5. This option leads to the final alternative. The CACs are considering not allowing thiobencarb on the restricted materials permit the year following a violation for the use of this herbicide.
6. Assessment of use-to-flow variances resulting from weather conditions and drought requirements is an option.

Growers choose thiobencarb because it has a longer water hold, which fits into the weed control program when the irrigation districts control the availability of water and limit releases from the rice

fields. The CRC considers a realistic approach to assess percent thiobencarb usage to the flows as comparison from 2002 to 2015. The correlation could result in a recommended percentage of thiobencarb availability in low water, or drought years as compared to normal weather conditions.

Under non-drought conditions, there is usually a reduction in thiobencarb use as seen in 2006-2012. The thiobencarb use was reduced those years due to adequate water availability, and the Abolish 19-day and Bolero 30-day water holding requirements. Thiobencarb is difficult to use with other herbicides, since the same management practices also apply to any treatment to the field during the Bolero or Abolish water hold.

The CRC recognizes the Performance Goal exceedances in the drains and also notes that the secondary MCL was not in violation. In addition, the CRC would like to maintain reasonable use of thiobencarb when conditions return to a more normal state for the nine rice-growing counties in the Sacramento Valley.

Currently approved management practices and outreach efforts (including increased inspection activities; limitations on individual thiobencarb use resulting from non-compliance; and increased outreach, especially in counties where violations occur), have been effective in protecting water quality in 2015.

The following attachments provide additional details regarding historical sampling results and environmental conditions related to the sampling events.

Appendix A
2015 Thiobencarb Combined Results

Table A-1. 2015 Thiobencarb Combined Results

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Sampling Dates	Rice Pesticides Program 2015, Thiobencarb Monitoring Results					City Thiobencarb Monitoring Results		
	Monitoring Sites Method Detection Limit for Valent < 0.5 µg/L (ppb) and CLS < 0.40 µg/L (ppb); EPA Method 507					Reported Less Than 0.1 µg/L (ppb); EPA Method 507		% Sacramento River at the SSR Intake
	CBD5	BS1	CBD1	SSB	SR1	WSR	SSR	
22-Apr-15	-	-	-	-	-	< 0.1	< 0.1	100
28-Apr-15	ND/ND <i>Valent/CLS</i>	-	ND	-	ND	-	-	-
29-Apr-15	-	ND	-	ND	-	< 0.1	< 0.1	74
05-May-15	ND/ND <i>Valent/CLS</i>	ND	ND	ND	ND	-	-	-
06-May-15	-	-	-	-	-	< 0.1	< 0.1	70.0
12-May-15	1.01	-	ND	-	ND	-	-	-
13-May-15	-	ND	-	0.62	-	< 0.1	< 0.1	73.1
14-May-15	-	-	-	-	-	< 0.1	< 0.1	76.6
19-May-15	1.89	ND/ND <i>Valent/CLS</i>	ND	ND	ND	< 0.1	NA	78.8
20-May-15	-	-	-	-	-	< 0.1	< 0.1	100
21-May-15	5.25	ND	0.65	ND	ND	< 0.1	< 0.1	88.6
25-May-15	-	-	-	-	-	< 0.1	< 0.1	84.7
26-May-15	2.41	-	1.53	-	ND/ND <i>Valent/CLS</i>	< 0.1	< 0.1	75.5
27-May-15	-	ND	-	ND	-	0.1	< 0.1	76.6
28-May-15	1.94	ND	1.39	ND	ND	< 0.1	< 0.1	77.9
02-Jun-15	1.56	ND	0.40/0.70 <i>Valent/CLS</i>	ND	ND	< 0.1	< 0.1	77.9

Table A-1. 2015 Thiobencarb Combined Results

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Sampling Dates	Rice Pesticides Program 2015, Thiobencarb Monitoring Results					City Thiobencarb Monitoring Results		
	Monitoring Sites Method Detection Limit for Valent < 0.5 µg/L (ppb) and CLS < 0.40 µg/L (ppb); EPA Method 507					Reported Less Than 0.1 µg/L (ppb); EPA Method 507		% Sacramento River at the SSR Intake
	CBD5	BS1	CBD1	SSB	SR1	WSR	SSR	
03-Jun-15	-	-	-	-	-	< 0.1	< 0.1	81.9
04-Jun-15	0.73	ND	0.36	ND	ND	< 0.1	< 0.1	86.3
09-Jun-15	0.48	-	ND	-	ND	-	-	-
10-Jun-15	-	ND	-	ND	-	< 0.1	< 0.1	67.8
11-Jun-15	0.45	ND	ND	0.62	ND	< 0.1	< 0.1	96.2
16-Jun-15	0.44	ND	ND	ND/ND <i>Valent/CLS</i>	ND	-	-	-
17-Jun-15	-	-	-	-	-	< 0.1	< 0.1	48.8
18-Jun-15	-	-	-	-	-	< 0.1	< 0.1	28.8
23-Jun-15	ND	-	ND/ND <i>Valent/CLS</i>	-	ND	-	-	-
24-Jun-15	-	ND	-	ND	-	< 0.1	< 0.1	79.1
30-Jun-15	ND	ND	ND	ND	ND	-	-	-
01-Jul-15	-	-	-	-	-	< 0.1	< 0.1	77.4

Notes:

Concentrations reported in µg/L (ppb)
 Performance Goals in the drain: Thiobencarb 1.5 µg/L
 µg/L = microgram(s) per liter
 CLS = California Laboratory Services
 ND = not detected above laboratory reporting limits
 ppb = part(s) per billion
 V = Valent

Monitoring Site Descriptions:

CBD5 = Colusa Basin Drain within the Colusa National Wildlife Refuge south of Highway 20
 BS1 = Butte Slough on Lower Pass Road northeast of Meridian
 CBD1 = Colusa Basin Drain at Road 99E and near Road 108 west of Knights Landing
 SSB = Sacramento Slough downstream of the Karnack pumps
 SR1 = Sacramento River at the Village Marina on Garden Highway
 WSR = City of West Sacramento Intake at Bryte Bend
 SSR = City of Sacramento at Sacramento River Intake

Appendix B
Maximum Thiobencarb Detections
by Site and Date, 2001-2015

Table B-1. Maximum Thiobencarb Detection (in µg/L) by Site and Date

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Year	SR1/Date	SRR/Date	WSR/Date	SSB/Date	CBD1/Date	BS1/Date	CBD5/Date	Acres Treated	Acres Planted
2001	22-May/0.50	29-May/0.38	5-May/0.59		29-May/7.9	29-May/2.6	10-May/5.9	168,991	496,100
2002	23-May/0.9	22-May/0.58	24-May/1.6			23-May/3.4	23-May/8.2	222,414	533,000
2003	ND	< 0.10	16-June/0.16	ND	17-June/2.30	10-June/0.60	12-June/1.30	154,928	498,000
2004	ND	< 0.10	< 0.10	1-June/0.90	27-May/1.60	ND	4-May/3.6	136,132	595,000
2005	14-June/0.07	< 0.10	1-June/0.11	9-June/0.63	14-June/0.67	21-June/0.36	21-June/0.45	118,786	528,000
2006	8-June/0.17	< 0.10	14-June/0.14	8-June/0.40	23-May/0.90	1-June/0.70	1-Jun/0.97	79,109	526,000
2007	22-May/0.13	< 0.10	23-May/0.19	22-May/0.17	22-May/0.76	17-May/0.23	15-May/0.54	74,251	534,000
2008	22-May/0.62	15-May/0.12	15-May/0.31	13-May/0.32	22-May/1.80	27-May/1.99	22-May/1.02	67,483	517,000
2009	26-May/0.31	25-May/0.29	25-May/0.68	9-June/0.24	26-May/1.84	11-Jun/0.50	26-May/1.24	72,660	561,000
2010	25-May/0.08	< 0.10	< 0.10	29-June/0.26	8-June/1.80	3-June/0.80	10-June/1.50	75,172	558,000
2011	ND	< 0.10	1-June/0.12	7-June/0.46	7-June/1.16	2-June/0.60	24-May/1.42	71,824	585,000
2012	ND	< 0.10	< 0.10	21-June/0.30	7-June/1.23	31-May/0.63	29-May/1.00	78,478	556,000
2013	21-May/0.11 30-May/0.11	< 0.10	< 0.10	30-May/0.34	23-May/1.77	23-May/0.36	21-May/3.97	84,533	556,000
2014	ND	< 0.10 < 0.48 < 0.49	< 0.10 < 0.48 < 0.49	20-May/0.25	3-June/1.27	29-May/1.1	29-May/3.81	106,487*	431,000
2015	ND	ND	27-May/0.1	12-May/0.62 11- June/0.62	26-May/1.53	ND	19-May/1.89 21-May/5.25 26-May/2.41 2-June/1.56	144,552*	375,000 (est.)

*Preliminary acreage from DPR

Valent laboratory reporting limit 0.5 µg/L.

Appendix C
2015 CRC RPP Thiobencarb Results

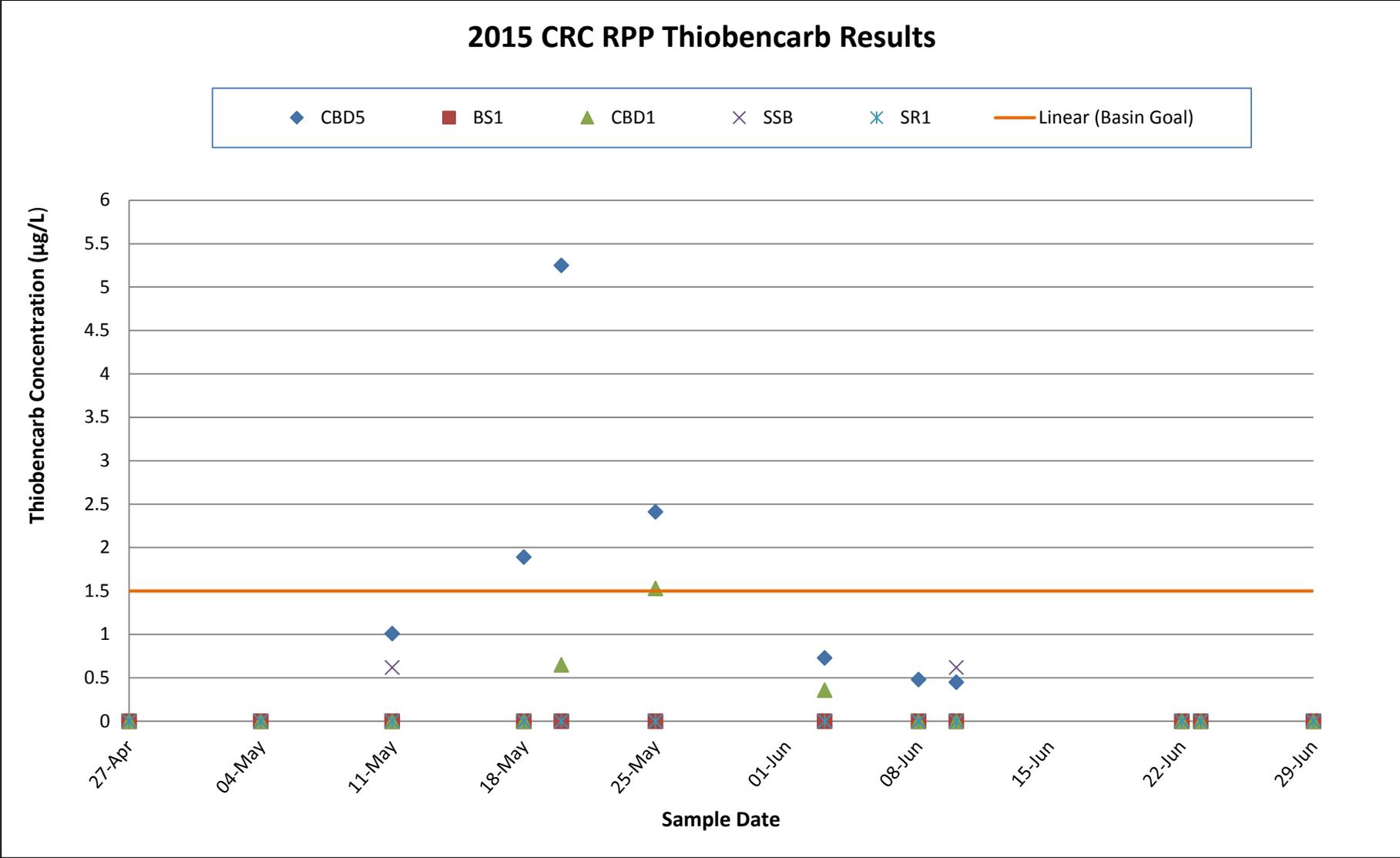
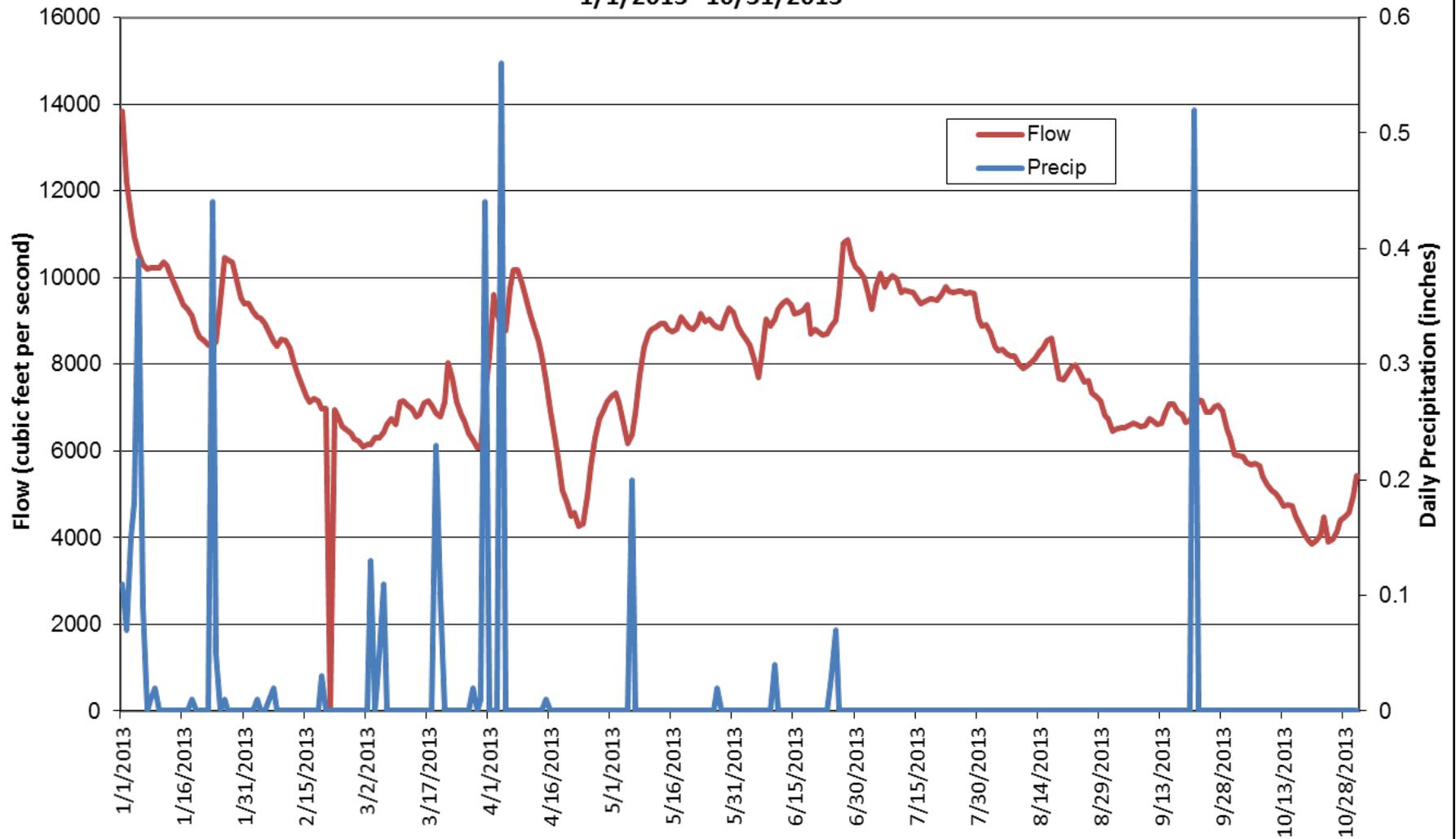


Figure C-1. CRC Thiobencarb Results, 2015

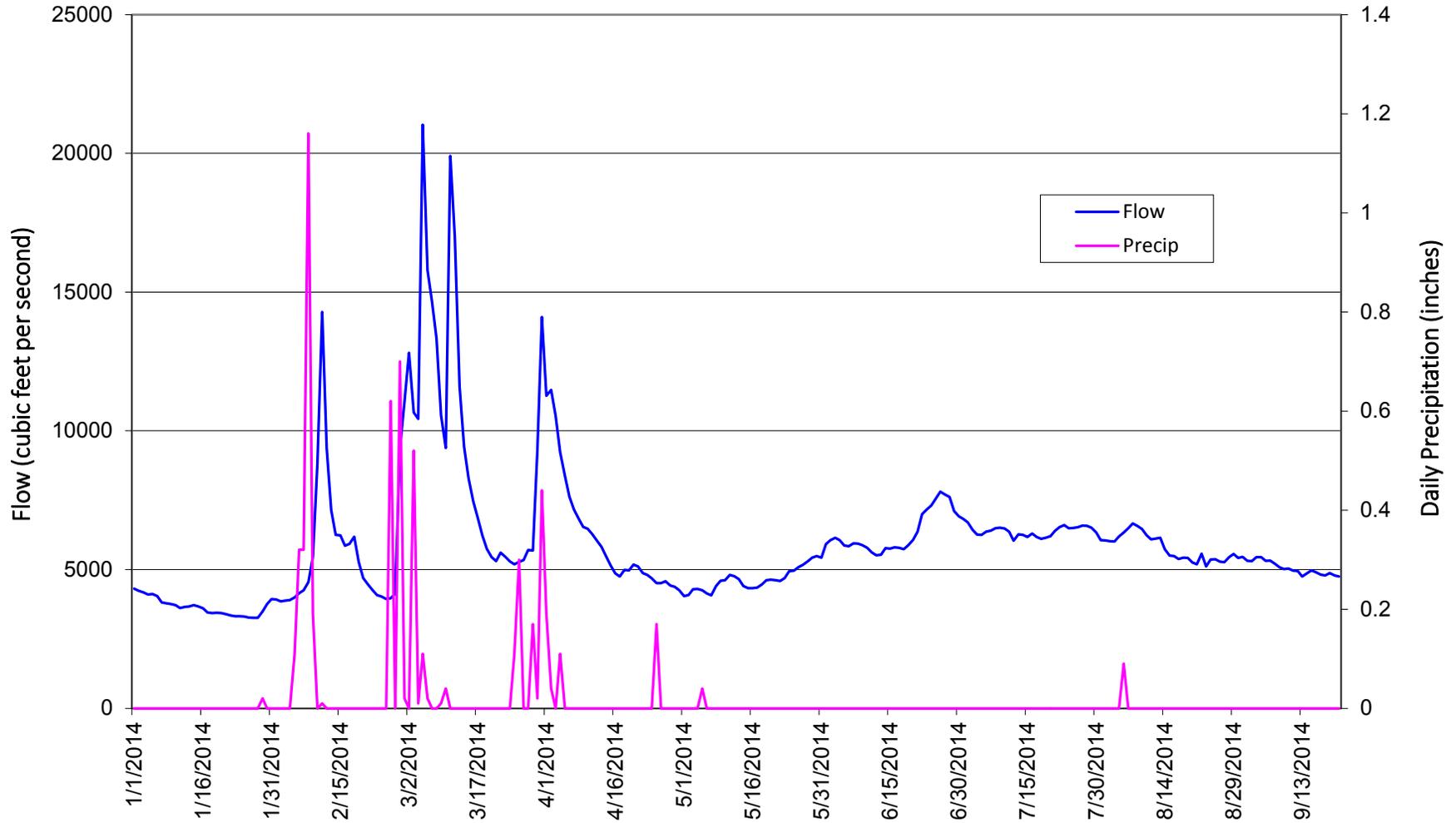
Non-detects are shown as zero (0) on the graph, and only the highest value of a reported duplicate sample is shown

Appendix D
Flow and Precipitation Data
for 2013, 2014, 2015

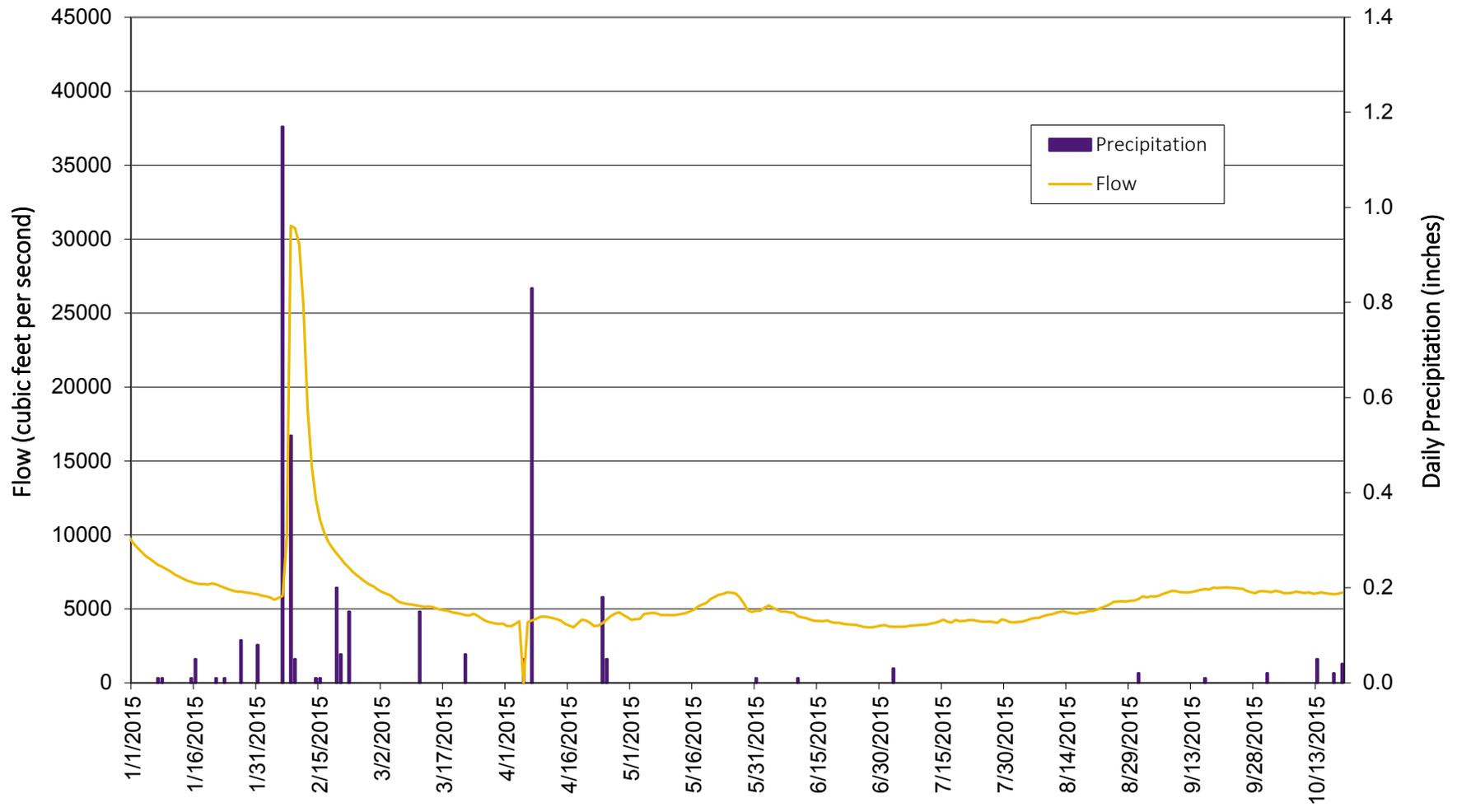
Sacramento River Flow at Colusa (COL)
Precipitation at Colusa (COL.A)
1/1/2013 - 10/31/2013



Sacramento River Flow at Colusa (COL)
Precipitation at Colusa (COL.A)
1/1/2014 - 9/21/2014

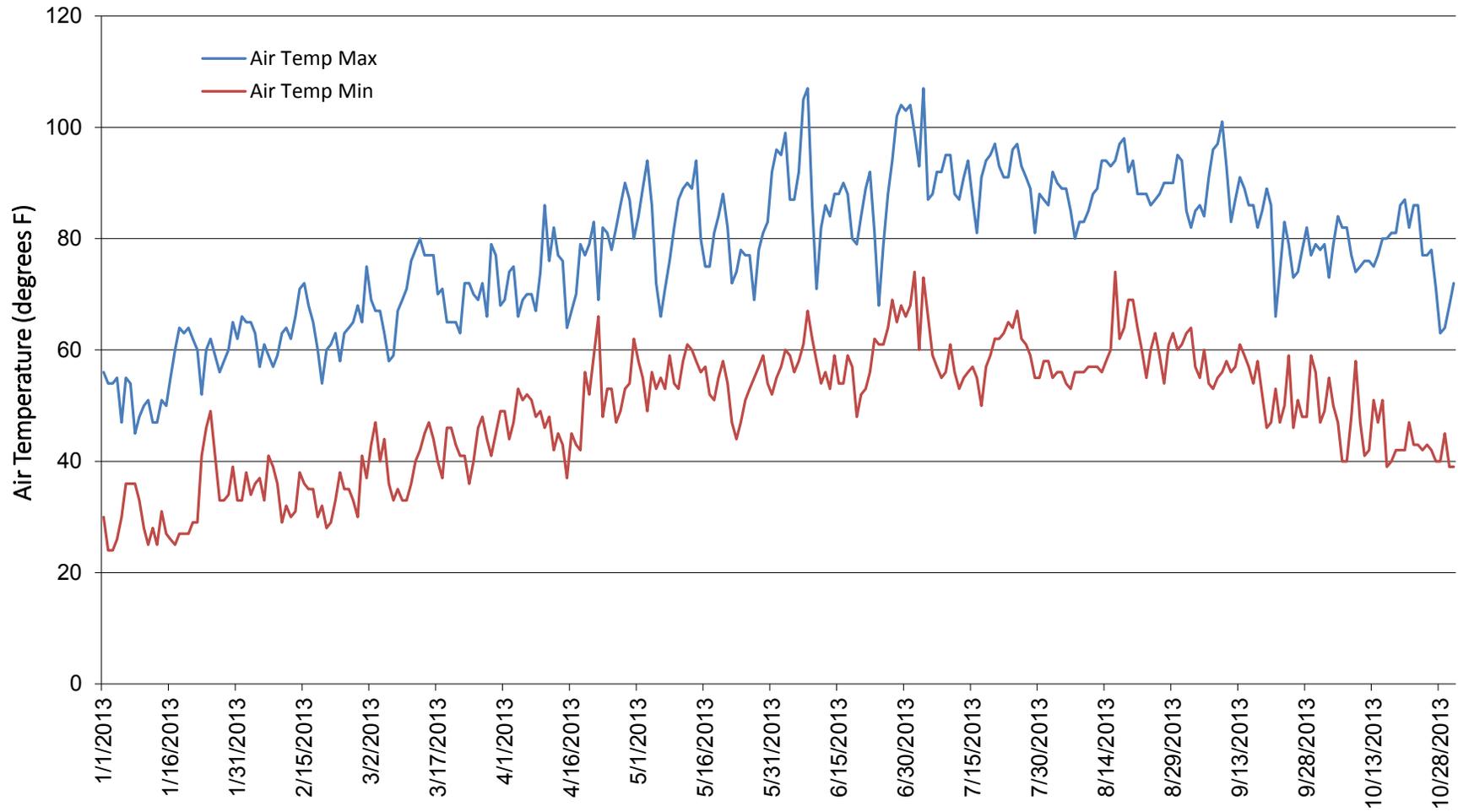


Sacramento River Flow at Colusa (COL)
Precipitation at Colusa (COL.A)
1/1/2015 - 10/19/2015

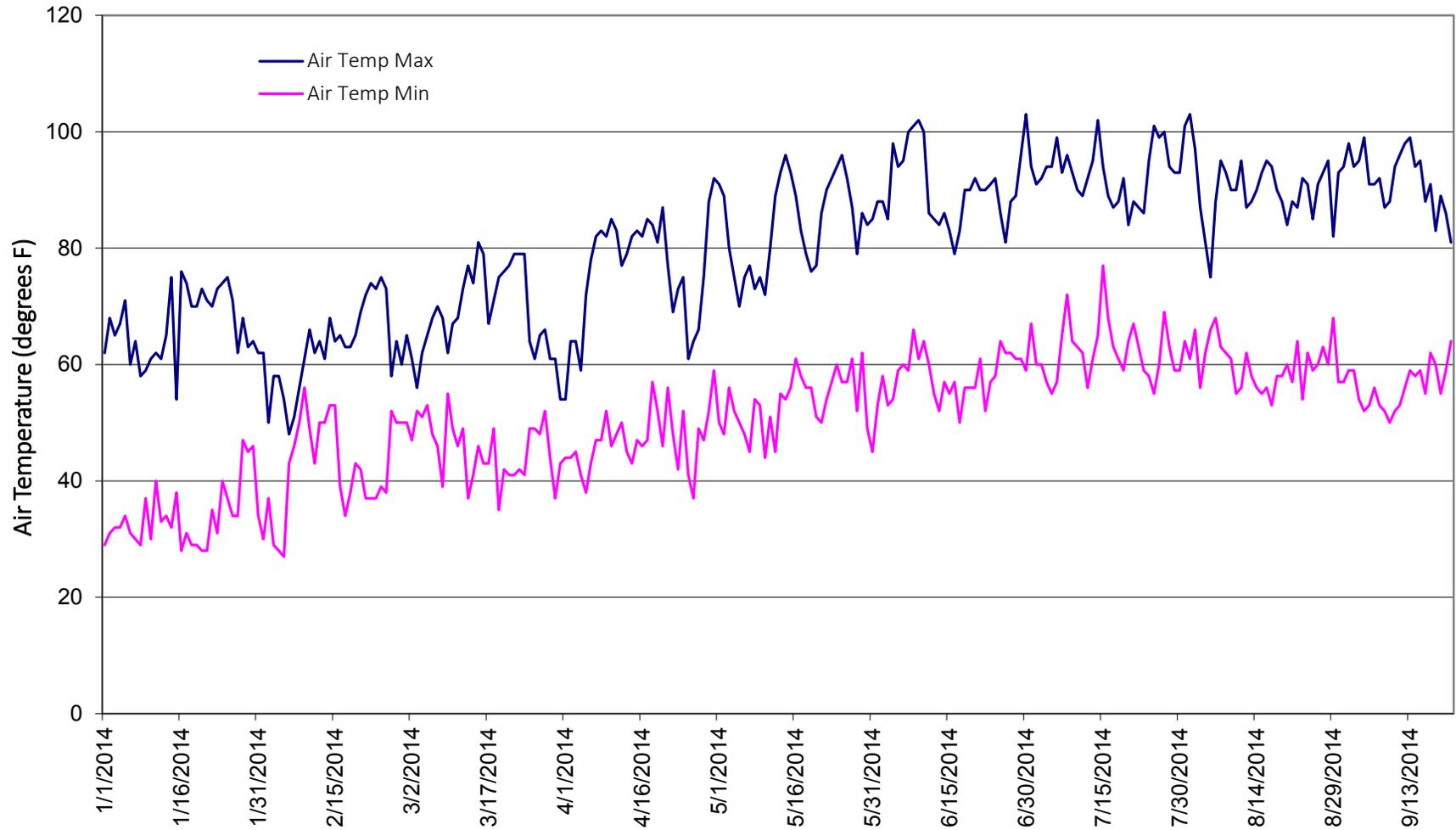


Appendix E
Daily Maximum and Minimum
Air Temperatures for 2013, 2014, 2015

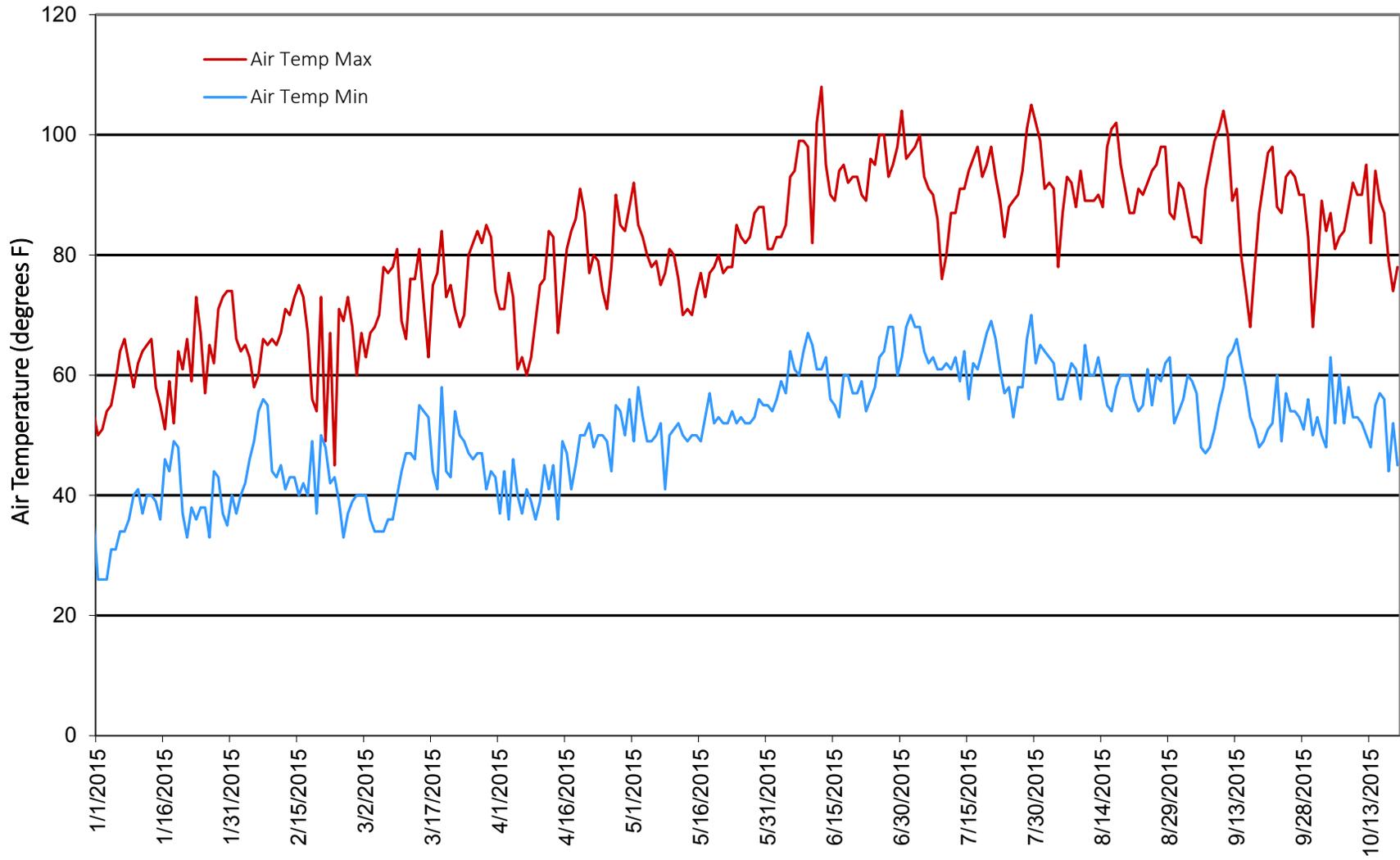
Daily Maximum and Minimum Air Temperatures (COL.A)
1/1/2013 - 10/31/2013



Daily Maximum and Minimum Air Temperatures (COL.A)
1/1/2014 - 9/21/2014

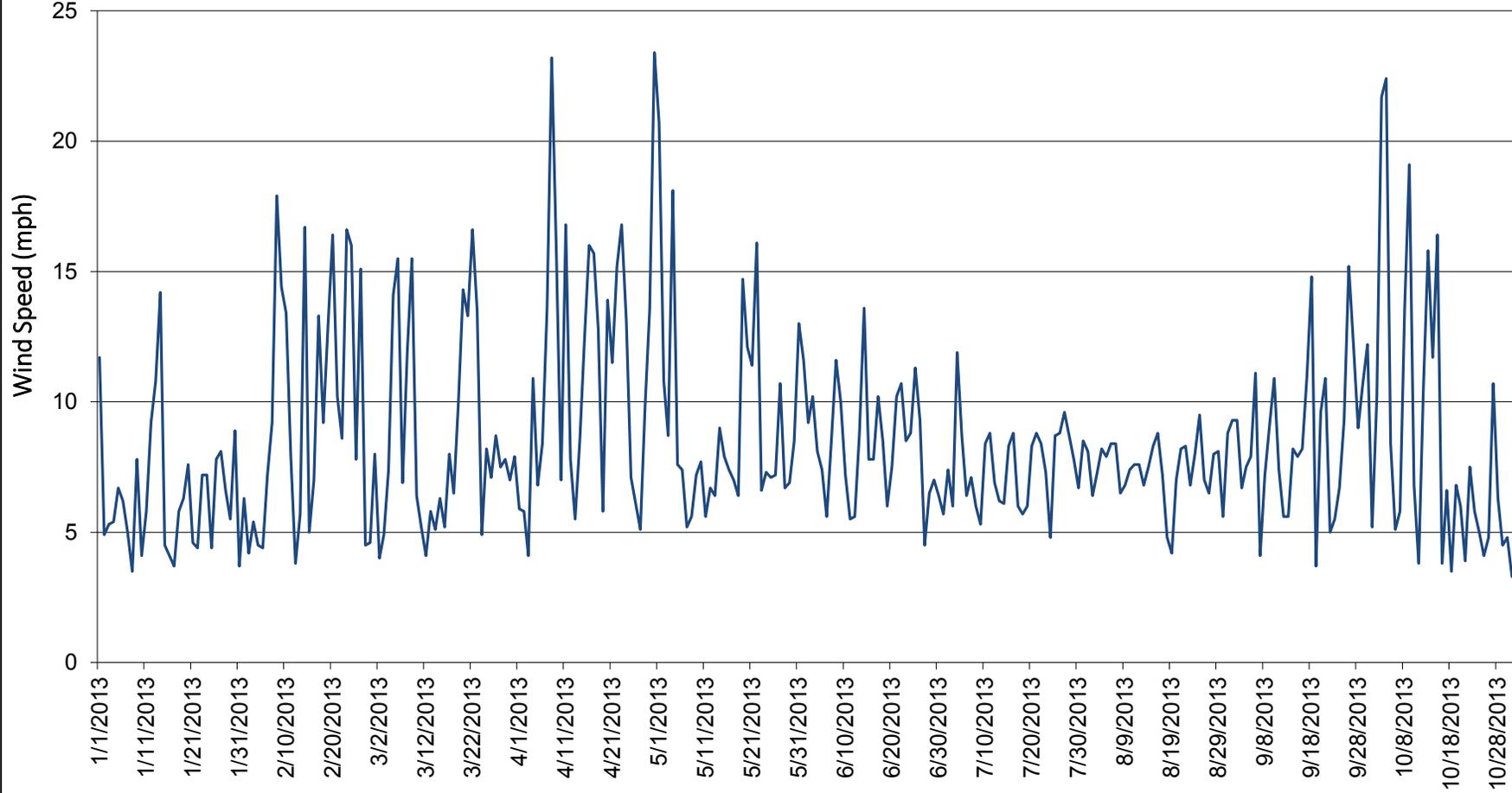


Daily Maximum and Minimum Air Temperatures (COLA)
1/1/2015 - 10/19/2015

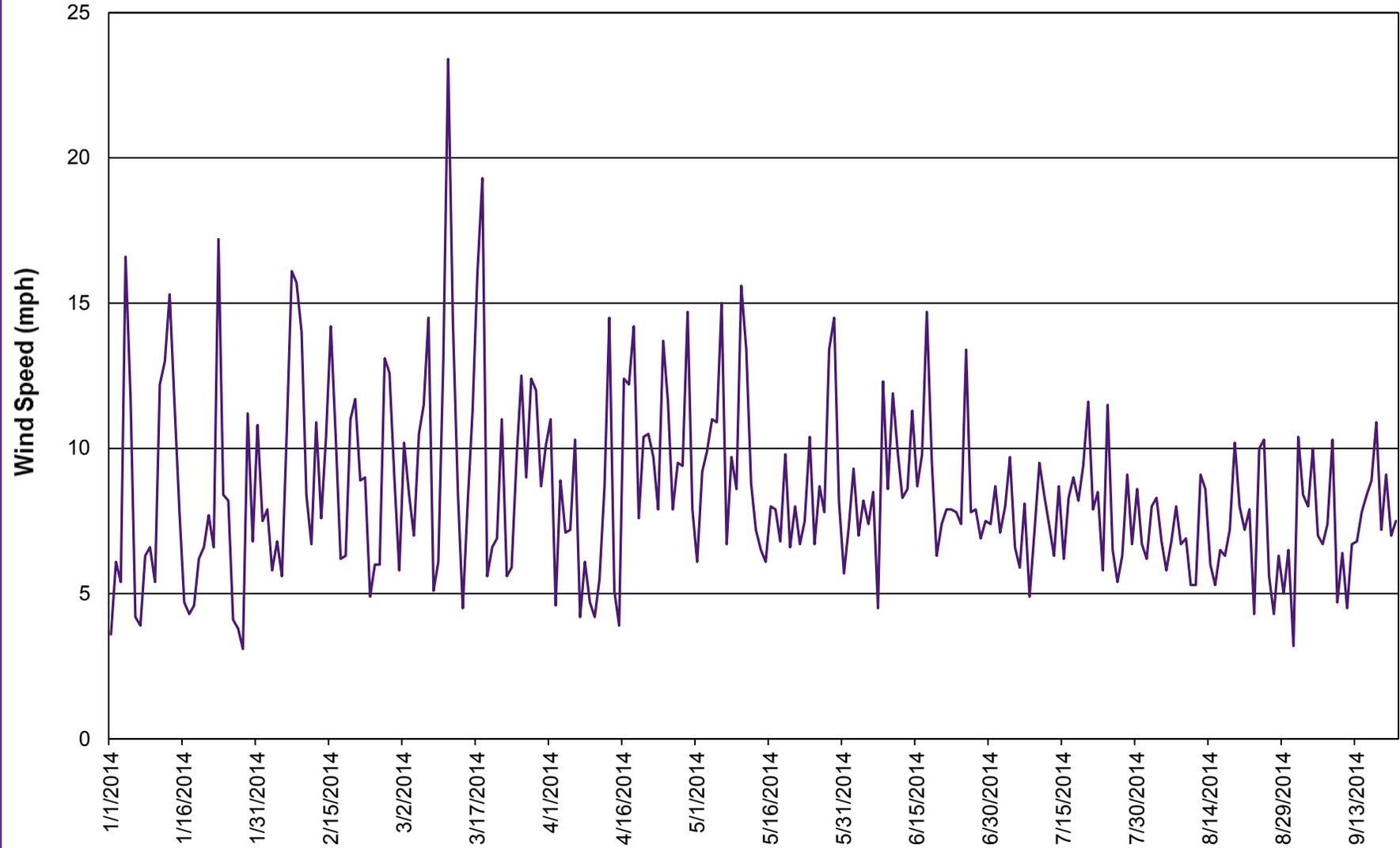


Appendix F
Daily Maximum Wind Speeds
for 2013, 2014, 2015

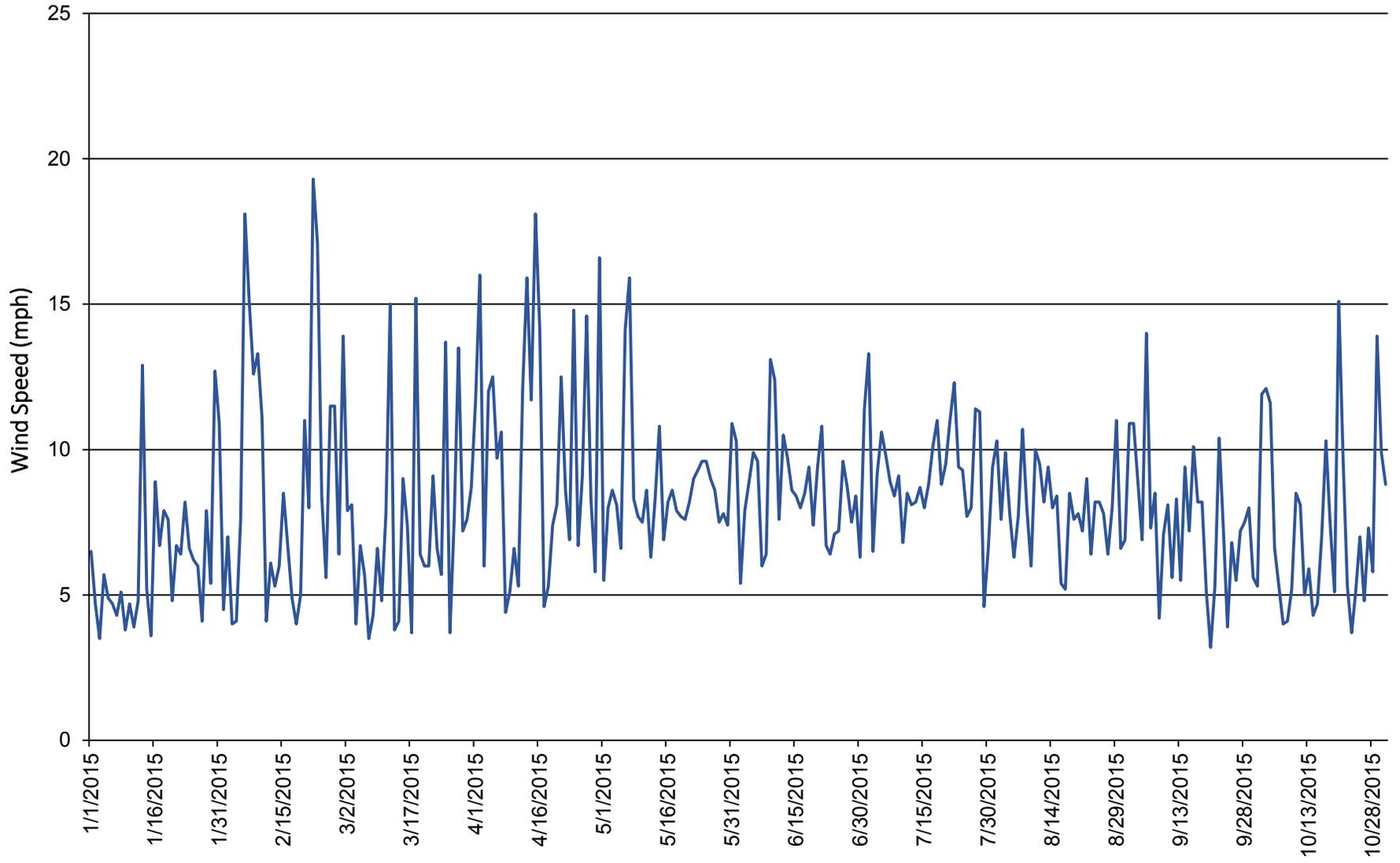
Daily Maximum Wind Speed (COL.A)
1/1/2013 - 10/31/2013



Daily Maximum Wind Speed (COL.A)
1/1/2014 - 9/21/2014

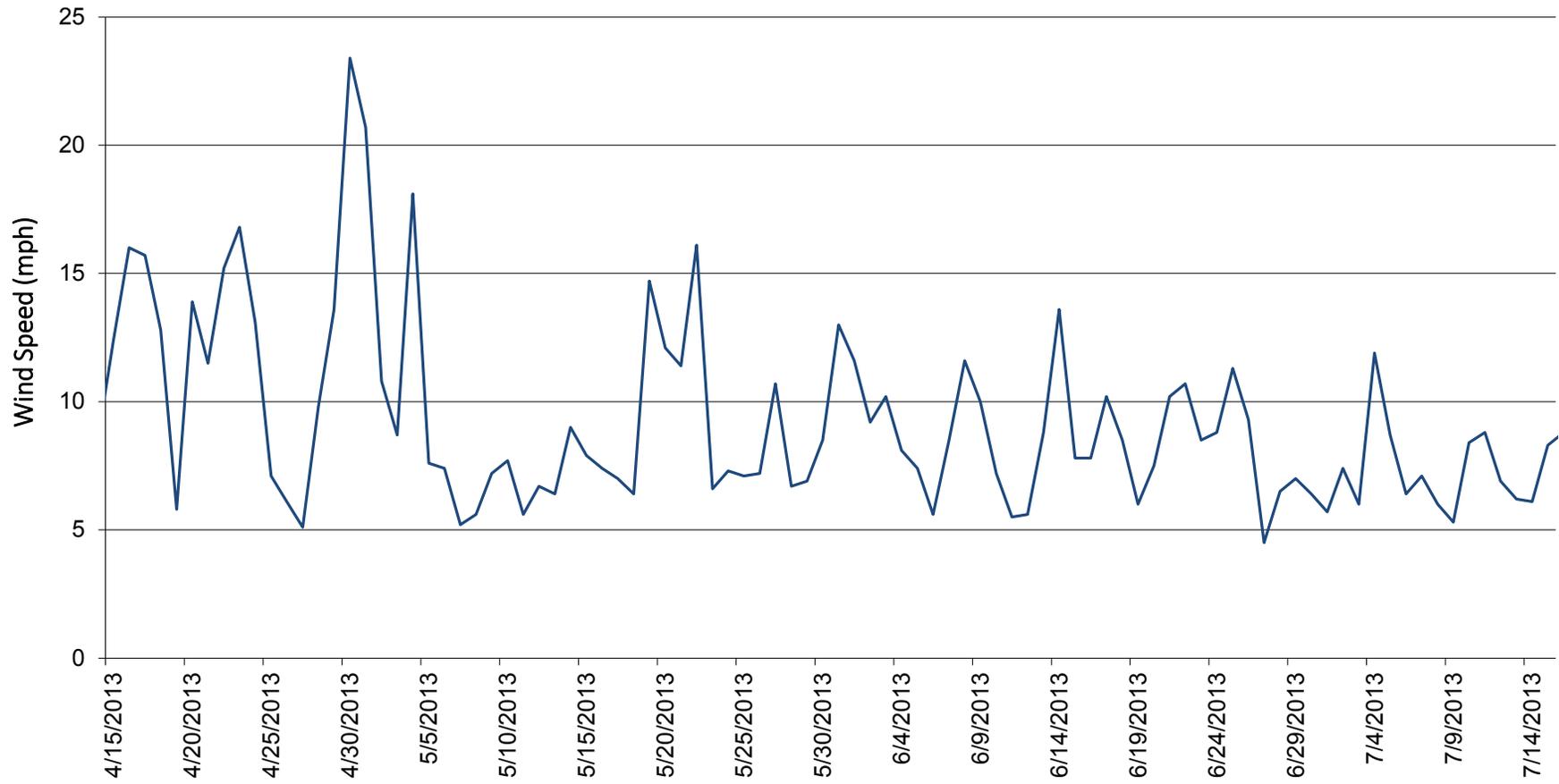


Daily Maximum Wind Speed (COL.A)
1/1/2015 - 10/31/2015

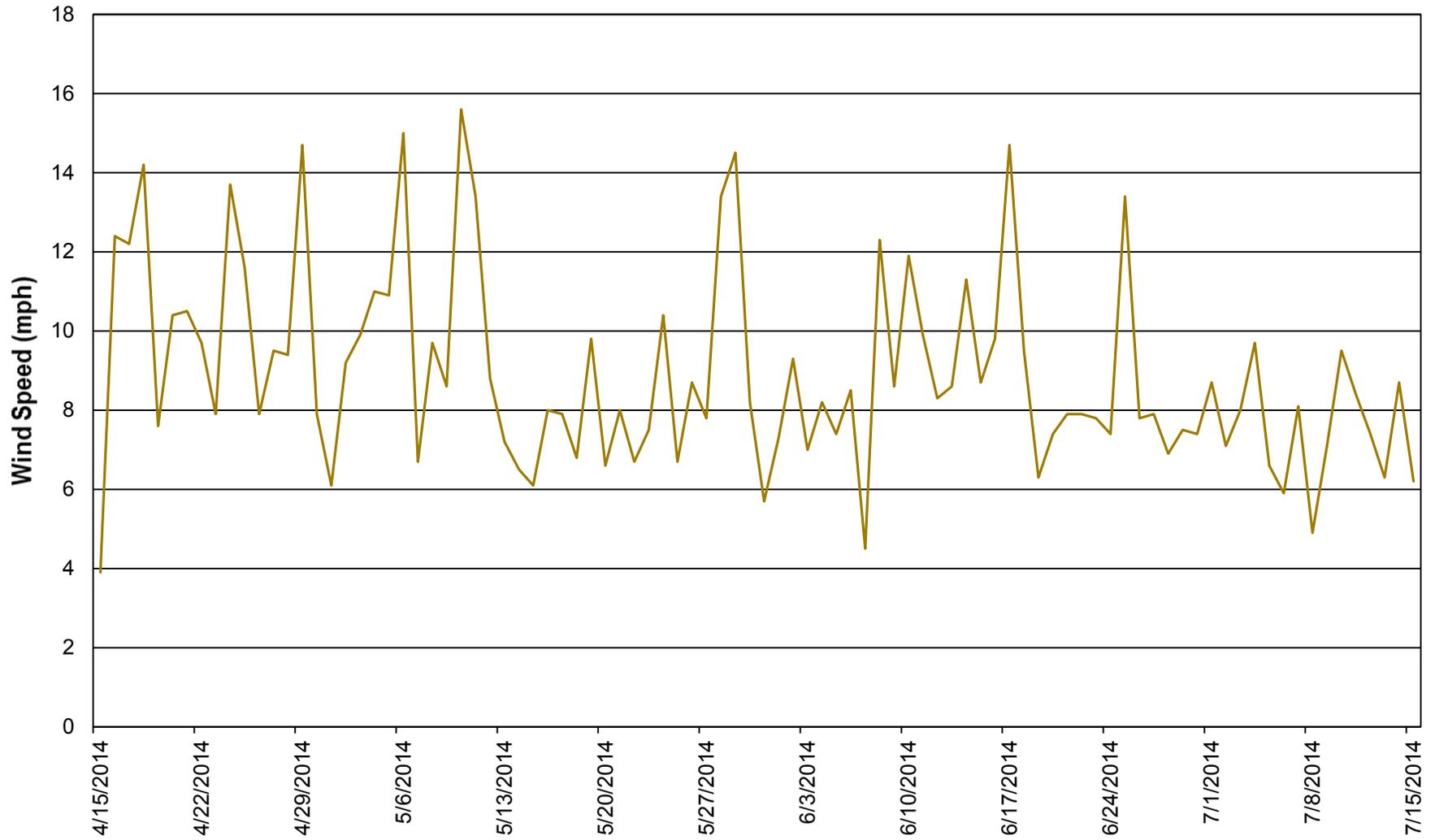


Appendix G
Daily Maximum Wind Speeds
During the Thiobencarb Use Season
for 2013, 2014, and 2015

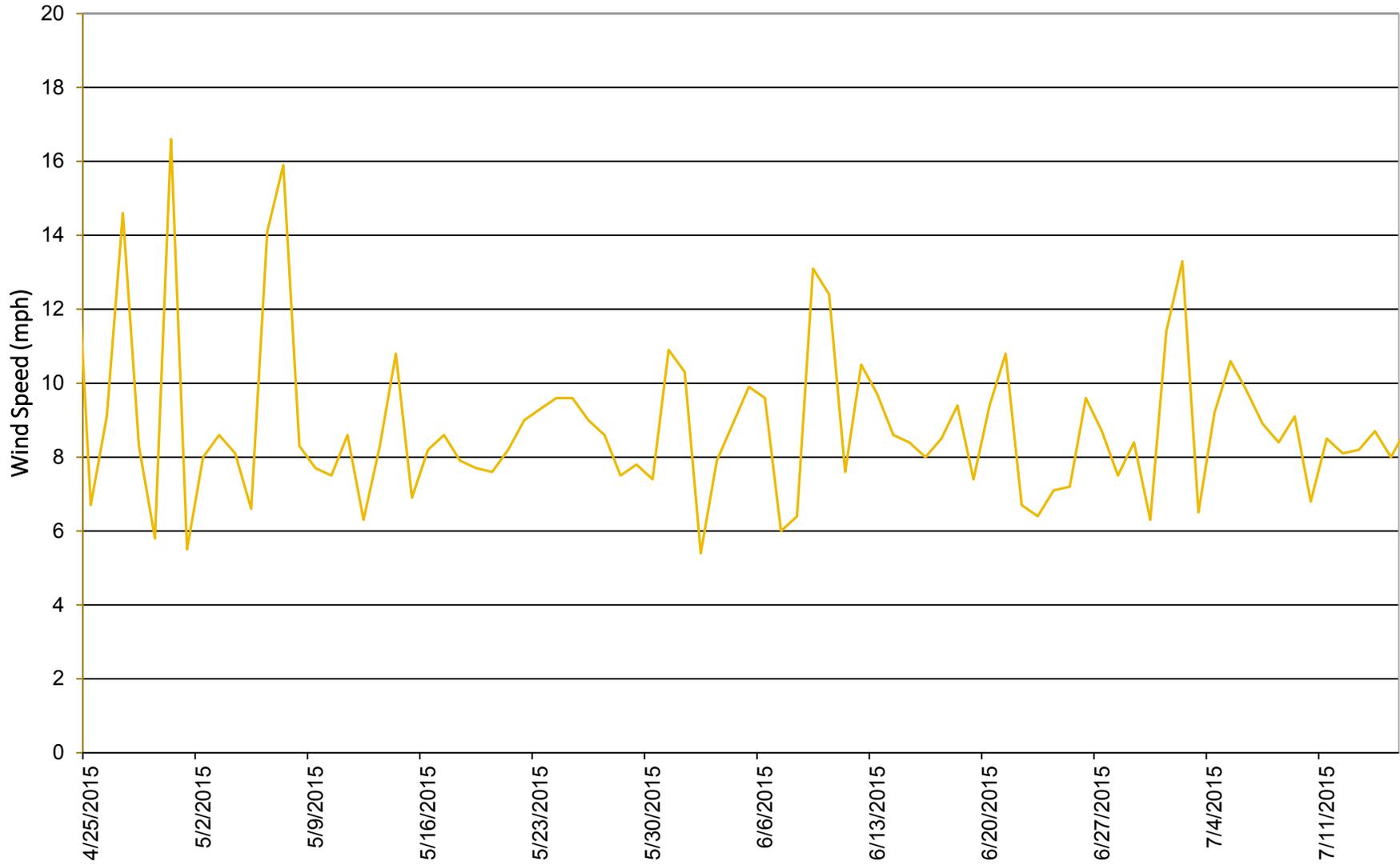
Daily Maximum Wind Speed (COL.A) During Thiobencarb Use Season
4/15/2013 - 7/15/2013



Daily Maximum Wind Speed (COL.A) During Thiobencarb Use Season
4/15/2014 - 9/21/2014



Daily Maximum Wind Speed (COL.A) During Thiobencarb Use Season
4/25/2015 - 7/15/2015



Appendix H
Management Practice Inspections
Narrative

Management Practice Inspections Narrative

Management Practice Inspections

Management practices are a key component of the rice water quality programs. During the early phases of the RPP, management practices were developed to increase efficacy and ultimately to protect water quality. The cornerstone of rice management practices is a thorough understanding of the rice calendar, including the application methods and timing of thiobencarb use, which is specific to the early part of the rice-growing season. Initial use begins after planting either in April or May, with peak use occurring mid-May to June depending on the planting time.

Management practices include field-level management of rice pesticides and discharges, CAC enforcement programs, grower education efforts, and communication programs. This section includes the thiobencarb water-hold table, general information on rice water quality management practices, and specific 2015 enforcement data.

Role of Management Practices in Attaining Water Quality Protection

Over the years, best management practice such as water-hold requirements and grower information meetings, along with inspection and enforcement actions, were implemented to ensure compliance with performance goals and attainment of water quality objectives and secondary MCLs for the pesticides regulated under the RPP. The water holds, which are specified on pesticide use labels and through permit conditions, were developed to provide for in-field degradation of pesticides prior to the release of treated water to drains and other surface waters. For 2015, the thiobencarb water-holding requirements were unchanged and remain the same as those listed in the DPR Pesticide Use Enforcement Program Standards Compendium.

Water Holds

The primary field-level water quality management practice is the water hold. The nature of rice farming, which requires standing water during the growing season, provides rice farmers with a unique opportunity to manage water flow. Water-hold durations vary based on requirements that are adopted from the data evaluations for the registration of the specific pesticide. The scientific data take into account the persistence of specific registered rice pesticides in the environment and are used to provide time for the applied product to degrade in the field. The goal of this strategy is to discharge rice drainage water that meets Basin Plan performance goals or other benchmarks.

The management practices developed under the RPP are the foundation for development and implementation of water-hold requirements for other pesticides. Over the years, water holds have become industry standard practice to address aquatic toxicity, taste complaints, environmental fate, and product efficacy. Thiobencarb water holds were originally developed with input from technical resources such as the University of California Cooperative Extension and pesticide registrants. Currently, the waterholding requirements result from the scientific data review for registration of all rice pesticides.

Water-hold requirements for thiobencarb are pesticide-use permit conditions under the RPP. Table H-1 specifies the water-hold requirements established by the DPR for the two registered formulations of thiobencarb.

Table H-1. Water-Hold Requirements in Days for Thiobencarb, North Sacramento Valley
Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Release Type	Thiobencarb	
	Bolero® UltraMax League MVP	Abolish™ 8EC
Single treated fields.	30	19
Release into tailwater recovery system or ponded onto fallow field or contained in other systems appropriate for preventing discharge.	19	19
System controlled by one permittee, then water may be discharged into the system in manner consistent with product labeling.	14	14
System includes drainage from more than one permittee, then water must be retained on site.	6	6
Water on fields within bounds of areas that discharge negligible amounts of drainage onto perennial streams. Commissioner must evaluate such sites and verify the hydrologic isolation of the fields.	6	6
CAC may authorize emergency release of tailwater.	19	19

Actions Taken to Address Identified Water Quality Impacts

The CACs are the local enforcement agencies working with DPR to enforce the California Food and Agricultural Code and the California Code of Regulations pertinent to pesticide use. The CACs issue restricted materials permits to growers purchasing and using California-restricted materials in their respective counties. Thiobencarb is a restricted material with additional use restrictions (permit conditions) not found on the registered product label. Water holds are the most common label requirement with additional clarifying permit conditions for thiobencarb. Since 2003, the CVRWQCB has authorized several resolutions, impacting the DPR permit conditions that require increased inspections for seepage control; buffer zones during application; a pre-season mandatory stewardship meeting for growers, pest control advisors, and applicators; and formation of a Storm Event Work Group. The resolution authorizing the 2010 RPP (R5-2010-9001) adopted additional conditions recommended by the CRC. The conditions included in the current RPP authorization are summarized below:

- Continuation of the management practices incorporated in the 2009 use permit conditions, including water-holding requirements for thiobencarb, drift minimization, mandatory pre-season thiobencarb stewardship training, water management (including emergency releases), and seepage mitigation measures. [R5-2010-9001 (1)(a)]
- Additional outreach to applicators on the results of the 2009 thiobencarb water quality monitoring and required management practices, including clarification of hold time requirements, application procedures, and notification requirements associated with elevated results near the Sacramento River drinking water intakes. [R5-2010-9001 (1)(b)]
- Consultation with the 10 thiobencarb dealers and distributors in the Sacramento River Basin. [R5-2010-9001 (1)(b)]
- Funding of additional county surveillance at non-traditional hours to double the level of 2009 surveillance and extension of the program to counties not previously funded. Surveillance inspections have increased to approximately 1.5 times the 2009 level with the new funding. [R5-2010-9001 (1)(c)]

- Storm-related emergency releases will be monitored at a monitoring site representative of rice field discharges from a reclamation district with a previously closed system. [R5-2010-9001 (1)(d)].
- If the Basin Plan performance goal or WQO for thiobencarb is not met or increasing thiobencarb concentrations are observed in waters designated for municipal or domestic water supply, the CRC, after consultation with DPR, will submit to the Executive Officer proposed actions to be implemented to achieve the performance goal or WQO [R5-2010-9001 (1)(e)].

The restricted materials permits require the CACs to keep records of pesticides applied to rice acreage, while full use reporting documents agricultural pesticide applications. Rice growers or pest control operators submit Notices of Intent (NOI) to the CACs at least 24 hours prior to application so that CAC staff can observe applications. Notices of Application (NOA) are reported 24 hours after an application occurs so that water-holding times can be recorded, inspected, and tracked.

Compliance with pesticide-use restrictions is a critical component of the RPP to achieve water quality protection. A range of label restrictions and permit conditions apply to the use of rice pesticides, including mix/load, application, and water-hold requirements. CACs perform inspections to enhance compliance with each of the label restrictions and permit conditions. Mix/load inspections are performed primarily for worker protection and to evaluate whether pesticides are being properly handled and contained to prevent releases to the environment. Application inspections are performed to evaluate label and permit condition application restrictions such as buffer zones, adherence to rate and wind speed and other local requirements, and water management. Seepage inspections evaluate the efficacy of farm water management levees to hold water in-field throughout the duration of water holds.

Release Inquiries and Emergency Releases

In 2015, there were no release inquiries and no reported emergency releases.

Seepage Control and Inspections

Seepage is a water quality concern because rice field water can move laterally through levees bordering rice fields, especially when levees are constructed in a manner that does not prevent water seepage. The CVRWQCB expressed concern that seepage was a contributing factor to increased thiobencarb concentrations in the Sacramento River in the past.

For several years, the CRC has contracted with three CACs to fund “off-duty” enforcement activity on weekends and holidays during RPP pesticide use season. Surveillance inspections have been offered to all the counties with rice acreage in the RPP. The number of inspections correlates to the thiobencarb NOIs and the amount of product used.

The CACs provide local oversight using the “DPR Pesticide Use Enforcement Program Standard Compendium, Volume 3, Restricted Materials Permitting” with activity prioritization under the County Enforcement Work Plans. All rice pesticide water-holding requirements are ranked as high-priority inspections when rice pesticides are used as restricted materials.

The CACs conducted seepage inspections in 2015, as summarized in Table H-2. Based on the inspection data provided to the DPR Enforcement Branch by the CACs, 1,431 thiobencarb use sites were inspected for seepage. Of these inspected sites, 1,271 sites reported no seepage, 261 had reported seepage of less than 5 gallons per minute (gpm), and 10 sites had reported seepage of greater than 5 gpm. The sites with flow greater than 5 gpm constitute less than 1 percent of inspected sites. Two enforcement actions were reported, with one in Colusa County, and one in Glenn County.

Table H-2. Thiobencarb Water Seepage Inspections, 2015

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

County	Chemical	Number of Seepage Inspections	Number of Sites with No Seepage	Number of Sites w/ Less than 5 gpm Seepage	Number of Sites w/ More than 5 gpm Seepage	Enforcement Actions
Butte	Bolero	0	0	0	0	0
	Abolish	0	0	0	0	0
	League	0	0	0	0	0
	County total	0	0	0	0	0
Colusa	Bolero	283	276	4	3	1 (pending)
	Abolish	61	61	0	0	0
	League	34	33	1	0	0
	County total	378	370	5	3	1
Glenn	Bolero	63	60	59	2	0
	Abolish	49	51	39	5	1
	League	1	4	1	0	0
	County total	113	115	99	7	1
Placer	Bolero	0	3	0	0	0
	Abolish	1	10	1	0	0
	League	0	2	0	0	0
	County total	1	15	1	0	0
Sacramento	Bolero	0	0	0	0	0
	Abolish	0	0	0	0	0
	League	0	0	0	0	0
	County total	0	0	0	0	0
Sutter	Bolero	146	143	3	0	0
	Abolish	65	64	1	0	0
	League	29	29	0	0	0
	County total	240	236	4	0	0
Tehama	Bolero	0	0	0	0	0
	Abolish	0	0	0	0	0
	League	0	0	0	0	0
	County total	0	0	0	0	0
Yolo	Bolero	118	115	3	0	0
	Abolish	0	0	0	0	0
	League	12	0	0	0	0
	County total	130	115	3	0	0
Yuba	Bolero	342	272	70	0	0
	Abolish	143	82	61	0	0
	League	84	66	18	0	0
	County total	569	420	149	0	0
Total		1,431	1,271	261	10	2 (1 pending)

Notes:

Data are preliminary.

gpm = gallon(s) per minute

Water-Hold Inspections

The CACs conducted water-hold inspections of 1,964 thiobencarb use sites in 2015 (Table H-3). There were no reported release inquiries and no reported emergency releases. Of the 1,964 use sites inspected, two were issued agricultural civil penalties (ACPs; one is pending). The ACPs were in Colusa County and Glenn County.

Table H-3. Thiobencarb Water-Hold, Application, and Mix/Load Inspections, 2015

Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

County	Chemical	Water-Hold Inspections	Release Inquiries	Emergency Releases	Appl. Inspections	Mix-Load Inspections	ACPs
Butte	Bolero	289	0	0	4	2	0
	Abolish	93	0	0	3	1	0
	League	2	0	0	2	0	0
	County total	384	0	0	9	3	0
Colusa	Bolero	283	0	0	5	4	1 (pending)
	Abolish	61	0	0	8	7	0
	League	34	0	0	3	1	0
	County total	378	0	0	16	12	1
Glenn	Bolero	121	0	0	1	0	0
	Abolish	95	0	0	4	3	1
	League	5	0	0	0	0	0
	County total	221	0	0	5	3	1
Placer	Bolero	3	0	0	0	0	0
	Abolish	6	0	0	0	0	0
	League	0	0	0	1	0	0
	County total	9	0	0	1	0	0
Sacramento	Bolero	32	0	0	0	0	0
	Abolish	0	0	0	0	0	0
	League	0	0	0	0	0	0
	County total	32	0	0	0	0	0
Sutter	Bolero	146	0	0	2	3	0
	Abolish	65	0	0	6	6	0
	League	29	0	0	1	1	0
	County total	240	0	0	9	10	0
Tehama	Bolero	0	0	0	0	0	0
	Abolish	0	0	0	0	0	0
	League	0	0	0	0	0	0
	County total	0	0	0	0	0	0
Yolo	Bolero	118	0	0	1	0	0
	Abolish	11	0	0	0	0	0
	League	2	0	0	0	0	0
	County total	131	0	0	1	0	0

Table H-3. Thiobencarb Water-Hold, Application, and Mix/Load Inspections, 2015*Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances*

County	Chemical	Water-Hold Inspections	Release Inquiries	Emergency Releases	Appl. Inspections	Mix-Load Inspections	ACPs
Yuba	Bolero	342	0	0	2	1	0
	Abolish	143	0	0	3	3	0
	League	84	0	0	2	2	0
County total		569	0	0	7	6	0
Total		1,964	0	0	48	34	2 (1 pending)

Note:

Data are preliminary.

ACP = agricultural civil penalty

Application and Mix/Load Inspections

The CACs conducted application and mix/load inspections in 2015, as summarized in Table H-3. Based on the inspection data provided by the CACs to the DPR Enforcement Branch, 48 application inspections and 34 mix/load event inspections were performed.

Appendix I
Maps and Coordinates of
Monitoring Locations

Maps and Coordinates of Monitoring Locations

Table I-1. Monitoring Location Information

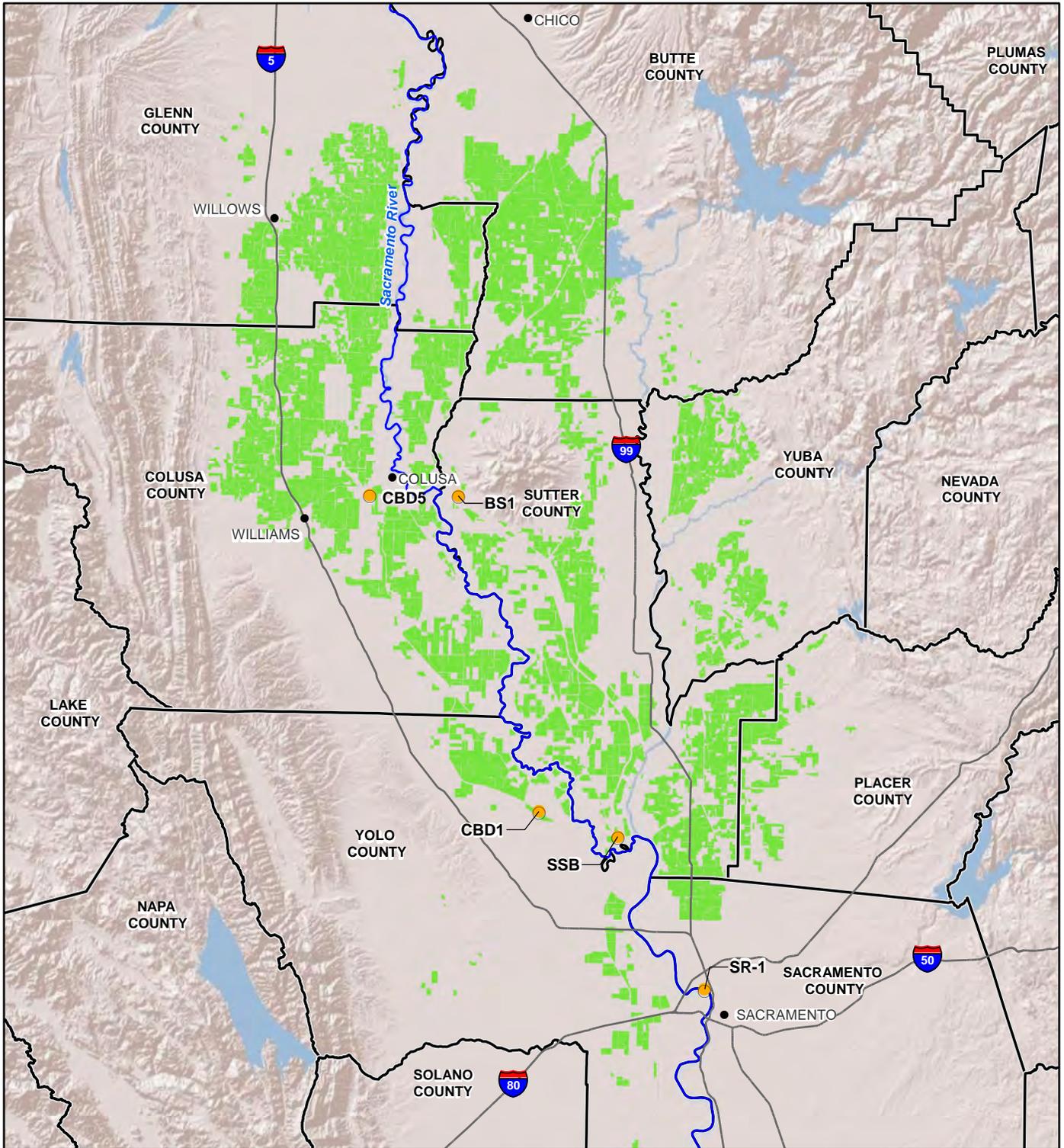
Rice Pesticides Program: 2015 Thiobencarb Performance Goal Exceedances

Site Code	Site Name	Latitude	Longitude	Site Type
CBD1	Colusa Basin Drain above Knights Landing	38.8125 N	-121.7731 W	Primary
CBD5	Colusa Basin Drain #5	39.1833 N	-122.0500 W	Primary
BS1	Butte Slough at Lower Pass Road	39.1875 N	-121.9000 W	Primary
SSB	Sacramento Slough Bridge near Karnak	38.7850 N	-121.6533 W	Primary
SR1	Sacramento River at Village Marina/ Crawdads Cantina	38.60359 N	-121.518 W	Primary – River Site
N	Willow Creek at Road 61 Glenn County	39.4579 N	-122.0860 W	2015 Special Monitoring
RD 68	Road 68 and Logan Creek Glenn County	39.2426 N	-122.1037 W	2015 Special Monitoring
Q	Glenn-Colusa Irrigation District at Two Mile Road Colusa County	39.2121 N	-122.0955 W	2015 Special Monitoring
P	Stone Corral Creek at Four Mile Road Colusa County	39.2934 N	-122.1156 W	2015 Special Monitoring
I	Colusa Basin Drain Maxwell Road Colusa County	39.2756 N	-122.0862 W	2015 Special Monitoring
K	Lurline Creek at Lurline Road Colusa County	39.2253 N	-122.1347W	2015 Special Monitoring
L	Freshwater Creek at San Jose Road Colusa County	39.1925 N	-122.1161 W	2015 Special Monitoring

Note:

Coordinates are North American Datum of 1983 (NAD83).

DWR = California Department of Water Resources



LEGEND

- CITY
- RPP MONITORING SITES
- COUNTY
- RICE LAND 2015 PERMIT AREA

NOTES:

DATUM: NAD 1983.
 SOURCES: BASEMAP (COPYRIGHT:© 2014 ESRI); RICE LANDS (CALAG PERMIT, 2015); COUNTY (CAL FIRE 2007) ; HYDROLOGY (NHD ACCESSED MARCH 2014).

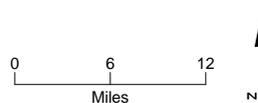
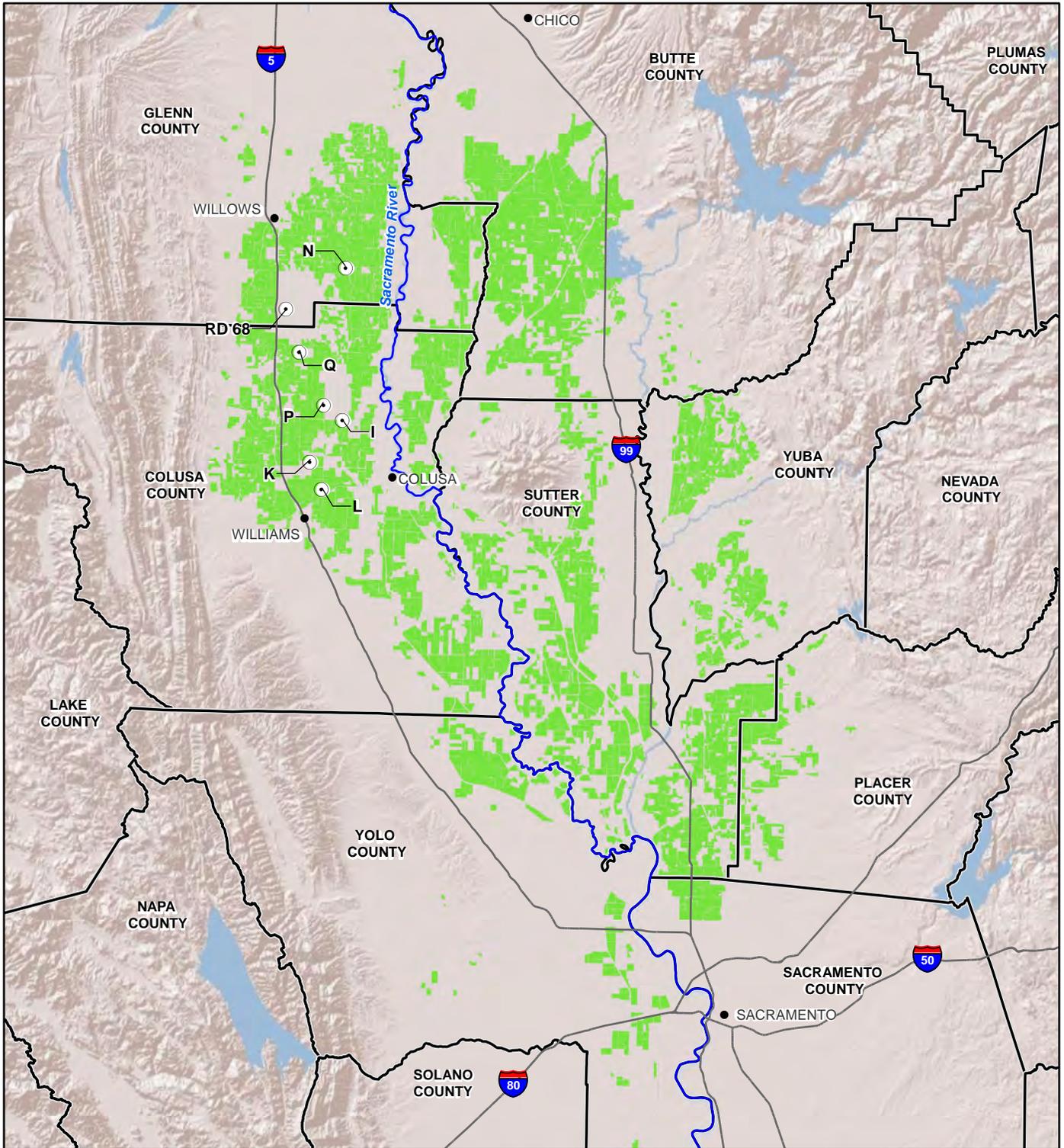


FIGURE I-1
RPP Monitoring Sites
 RPP Annual Monitoring Report
 California Rice Commission



NOTES:

DATUM: NAD 1983.

SOURCES: BASEMAP (COPYRIGHT:© 2014 ESRI); RICE LANDS (CALAG PERMIT, 2015); COUNTY (CAL FIRE 2007) ; HYDROLOGY (NHD ACCESSED MARCH 2014).

LEGEND

- CITY
- ⊙ SPECIAL MONITORING SITE
- ▭ COUNTY
- RICE LAND 2015 PERMIT AREA



FIGURE I-2
2015 Special Monitoring Sites
 RPP Annual Monitoring Report
 California Rice Commission

References

Bennett, K.P., Singhasemanon, N., Miller, N., Gallavan, R. February 1998. Rice Pesticides Monitoring in the Sacramento Valley, 1995. Department of Pesticide Regulation, Environmental Monitoring Branch.

California Regional Water Quality Control Board – Central Valley Region 2010. Resolution No. R5-2010-9001. Rice Pesticides Program – Control of Rice Pesticides. Adopted 24 February 2010.

CRC, October 2004. Basis for Water Quality Monitoring Program: Conditional Wavier of Waste Discharge Requirements for Discharges from Irrigated Lands for Rice (CWFR).

Cronacchia, John W., Cohen, David B., Bowes, Gerald W., Schnagle, Ridy J., Montoya, Berry L. 1984. Rice Herbicides Monilate (Ordram) and Thiobencarb (Bolero), Special Projects Report No. 84-4sp.

Department of Pesticide Regulation. Pesticide Use Report. 1990-2013.

Department of Pesticide Regulation, 2000. Thiobencarb Use in Colusa and Glenn Counties from 1994-2000.

Department of Water Resources. Division of Planning and Local Assistance. 2004. Northern District, Land and Water Use Section.

Division of Agricultural Sciences, University of California. *Pest Control and Water Management in Rice; Hold Your Water!* Leaflet 21298. April 1982.

Lou, Yuzhou. January 2010. Geographical Information System Mapping and Preliminary Data Analysis for Thiobencarb Use in California, 2003-2009. Department of Pesticide Regulation, Environmental Monitoring Branch.

Helliker, Paul E. February 2002. Response to Resolutions No. 5-01-074. Department of Pesticide Regulation Memorandum to Gary Carlton, Executive Officer, Central Valley Regional Water Quality Control Board.

Appendix J
2015 Field and Laboratory Results

Appendix J-1
Field Sheets and
Chain-of-Custody Forms



Project No. 20154800.001A Task 01		Project Name RPP- W1D1						Analysis		Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)		Samplers: (Signature/Number) <i>Mark Lee/1556</i>								Instructions/Remarks	
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix	No. of Containers	Type of Containers	Thiocyanate (EPA 507)					
1	4-28-15	0830	SR1-V-1-1	W	1	500mL Amber	X				
2		1230	CBD5-V-1-1	W	1	500mL Amber	X				
3		1425	CBD1-V-1-1	W	1	500mL Amber	X				
4	<i>Mark Lee</i>										
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
Relinquished By: <i>Mark Lee</i>		Date/Time 4-28-15 1615		Received By: <i>Sample Control #3</i>		Instructions/Remarks standard TAT		Send Results To: California Rice Commission			
Relinquished By: <i>Sample Control #3</i>		Date/Time 4-26-15 1800		Received By: <i>Feed Co.</i>							
Relinquished By:		Date/Time		Received By:							

Project No. 20154800.001A Task 01		Project Name RPP- W1D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928		
L.P. No. (PO No.)	Samplers: (Signature/Number)					Thiocyanate (EPA 507)												
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	4-29-15	1155	BS1-V-1-1	W	1	500mL Amber	X											
2	↓	1515	SSB-V-1-1	W	1	500mL Amber	X											
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished By: <i>Mark L</i>	Date/Time 4-29-15 18:00	Received By: <i>Fred G</i>	Instructions/Remarks Standard TAT	Send Results To: California Rice Commission
Relinquished By:	Date/Time	Received By:		
Relinquished By:	Date/Time	Received By:		

Project No. 20154800.001A Task 01		Project Name RPP- W1D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)	Samplers: (Signature/Number) <i>Mark Lee / 15tb</i>					Thiobencarb (EPA 507)												Instructions/Remarks
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	4-28-15	1230	CBD5-CL-1-1	W	1	1-L Amber	X										QC Sample	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Mark Lee</i>		Date/Time 4-28-15 1615	Received By: <i>Sample Control #3</i>		Instructions/Remarks standard TAT										Send Results To: criddle@kleinfelder.com sgardner@kleinfelder.com			
Relinquished By: <i>Sample Control #3</i>		Date/Time 0857 4/29/15 0830	Received By: <i>[Signature]</i>															
Relinquished By: <i>[Signature]</i>		Date/Time 4/30/15 0857	Received By: <i>[Signature]</i>															

4-30-15 857
(13)

Project No. 20154800.001A Task 01		Project Name RPP- W2D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1556			Date MM/DD/YY			Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix	Thiobencarb (EPA 507)								
1	05/05/15	0825	SR1-V-2-1		W	1												
2	05/05/15	0940	SSB-V-2-1	W	1	500mL Amber		X										
3	05/05/15	1110	BS1-V-2-1	W	1	500mL Amber		X										
4	05/05/15	1225	CBD5-V-2-1	W	1	500mL Amber		X										
5	05/05/15	1350	CBD1-V-2-1	W	1	500mL Amber		X										
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Mark Lee</i>		Date/Time 5-5-15 1700		Received By: <i>Fed Ex</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission		
Relinquished By:		Date/Time		Received By:														
Relinquished By:		Date/Time		Received By:														



Project No. 20154800.001A Task 01		Project Name RPP- W2D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1566					Thiobencarb (EPA 507)												
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	05/05/15	1225	CBD5-CL-2-1	W	1	1-L Amber	X											QC Sample
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By:		Date/Time	Received By:		Instructions/Remarks Standard TAT										Send Results To:			
Relinquished By:		Date/Time	Received By:												criddle@kleinfelder.com sgardner@kleinfelder.com			
Relinquished By:		Date/Time	Received By:		Am Sue Gardner													

Handwritten signature and notes:
 5/5/15 1645 (1.3)
 5/5/15 1644 (1.3)

Project No. 20154800.001A Task 01		Project Name RPP- W3D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)	Samplers: (Signature/Number) <i>Mark Lee #1556</i>						Thiobencarb (EPA 507)											
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	05/12/15	0830	SR1-V-3-1	W	1	500mL Amber	X											
2	05/12/15	1140	CBD5-V-3-1	W	1	500mL Amber	X											
3	05/12/15	1345	CBD1-V-3-1	W	1	500mL Amber	X											
4	05/12/15	1600	CRC1-V-3-1	W	1	500mL Amber	X											
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished By: <i>Mark Lee</i>	Date/Time 5-12-15 1740	Received By: <i>Sample Control</i>	Instructions/Remarks Standard TAT	Send Results To: California Rice Commission
Relinquished By: <i>Sample Control</i>	Date/Time 5-13-15 1900	Received By: <i>Fed Ex</i>		
Relinquished By:	Date/Time	Received By:		



Project No. 20154800.001A Task 01		Project Name RPP- W3D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)	Samplers: (Signature/Number) <i>Mark Lee / 1516</i>					Thiocyanate (EPA 507)											
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix														
1	05/13/15	1500	SSB-V-3-1	W	1	500mL Amber	X										
2	05/13/15	1135	BS1-V-3-1	W	1	500mL Amber	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
Relinquished By: <i>Mark Lee</i>		Date/Time 5-13-15 1900		Received By: <i>Feed Ex</i>		Instructions/Remarks										Send Results To: California Rice Commission	
Relinquished By:		Date/Time		Received By:													
Relinquished By:		Date/Time		Received By:													



Project No. 20154800.001A Task 01		Project Name RPP- W3D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301	
L.P. No. (PO No.)		Samplers: (Signature/Number) <i>Mark-Lee / 1556</i>					Thiocyanate (EPA 507)											Instructions/Remarks: Please provide MDL report
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	05/12/15	1600	CRC1-CL-3-1	W	1	1-L Amber	X											
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Mark Lee</i>		Date/Time 5-12-15 1700	Received By: <i>Sample Control</i>		Instructions/Remarks Standard TAT										Send Results To: criddle@kleinfelder.com sgardner@kleinfelder.com Attn: Sue Gardner, PM 3077 Fite Circle Sacramento CA 95827			
Relinquished By:		Date/Time	Received By:															
Relinquished By: <i>Mark Lee</i>		Date/Time 5-14-15 1020	Received By: <i>[Signature]</i>															

5-14-15 1020
(5.4)

Project No. 20154800.001A Task 01		Project Name RPP- W4D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928		
L.P. No. (PO No.)	Samplers: (Signature/Number) S. Echaverria M. Lee			Date MM/DD/YY			Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix	Thiobencarb (EPA 507)									
1	05/19/15	0910	SR1-V-4-1	W	1	500mL Amber		X											
2	05/19/15	1245	CBD5-V-4-1	W	1	500mL Amber		X											
3	05/19/15	1415	CBD1-V-4-1	W	1	500mL Amber		X											
4	05/19/15	1020	SSB-V-4-1	W	1	500mL Amber		X											
5	05/19/15	1140	BS1-V-4-1	W	1	500mL Amber		X											
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
Relinquished By: <i>Mark Lee</i>		Date/Time 5-19-15 1600		Received By: <i>Sample Control</i>			Instructions/Remarks Standard TAT										Send Results To: California Rice Commission		
Relinquished By: <i>Sample Control</i>		Date/Time 5-21-15 1700		Received By: <i>Red Ex</i>															
Relinquished By:		Date/Time		Received By:															



Project No. 20154800.001A Task 01		Project Name RPP- W4D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301	
L.P. No. (PO No.)	Samplers: (Signature/Number) <i>Sean Echeverria / Mark Lee</i>					Thiobencarb (EPA 507)											Instructions/Remarks: Please provide MDL report
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix														
1	05/19/15	1140	BS1-CL-4-1	W	1	1-L Amber	X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	See instructions TAT. For Thiobencarb.
9																	
10																	
11																	
12																	
13																	
14																	
15																	
Relinquished By: <i>Mark Lee</i>		Date/Time 5-19-15 1600		Received By: <i>Sample Control</i>		Instructions/Remarks Thiobencarb results must be reported within 7- calendar days										Send Results To: criddle@kleinfelder.com sgardner@kleinfelder.com Attn: Sue Gardner, PM 3077 Fite Circle Sacramento CA 95827	
Relinquished By: <i>Sample Control</i>		Date/Time 5/20/15 1405		Received By: <i>[Signature]</i>													
Relinquished By:		Date/Time		Received By:													

4.4^o

Rice Pesticides Program - Field Data Sheet - Water Sample Collection

Coalition Name: CRC		Date: 5/21/2015
Station ID & Name : CBD1		FIRST SAMPLE TIME: 1335
Project ID: 20154800.001A-01	Arrival Time: 1315	Departure Time: 1405
Sampling Crew (and Agency): Mark Lee, Sean Echeverria, (Kleinfelder)		Target Lat. & Long.:
		Actual Lat & Long:
		Datum:
		Accuracy (ft / m):

OBSERVATIONS		WADEABLE:	PICTURE NAME/S:
DOMINANT SUBSTRATE: Concrete, Cobble, Gravel, Sand, Mud, <u>Unk</u> , Other		YES <u>(NO)</u>	
SITE ODOR: <u>None</u> , Sulfides, Sewage, Petroleum, Mixed, Other			SKY CODE: clear, <u>partly cloudy</u> , overcast, fog, hazy
OTHER PRESENCE: <u>Vascular</u> , Nonvascular, Oily Sheen, Foam, Trash, None, Other			PRECIPITATION: <u>None</u> , Foggy, Drizzle, Rain, Snow
WATER ODOR: <u>None</u> , Sulfides, Sewage, Petroleum, Mixed, Other			PRECIPITATION (last 24 hrs): Unknown, <1", >1", <u>None</u>
WATER CLARITY: Clear (see bottom), Cloudy (>4" vis), <u>Murky</u> (<4" vis)			WATERCOLOR: colorless, green, yellow, <u>brown</u> , other
OBSERVED FLOW: NA, Dry Waterbody Bed, No Observed Flow, Isolated Pool, <u>0.1 - 1 cfs</u> , 1 - 5 cfs, 5 - 20 cfs, 20 - 50 cfs, 50 - 200 cfs, >200cfs			

Comments: Thickness: 10' Sample Depth: 5'

PHYSICAL PARAMETERS	SAC	SR	SAMPLE COLLECTION
Water Temp (Celsius):	<u>21.73</u>	<u>22.57</u>	Sample Depth (circle one): 0.1 m (<u>subsurface grab</u>) -88 (integrated)
Air Temp (°F):		<u>80°</u>	STARTING BANK: LB / RB / NA
*pH>8.5 or <6.5 pH:	<u>7.85</u>	<u>8.47</u>	OCCUPATION METHOD: Walk-in, <u>Bridge</u> , Other
*DO<7.0 DO (mg/L):	<u>6.03</u>	<u>12.15</u>	SAMPLING EQUIPMENT: Indiv bottle by hand, By pole, Other <u>Kemmerer</u>
			SAMPLE LOCATION: Bank, Near Bank, Thalweg, <u>Midchannel</u> , Open Water
			HYDRO-MODIFICATION: None, Bridge, Pipes, Concrete Channel, Grade Control, Culvert, Other
			HYDROMODLOC: US / DS / NA

CALCULATED SITE DISCHARGE (cfs):		Wet Channel Width (m):	Wet Channel Width (m):
Transfer Calculated Value From Discharge Worksheet		Midchannel depth (m):	Stage:

Sample ID	Analyte	Container	Number	Notes
See Attached Sample Plan				
				<u>Slight oily sheen on surface</u>
				<u>No site odor.</u>
				<u>*DO will not stabilize. Moved meter/probes to opposite side of bridge - no change in meter/probe performance</u>

**KLEINFELDER
INSTRUMENT CALIBRATION LOG**

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 5/21/2015

Project No.: 20154800.001A-01

Job Name: RPP

Calibration
Start Time: 0640

pH Meter: YSI-SAC								EC Meter: YSI-SAC	
Reading (Initial)	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
								Reading (initial)	1413
Reading (initial)	0653	18	18.59	6.97	1.5	10.13	-179.3	Reading (initial)	1414
Calibration (initial)	0730	18	18.49	7.00	1.6	10.00	-179.3	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1526		26.40	7.03	-0.5	9.94	-180.2	Reading (end of day)	1402

Comments:

Installed new membrane to D.O. probe

Turbidity Meter (make/number): _____					D.O. Meter: YSI-SAC		
_____ NTU	_____ NTU	_____ NTU	Battery Check		Barometric Pressure: <u>755.5</u> mmHg		
Reading (Initial)						mg/L	%
Calibration					Reading (Initial):	10.46	106.8
					Reading (adj.):	9.77	99.7
					Intermediate Reading (initial):		
					Intermediate Reading (adj.):		

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 5/21/2015

Project No.: 20154800.001A-01

Job Name: RPP

Calibration

Start Time: 0640

pH Meter: YSI-SR								EC Meter: YSI-SR	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
Reading (initial)	0653	18	18.26	6.99	0.8	10.13	-180.4	Reading (initial)	1422
Calibration (initial)	0730	18	18.77	7.00	0.9	10.00	-180.4	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1526		26.55	7.04	-0.6	9.95	-181.9 -181.5	Reading (end of day)	1395

Comments:

Installed new membrane to D.O. probe.

Turbidity Meter (make/number): _____					D.O. Meter: YSI-SR			
	NTU	NTU	NTU	Battery Check	Barometric Pressure: <u>750.5</u> mmHg		mg/L	%
Reading (Initial)								
Calibration						Reading (initial):	<u>10.58</u>	<u>103.5</u>
						Reading (adj.):	<u>10.12</u>	<u>99.4</u>
						Intermediate Reading (initial):		
						Intermediate Reading (adj.):		



Project No. 20154800.001A Task 01		Project Name RPP- W5D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301				
L.P. No. (PO No.)	Samplers: (Signature/Number) S. Echeverria M. Lee					Thiobencarb (EPA 507)														Instructions/Remarks: Please provide MDL report
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																	
1	05/26/15	0855	SR1-CL-5-1	W	1		1-L Amber	X												
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
Relinquished By: <i>Mark L</i>		Date/Time 5/26/15 1600		Received By: <i>Sample Control</i>		Instructions/Remarks Please provide results within 7-calendar days. Thank you										Send Results To: criddle@kleinfelder.com sgardner@kleinfelder.com Attn: Sue Gardner, PM 3077 Fite Circle Sacramento CA 95827				
Relinquished By: <i>Sample Control</i>		Date/Time 5/27/15 1530		Received By: <i>Mark L</i>																
Relinquished By: <i>Mark L</i>		Date/Time 5/27/15 1625		Received By: <i>[Signature]</i> 5/27/15 1625																

2-7



Project No. 20154800.001A Task 01		Project Name RPP- W5D2			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928					
L.P. No. (PO No.)	Samplers: (Signature/Number) C. Riddle M. Lee						Thiobencarb (EPA 507)															
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																			
1	05/28/15	1825	SR1-V-5-2	W	1	500mL Amber	X															
2	05/28/15	0945	SSB-V-5-2	W	1	500mL Amber	X															
3	05/28/15	1055	BS1-V-5-2	W	1	500mL Amber	X															
4	05/28/15	1140	CBD5-V-5-2	W	1	500mL Amber	X															
5	05/28/15	1255	CBD1-V-5-2	W	1	500mL Amber	X															
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
Relinquished By: <i>Much...</i>		Date/Time: 5/28/15 11:00	Received By: <i>Red Ex</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission							
Relinquished By:		Date/Time:	Received By:																			
Relinquished By:		Date/Time:	Received By:																			

**KLEINFELDER
INSTRUMENT CALIBRATION LOG**

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 5/28/2015

Project No.: 20154800.001A-01

Job Name: RPP 2015

Calibration
Start Time: 0645

pH Meter: YSI-SAC								EC Meter: YSI-SAC	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
Reading (initial)	0710	20.0	20.38	7.04	-2.5	10.10	-182.9	Reading (initial)	1404
Calibration (initial)	0740		20.5	7.00	-2.5	10.00	-182.9	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1435		25.61	7.02	-2.9	9.95	-182.7	Reading (end of day)	1408

Comments:

Turbidity Meter (make/number): _____

___ NTU

___ NTU

___ NTU

Battery Check

D.O. Meter: YSI-SAC

Barometric Pressure: 757.9 mmHg

Reading (Initial)

Calibration

mg/L

%

Reading (initial): 9.57 97.9

Reading (adj.): 9.76 99.8

Intermediate Reading (initial):

Intermediate Reading (adj.):



Project No. 20154800.001A Task 01		Project Name RPP- W6D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301	
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556														Instructions/Remarks: Please provide MDL report	
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix			Thiobacarb (EPA 507)											
1	06/02/15	1225	CBD1-CL-2-1	W	1	1-L Amber	X										QC Sample
2	<i>Mark Lee</i>																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
Relinquished By: _____																	
Relinquished By: _____		Date/Time	Received By: _____														
Relinquished By: <i>Mark Lee</i>		Date/Time 6/2/15 1700	Received By: <i>[Signature]</i>														

[Signature] 6/2/15 1700 2-3

Project No. 20154800.001A Task 01		Project Name RPP- W6D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928		
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1556			Date MM/DD/YY			Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix	Thiobencarb (EPA 507)									
1	06/02/15	0805	SR1-V-6-1	W	1	500mL Amber	X												
2	06/02/15	0905	SSB-V-6-1	W	1	500mL Amber	X												
3	06/02/15	1020	BS1-V-6-1	W	1	500mL Amber	X												
4	06/02/15	1115	CBD5-V-6-1	W	1	500mL Amber	X												
5	06/02/15	1225	CBD1-V-6-1	W	1	500mL Amber	X												
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
Relinquished By: <i>Mark Lee</i>		Date/Time: 6/2/15 1950		Received By: <i>Sample Control</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission			
Relinquished By: <i>Sample Control SE</i>		Date/Time: 6/4/15 1630		Received By: <i>Fed Ex</i>															
Relinquished By:		Date/Time:		Received By:															

Project No. 20154800.001A Task 01		Project Name RPP- W6D2		No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1556					Thiobencarb (EPA 507)											
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix														
1	06/04/15	0845	SR1-V-6-2	W	1	500mL Amber	X										
2	06/04/15	0935	SSB-V-6-2	W	1	500mL Amber	X										
3	06/04/15	1045	BS1-V-6-2	W	1	500mL Amber	X										
4	06/04/15	1140	CBD5-V-6-2	W	1	500mL Amber	X										
5	06/04/15	1255	CBD1-V-6-2	W	1	500mL Amber	X										
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

Mark Lee

Relinquished By: <i>Mark Lee</i>	Date/Time 6-4-15 / 1630	Received By: <i>Fed Ex</i>	Instructions/Remarks Standard TAT	Send Results To: California Rice Commission
Relinquished By:	Date/Time	Received By:		
Relinquished By:	Date/Time	Received By:		

**KLEINFELDER
INSTRUMENT CALIBRATION LOG**

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 6/10/2015

Project No.: 20154800.001A-01

Job Name: RPP 2015

Calibration
Start Time: _____

pH Meter: YSI-SR								EC Meter: YSI-SR	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)		1413 umho
Reading (initial)	0705	24	24.27 24.90	7.17	-10.0	9.77	-173.8	Reading (initial)	1406
Calibration (initial)	0742	24	25.07	7.00	-9.6	10.00	-174.6	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1837		25.05	6.99	-9.1	9.94	-171.6	Reading (end of day)	1414

Comments:

Turbidity Meter (make/number): _____					D.O. Meter: YSI-SR				
	NTU	NTU	NTU	Battery Check	Barometric Pressure: <u>756.8</u> mmHg				
Reading (Initial)							mg/L	%	
Calibration							Reading (initial):	8.10	91.5
							Reading (adj.):	8.82	99.6
							Intermediate Reading (initial):		
							Intermediate Reading (adj.):		



Project No. 20154800.001A Task 01		Project Name RPP- W7D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301	
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1555					Thiobencarb (EPA 507)											Instructions/Remarks: Please provide MDL report
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix														48 hr. TAT
1	06/09/15		CRC1-CL-7-1	W	1	1 Liter Amber	X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
Relinquished By: <i>Mark Lee</i>		Date/Time 6-9-15 1930		Received By: <i>Sample Control</i>		Instructions/Remarks Please provide results within 7 calendar days. Thank you										Send Results To: Kleinfelder 3077 Fite Circle, Sacramento, CA 95827 criddle@kleinfelder.com sgardner@kleinfelder.com	
Relinquished By: <i>Sample Control</i>		Date/Time 6-12-15 1130		Received By: <i>Mark Lee</i>													
Relinquished By: <i>Mark Lee</i>		Date/Time 6-12-15 1215		Received By: <i>[Signature]</i>													

2.30

Project No. 20154800.001A Task 01		Project Name RPP- W7D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)	Samplers: (Signature/Number) Mark Lee / 1556			Date MM/DD/YY			Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix	Thiobencarb (EPA 507)								
1	06/09/15	0855	SR1-V-7-1	W	1	500mL Amber		X										
2	06/09/15	1250	CBD5-V-7-1	W	1	500mL Amber		X										
3	06/09/15	1645	CBD1-V-7-1	W	1	500mL Amber		X										
4	06/09/15	0700	CRC1-V-7-1	W	1	500mL Amber		X										
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Dean Williams</i>		Date/Time: 6-9-15 1900		Received By: <i>Sample Control</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission		
Relinquished By: <i>Sample Control</i>		Date/Time: 6-11-15 1430		Received By: <i>Dean Williams</i>														
Relinquished By: <i>Dean Williams</i>		Date/Time: 6-11-15 1445		Received By:														

No. 20154800.001A Task 01		Project Name RPP-W7D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925)948-2928	
L.P. No. (PO No.)		Sampiers: (Signature/Number) Mark Lee / 1556					Thiocarb (EPA 507)											
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	06/10/15	1225	BS1-V-7-1	W	1	500mL Amber	X											
2	06/10/15	1610	SSB-V-7-1	W	1	500mL Amber	X											
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished By: <i>Mark Lee</i>	Date/Time 6-10-15 1840	Received By: <i>Sample Control</i>	Instructions/Remarks Standard TAT	Send Results To: California Rice Commission
Relinquished By: <i>Sample Control</i>	Date/Time 6-11-15 1430	Received By: <i>Sean Williams</i>		
Relinquished By: <i>Sean Williams</i>	Date/Time 6-11-15 1445	Received By:		



Project No. 20154800.001A Task 01		Project Name RPP- W8D1			Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928			
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556			No. of Containers	Type of Containers	Thiobencarb (EPA 507)											Instructions/Remarks
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	06/16/15	0805	SR1-V-8-1	W	1	500mL Amber	X											
2	06/16/15	0920	SSB-V-8-1	W	1	500mL Amber	X											
3	06/16/15	1040	BS1-V-8-1	W	1	500mL Amber	X											
4	06/16/15	1135	CBD5-V-8-1	W	1	500mL Amber	X											
5	06/16/15	1245	CBD1-V-8-1	W	1	500mL Amber	X											
6	<i>Mark Lee</i>																	
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By:		Date/Time	Received By:		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission			
Relinquished By: <i>Mark Lee</i>		6-16-15 Date/Time 1530	Received By: <i>Fed Ex</i>															
Relinquished By:		Date/Time	Received By:															

Rice Pesticides Program - Field Data Sheet - Water Sample Collection

Coalition Name: CRC			Date: 6/24/2015		
StationID & Name : CRC1			FIRST SAMPLE TIME: 0730		
Project ID: 20154800.001A-01	Arrival Time:	Departure Time:	Target Lat. & Long.:		
Sampling Crew (and Agency): Mark Lee, Sean Echeverria, (Kleinfelder)			Actual Lat & Long:		
			Datum:	Accuracy (ft / m):	

OBSERVATIONS		WADEABLE:	PICTURE NAME/S:
DOMINANT SUBSTRATE: Concrete, Cobble, Gravel, Sand, Mud, Unk., Other		YES / NO	
SITE ODOR: None, Sulfides, Sewage, Petroleum, Mixed, Other			SKY CODE: clear, partly cloudy, overcast, fog, hazy
OTHER PRESENCE: Vascular, Nonvascular, Oily Sheen, Foam, Trash, None, Other			PRECIPITATION: None, Foggy, Drizzle, Rain, Snow
WATER ODOR: None, Sulfides, Sewage, Petroleum, Mixed, Other			PRECIPITATION (last 24 hrs): Unknown, <1", >1", None
WATER CLARITY: Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis)			WATERCOLOR: colorless, green, yellow, brown, other
OBSERVED FLOW: NA, Dry Waterbody Bed, No Observed Flow, Isolated Pool, 0.1 - 1cfs, 1 - 5 cfs, 5 - 20 cfs, 20 - 50 cfs, 50 - 200 cfs, >200cfs			

Comments: _____ Thickness: _____ Sample Depth: _____

PHYSICAL PARAMETERS	SAC	SR	SAMPLE COLLECTION	Sample Depth (circle one): 0.1 m (subsurface grab) -88 (integrated)
Water Temp (Celsius):			STARTING BANK: LB / RB/ NA	
Air Temp (°F):			OCCUPATION METHOD: Walk-in, Bridge, Other	
*pH>8.5 or <6.5 pH:			SAMPLING EQUIPMENT: Indiv bottle by hand, By pole, Other	
*DO<7.0 DO (mg/L):			SAMPLE LOCATION: Bank, Near Bank, Thalweg, Midchannel, Open Water	
			HYDRO-MODIFICATION: None, Bridge, Pipes, Concrete Channel, Grade Control, Culvert, Other	
			HYDROMODLOC: US / DS / NA	

CALCULATED SITE DISCHARGE (cfs):		Wet Channel Width (m):		Wet Channel Width (m):	
Transfer Calculated Value From Discharge Worksheet		Midchannel depth (m):		Stage:	
Sample ID	Analyte	Container	Number	Notes	
See Attached Sample Plan					
				Blind Spike Samples: Valent and CLS Labs	

**KLEINFELDER
INSTRUMENT CALIBRATION LOG**

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 6/24/2015

Project No.: 20154800.001A-01/02

Job Name: RPP/Rice WDR 2015

Calibration
Start Time: 1638

pH Meter: YSI-SAC								EC Meter: YSI-SAC	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
Reading (initial)	0645	22.5	23.29	7.05	-2.6	10.09	-183.4	Reading (initial)	1408
Calibration (initial)	0715	22	22.46	7.00	-2.6	10.00	-183.3	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1614		33.17	7.04	-5.4	9.95	*-186.7	Reading (end of day)	1419

Comments:

1.00 NTU calibration error message
10.00 NTU calibration OK.

Turbidity Meter (make/number): <u>La Motac 2020 1/e</u>				D.O. Meter: YSI-SAC				
	0 NTU	1.0 NTU	10.0 NTU	Battery Check	Barometric Pressure: <u>753.5</u> mmHg			
Reading (Initial)		0.67	9.49	new			mg/L	%
Calibration		1.00 *	10.00			Reading (initial):	8.65	92.9
						Reading (adj.):	9.25	99.4
		*Err message				Intermediate Reading (initial):		
						Intermediate Reading (adj.):		

Project No. 20154800.001A Task 01		Project Name RPP- W9D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928	
L.P. No. (PO No.)		Samplers: (Signature/Number) Sean Echeverria Mark Lee					Thiobencarb (EPA 607)											Instructions/Remarks
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	06/23/15	0900	SR1-V-9-1	W	1	500mL Amber	X											
2	06/23/15	1150	CBD5-V-9-1	W	1	500mL Amber	X											
3	06/23/15	1340	CBD1-V-9-1	W	1	500mL Amber	X											
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Mark Lee</i>		Date/Time 6/23/15 1540		Received By: <i>Sample Control #2</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission		
Relinquished By: <i>Sample Control #2 SE</i>		Date/Time 6/23/15 1445		Received By: <i>Paul FX</i>														
Relinquished By:		Date/Time		Received By:														

Project No. 20154800.001A Task 01		Project Name RPP- W9D1			No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928						
L.P. No. (PO No.)	Samplers: (Signature/Number)						Thiobencarb (EPA 507)																
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																				
1	06/24/15	0730	CRC1-V-9-1	W	1	500mL Amber	X																
2	06/24/15	1120	BS1-V-9-1	W	1	500mL Amber	X																
3	06/24/15	1415	SSB-V-9-1	W	1	500mL Amber	X																
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							
Relinquished By: <i>Mack R</i>		Date/Time: <i>6/24/15 1630</i>		Received By: <i>Samuel Patal #12</i>		Instructions/Remarks										Send Results To: California Rice Commission							
Relinquished By: <i>Sample Control #258</i>		Date/Time: <i>6/25/15 1445</i>		Received By: <i>Fred FX</i>																			
Relinquished By:		Date/Time:		Received By:																			



Project No. 20154800.001A Task 01		Project Name RPP- W9D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)	Samplers: (Signature/Number) Sean Echeverria Mark Lee					Thiobencarb (EPA 507)												
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	06/24/15	0730	CRC1-CL-9-1	W	1	1-L Amber	X											
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Relinquished By: <i>Mark Lee</i>		Date/Time 6-24-15 1630		Received By: <i>Sample Control #2</i>		Instructions/Remarks Please provide results within 7 calendar days										Send Results To: Kleinfelder 3077 Fite Circle Sacramento, CA 95827 Attn: sgardner@kleinfelder.com criddle@kleinfelder.com		
Relinquished By: <i>Sample Control #2</i>		Date/Time 6/25/15 0828		Received By: <i>Justin Sully</i>														
Relinquished By:		Date/Time		Received By: 08:28														

(1.0)



Environmental
Field Daily Report

Report #: _____
Page 1 of 1

Project Name : RICE RPP	Date : 4/30/15	Time Arrived :
Project Manager : S. Gardner	Site Location : Various site	Time Departed :
Project / Task # : 20154900	Personnel : Sergio L. Sean E.	Mileage :
		Mileage :

Weather Conditions : Sunny	Wind from :	at	mph	Temperature :	°F
Subcontractor : (Name/Firm)	Time Arrived :	Time Departed :	Time Arrived :	Time Departed :	
Site Visitors :	Time Arrived :	Time Departed :	Time Arrived :	Time Departed :	
Equipment :	Sample bottles, ysi meters, horizontal sampler, bucket, funnel, DI water, traffic cone & sign, tools, labels + bubble wrap, PPE, field folder, etc...				

Primary Assignments : Collect water samples for RICE Comm.

Field Notes : Duro make, field forms, & calibrate ysi meter. 0740 Depart + job sites. Buy ice for samples. 0814 to 1300 Collected field parameters and water samples. 1300 leave site back to PLF. 1355 End of day making for ysi meters. Packaged samples w/ ice for shipping. Backup samples are stored in sample control #2.

Attachments :	Leadbok ?	Y	N	Book # :	Pages :	Proj. Task Form ?	Y	N
Chain of Custody?	<input checked="" type="checkbox"/>	N		COC#s	100273	Site Safety Plan ?	Y	N
Field Data Sheets?	<input checked="" type="checkbox"/>	N		Total FDSs:		Sample Control Log ?	Y	N
Utility Clearance	Ticket #:			Marks Observed?	Y	N	Comments :	
Other attachments:								

KLEINFELDER
INSTRUMENT CALIBRATION LOG

Sampler Name/No.: Seng Lo/Sean Echeverria

Date: 6/30/2015

Project No.: 20154800.001A-01

Job Name: RPP 2015

Calibration
Start Time: 0621

pH Meter: YSI-SAC								EC Meter: YSI-SAC	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
Reading (initial)	0630	25	25.77	7.13	-7.6	9.98	-183.9	Reading (initial)	1406
Calibration (initial)	0646	25	25.34	7.00	-7.5	183.9 9.00	-183.9	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1355		32.02	7.00	-7.6	9.98	-186.3	Reading (end of day)	1411

Comments:

Turbidity Meter (make/number): <u>N/A</u>					D.O. Meter: YSI-SAC			
___ NTU	___ NTU	___ NTU	Battery Check		Barometric Pressure: <u>755.5</u> mmHg			
Reading (Initial)							mg/L	%
Calibration						Reading (initial):	<u>7.17</u>	<u>85.6</u>
						Reading (adj.):	<u>8.33</u>	<u>99.3</u>
						Intermediate Reading (initial):		
						Intermediate Reading (adj.):		

KLEINFELDER
INSTRUMENT CALIBRATION LOG

Sampler Name/No.: Seng Lo/Sean Echeverria

Date: 6/30/2015

Project No.: 20154800.001A-01

Job Name: RPP 2015

Calibration
Start Time: 0621

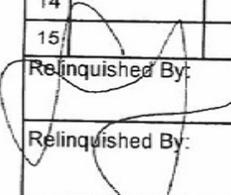
pH Meter: YSI-SR								EC Meter: YSI-SR	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)	1413 umho	
Reading (initial)	0630	25	25.89	7.19	-11.0	9.82	-178.0	Reading (initial)	1412
Calibration (initial)	0646	25	25.41	7.00	-10.8	10.00	-178.0	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1355		32.38	7.00	-11.0	10.07	-182.7	Reading (end of day)	1417

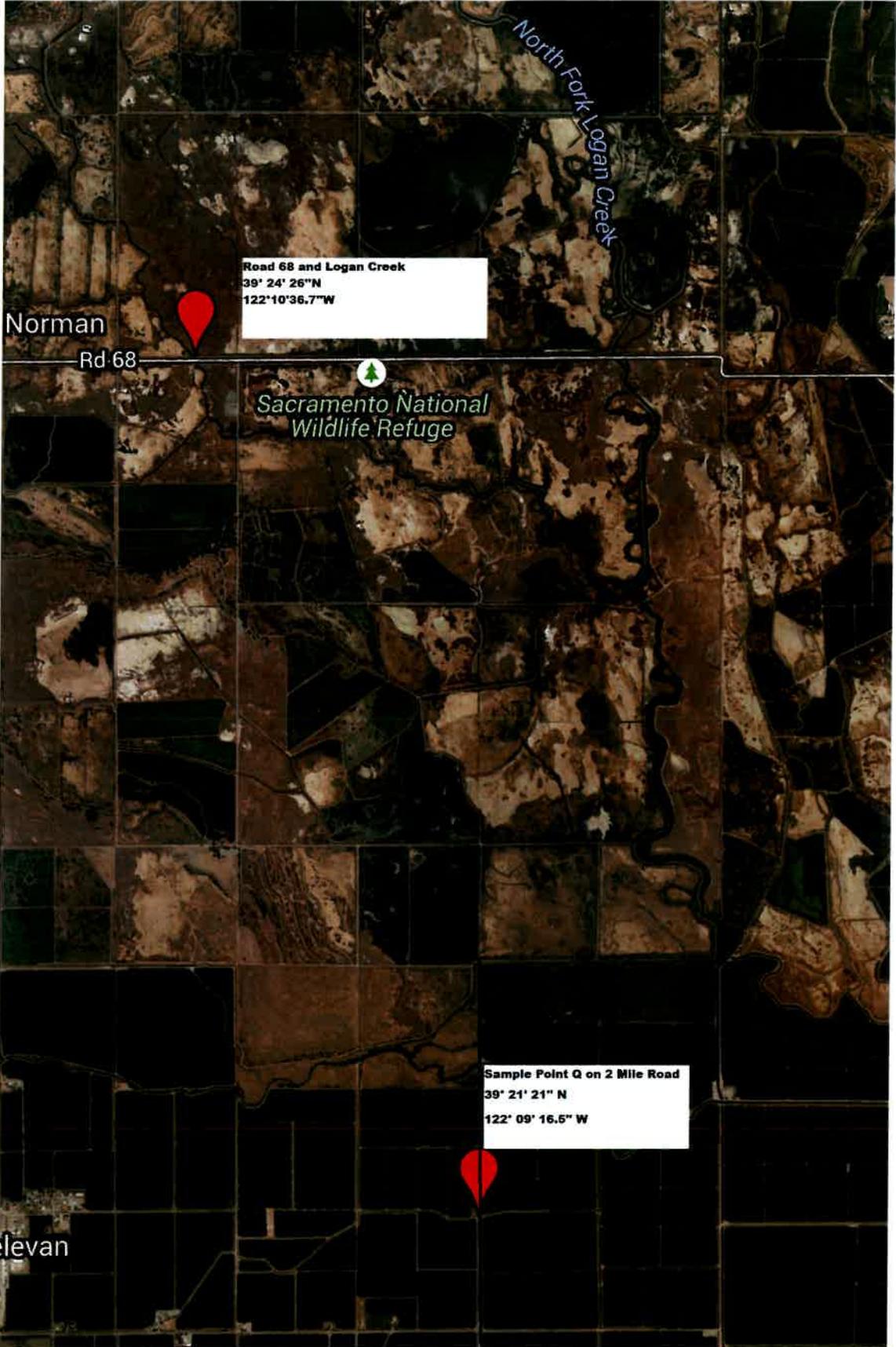
Comments:

Turbidity Meter (make/number): <u>N/A</u>					D.O. Meter: YSI-SR			
	___ NTU	___ NTU	___ NTU	Battery Check	Barometric Pressure: <u>754.6</u> mmHg			
Reading (Initial)							mg/L	%
Calibration							Reading (initial):	7.26 86.9
							Reading (adj.):	8.28 99.3
							Intermediate Reading (initial):	
							Intermediate Reading (adj.):	



Project No. 20154800.001A		Project Name RPP- W10D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: Valent 6560 Trinity Ct., Dublin, CA 94568 Attn: Charles Green (925) 948-2928				
Task 01		L.P. No. (PO No.)				Samplers: (Signature/Number) Sean Echeverria Seng Lo												Instructions/Remarks		
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix			Thiobencarb (EPA 507)														
1	06/30/15	08210	SR1-V-10-1	W	1	500mL Amber	X													
2	06/30/15	0934	SSB-V-10-1	W	1	500mL Amber	X													
3	06/30/15	1040	BS1-V-10-1	W	1	500mL Amber	X													
4	06/30/15	1137	CBD5-V-10-1	W	1	500mL Amber	X													
5	06/30/15	1240	CBD1-V-10-1	W	1	500mL Amber	X													
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
Relinquished By: <i>Sean</i>		Date/Time 6/30/15 1430		Received By: <i>Fed. Ex</i>		Instructions/Remarks Standard TAT										Send Results To: California Rice Commission				
Relinquished By:		Date/Time		Received By:																
Relinquished By:		Date/Time		Received By:																

Project No. 20154800.001A Task 01		Project Name RPP- W10D1			No. of Containers	Type of Containers	KLF Sample Control													
L.P. No. (PO No.)	Samplers: (Signature/Number) Sean Echeverria Seng Lo																			
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix			HOLD														
1	06/30/15	0820	SR1-B-10-1	W	1	1L Amber	X													
2	06/30/15	0934	SSB-B-10-1	W	1	1L Amber	X													
3	06/30/15	1040	BS1-B-10-1	W	1	1L Amber	X													
4	06/30/15	1137	CBD5-B-10-1	W	1	1L Amber	X													
5	06/30/15	1240	CBD1-B-10-1	W	1	1L Amber	X													
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
Relinquished By: 		Date/Time 6/30/15 1445		Received By: Sample Control # 2		Instructions/Remarks HOLD in Sample Control										Send Results To:				
Relinquished By:		Date/Time		Received By:																
Relinquished By:		Date/Time		Received By:																



Road 68 and Logan Creek
39° 24' 26" N
122° 10' 36.7" W

Norman

Rd 68



Sacramento National
Wildlife Refuge

Sample Point Q on 2 Mile Road
39° 21' 21" N
122° 09' 16.5" W

Elevan

KLEINFELDER
INSTRUMENT CALIBRATION LOG

Sampler Name/No.: Mark Lee/Sean Echeverria

Date: 6/17/2015

Project No.: 20154800.001A-01

Job Name: RPP 2015

Calibration
Start Time: 0630

pH Meter: YSI-SAC								EC Meter: YSI-SAC	
	Time	Temp. via Thermometer	Temp. via YSI Meter	pH7	mVpH (pH 7)	pH10	mVpH (pH10)		1413 umho
Reading (initial)	0645	22	21.79	7.06	-3.7	9.76	-165.1	Reading (initial)	1415
Calibration (initial)	0730	21	21.56	7.00	-3.7	10.00	-165.0	Calibration (initial)	1413
Reading (intermediate)								Reading (intermediate)	
Calibration (intermediate)								Calibration (intermediate)	
Reading (end of day)	1530		32.37	6.99	-2.8	9.94	-186.0	Reading (end of day)	1417

Comments:

Turbidity Meter (make/number): _____					D.O. Meter: YSI-SAC			
	_____ NTU	_____ NTU	_____ NTU	Battery Check	Barometric Pressure: <u>754.8</u> mmHg			
Reading (Initial)							mg/L	%
Calibration						Reading (initial):	<u>7.80</u>	<u>84.8</u>
						Reading (adj.):	<u>8.99</u>	<u>99.0</u>
						Intermediate Reading (initial):		
						Intermediate Reading (adj.):		



Project No. 20154800.001A Task 01		Project Name RPP2015						Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee Sean Echeverria		No. of Containers		Type of Containers		Thiobencarb (EPA 507)											Instructions/Remarks: Please provide MDL report	
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																	
1	06/17/15	1010	N-CL-2	W	1	1-L Amber	X													
2	06/17/15	1045	RD 68-CL-2	W	1	1-L Amber	X													
3	06/17/15	1120	Q-CL-2	W	1	1-L Amber	X													
4	06/17/15	1200	P-CL-2	W	1	1-L Amber	X													
5	06/17/15	1230	I-CL-2	W	1	1-L Amber	X													
6	06/17/15	1315	K-CL-2	W	1	1-L Amber	X													
7	06/17/15	1343	L-CL-2	W	1	1-L Amber	X													
8	Mark Lee																			
9	Mark Lee																			
10	Mark Lee																			
11	Mark Lee																			
12	Mark Lee																			
13	Mark Lee																			
14	Mark Lee																			
15	Mark Lee																			
Relinquished By:		Date/Time		Received By:		Instructions/Remarks Please provide results within 7-calendar days.										Send Results To: KLEINFELDER 3077 FITE CIRCLE, SACRAMENTO, CA criddle@kleinfelder.com sgardner@kleinfelder.com				
Relinquished By:		Date/Time		Received By:																
Relinquished By: <i>Mark Lee</i>		6-17-15 1655		D. King 6/17/15																

1655 (1.7)

Appendix J-2 Valent Results

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -1
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	4/30/15
Date Extracted:	4/30/15
Analysis Date:	5/4/15
Date Reported:	5/4/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-1-1	4/28/2015	0.00	<0.5
SSB1-V-1-1	4/29/2015	0.00	<0.5
CBD5-V-1-1	4/28/2015	0.00	<0.5
CBD1-V-1-1	4/28/2015	0.00	<0.5
BS1-V-1-1	4/29/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.933	93.3%
F2	1.0	0.913	91.3%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Brown

DATE: 5/4/2015

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number: C-15-002 -2
 Analyte: Thiobencarb
 Matrix: Water

Date(s) Received: 5/6/15
 Date Extracted: 5/6/15
 Analysis Date: 5/6/15
 Date Reported: 5/7/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-2-1	5/5/2015	0.00	<0.5
SSB1-V-2-1	5/5/2015	0.00	<0.5
CBD5-V-2-1	5/5/2015	0.00	<0.5
CBD1-V-2-1	5/5/2015	0.00	<0.5
BS1-V-2-1	5/5/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.931	93.1%
F2	1.0	0.967	96.7%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.
 * Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles J. Green

DATE: 5/14/15

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number: C-15-002 -3
 Analyte: Thiobencarb
 Matrix: Water

 Date(s) Received: 5/14/15
 Date Extracted: 5/14/15
 Analysis Date: 5/14/15
 Date Reported: 5/18/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-3-1	5/12/2015	0.00	<0.5
SSB1-V-3-1	5/13/2015	0.62	0.6
CBD5-V-3-1	5/12/2015	1.01	1.0
CBD1-V-3-1	5/12/2015	0.00	<0.5
BS1-V-3-1	5/13/2015	0.00	<0.5
CRC1-V-3-1	5/12/2015	1.74	1.7

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.959	95.9%
F2	1.0	0.939	93.9%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.
 * Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Green

DATE: 5/18/2015

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -4
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	5/26/15
Date Extracted:	5/26/15
Analysis Date:	5/26/15
Date Reported:	5/27/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-4-1	5/19/2015	0.00	<0.5
SSB1-V-4-1	5/19/2015	0.00	<0.5
CBD5-V-4-1	5/19/2015	1.89	1.9
CBD1-V-4-1	5/19/2015	0.32	<0.5
BS1-V-4-1	5/19/2015	0.00	<0.5
SR1-V-4-2	5/21/2015	0.00	<0.5
SSB1-V-4-2	5/21/2015	0.00	<0.5
CBD5-V-4-2	5/21/2015	5.25	5.2
CBD1-V-4-2	5/21/2015	0.65	0.7
BS1-V-4-2	5/21/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.969	96.9%
F2	1.0	0.958	95.8%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Green

DATE: 5/27/2015

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -5
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	5/29/15
Date Extracted:	6/1/15
Analysis Date:	6/1/15
Date Reported:	6/3/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-5-1	5/26/2015	0.00	<0.5
SSB1-V-5-1	5/27/2015	0.00	<0.5
CBD5-V-5-1	5/26/2015	2.41	2.4
CBD1-V-5-1	5/26/2015	1.53	1.5
BS1-V-5-1	5/27/2015	0.00	<0.5
SR1-V-5-2	5/28/2015	0.00	<0.5
SSB1-V-5-2	5/28/2015	0.00	<0.5
CBD5-V-5-2	5/28/2015	1.94	1.9
CBD1-V-5-2	5/28/2015	1.39	1.4
BS1-V-5-2	5/28/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.944	94.4%
F2	1.0	0.936	93.6%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.
 * Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles J. [Signature]

DATE: 6/3/2015

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -6
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	6/5/15
Date Extracted:	6/5/15
Analysis Date:	6/15/15
Date Reported:	6/16/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-6-1	6/2/2015	0.00	<0.5
SSB1-V-6-1	6/2/2015	0.00	<0.5
CBD5-V-6-1	6/2/2015	1.56	1.6
CBD1-V-6-1	6/2/2015	0.40	<0.5
BS1-V-6-1	6/2/2015	0.00	<0.5
SR1-V-6-2	6/4/2015	0.00	<0.5
SSB1-V-6-2	6/4/2015	0.00	<0.5
CBD5-V-6-2	6/4/2015	0.73	0.7
CBD1-V-6-2	6/4/2015	0.36	<0.5
BS1-V-6-2	6/4/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	0.959	95.9%
F2	1.0	1.015	101.5%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Green

DATE: 6/16/15

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -7
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	6/12/15
Date Extracted:	6/15/15
Analysis Date:	6/16/15
Date Reported:	6/23/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-7-1	6/9/2015	0.00	<0.5
SSB1-V-7-1	6/10/2015	0.00	<0.5
CBD5-V-7-1	6/9/2015	0.48	<0.5
CBD1-V-7-1	6/9/2015	0.00	<0.5
BS1-V-7-1	6/10/2015	0.00	<0.5
CRC1-V-7-1	6/9/2015	1.48	1.5
SR1-V-7-2	6/11/2015	0.00	<0.5
SSB1-V-7-2	6/11/2015	0.62	0.6
CBD5-V-7-2	6/11/2015	0.45	<0.5
CBD1-V-7-2	6/11/2015	0.00	<0.5
BS1-V-7-2	6/11/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	1.012	101.2%
F2	1.0	0.987	98.7%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Quinn

DATE: 6/23/15

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -9
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	6/26/15
Date Extracted:	6/26/15
Analysis Date:	6/29/15
Date Reported:	7/6/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SSB1-V-9-1	6/24/2015	0.00	<0.5
CBD5-V-9-1	6/23/2015	0.00	<0.5
CBD1-V-9-1	6/23/2015	0.00	<0.5
BS1-V-9-1	6/24/2015	0.00	<0.5
CRC1-V-9-1	6/24/2015	1.70	1.7

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	1.040	104.0%
F2	1.0	0.974	97.4%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

- Sample SR1-V-9-1 not reported due to contamination. See week 10 for extraction of backup sample SR1-B-9-1.

SIGNATURE: Charles G. Quinn

DATE: 7/9/2015

Valent USA Corporation
2015 CA Rice Pesticide Monitoring Study
Sample Results

Reference Number:	C-15-002 -10
Analyte:	Thiobencarb
Matrix:	Water
Date(s) Received:	7/1/15
Date Extracted:	7/2/15
Analysis Date:	7/6/15
Date Reported:	7/6/15

Sample Results:

Sample	Date Sampled	Thiobencarb Found, ppb *	Reported Value, ppb
SR1-V-10-1	6/30/2015	0.00	<0.5
SSB1-V-10-1	6/30/2015	0.00	<0.5
CBD5-V-10-1	6/30/2015	0.00	<0.5
CBD1-V-10-1	6/30/2015	0.00	<0.5
BS1-V-10-1	6/30/2015	0.00	<0.5
SR1-B-9-1	6/23/2015	0.00	<0.5

Quality Control Sample Results:

Sample	Fortification, ppb	Thiobencarb Found, ppb *	Percent Recovery
CK	-	0.000	-
F1	1.0	1.017	101.7%
F2	1.0	1.004	100.4%

Remarks:

CK = Check Sample, F1 = Fortified Sample 1, and F2 = Fortified Sample 2.

* Values presented are for quality control purposes only - values below the method detection limit (0.5 ppb) are not considered reliable.

SIGNATURE: Charles Green

DATE: 7/9/15

Appendix J-3 CLS Results

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

May 07, 2015

CLS Work Order #: CYD1315

COC #: 111262

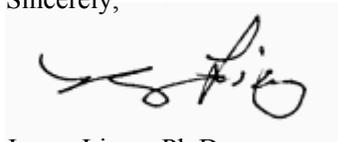
Sue Gardner
Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W1D1

Enclosed are the results of analyses for samples received by the laboratory on 04/30/15 09:05. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento, CA 95827	Project: RPP-W1D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYD1315 COC #: 111262
--	--	--

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CBD5-CL-1-1 (CYD1315-01) Water Sampled: 04/28/15 12:30 Received: 04/30/15 09:05									
Thiobencarb	ND	1.0	µg/L	1	CY03085	05/06/15	05/07/15	EPA 507	
Surrogate: EPN		92 %	65-135		"	"	"	"	

CALIFORNIA LABORATORY SERVICES

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento, CA 95827	Project: RPP-W1D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYD1315 COC #: 111262
--	--	--

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CY03085 - EPA 3510B GCNV										
Blank (CY03085-BLK1)										
					Prepared: 05/06/15 Analyzed: 05/07/15					
Thiobencarb	ND	1.0	µg/L							
Surrogate: EPN	3.16		"	2.50		126	65-135			
LCS (CY03085-BS1)										
					Prepared: 05/06/15 Analyzed: 05/07/15					
Thiobencarb	5.92	1.0	µg/L	5.00		118	75-120			
Surrogate: EPN	2.78		"	2.50		111	65-135			
LCS Dup (CY03085-BSD1)										
					Prepared: 05/06/15 Analyzed: 05/07/15					
Thiobencarb	5.17	1.0	µg/L	5.00		103	75-120	14	25	
Surrogate: EPN	2.09		"	2.50		83	65-135			

CALIFORNIA LABORATORY SERVICES

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento, CA 95827	Project: RPP-W1D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYD1315 COC #: 111262
--	--	---

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

12 May 2015

CLS Work Order #: CYE0196

COC #:

Sue Gardner
Kleinfelder (Sacramento)

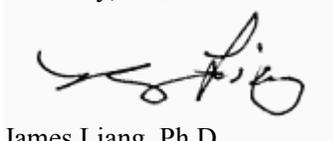
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W2D1

Enclosed are the results of analyses for samples received by the laboratory on 05/05/15 16:44. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is written over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

05/12/15 13:58

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W2D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0196**
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CBD5-CL-2-1 (CYE0196-01) Water Sampled: 05/05/15 12:25 Received: 05/05/15 16:44										
<i>Surrogate: EPN</i>	90 %		65-135	µg/L		CY03085	05/06/15	05/07/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/12/15 13:58

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP-W2D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYE0196 COC #:
--	--	-------------------------------------

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CY03085 - EPA 3510B GCNV											
Blank (CY03085-BLK1)						Prepared: 05/06/15 Analyzed: 05/07/15					
Surrogate: EPN	3.16			µg/L	2.50		126	65-135			
Thiobencarb	ND	0.40	1.0	"							
LCS (CY03085-BS1)						Prepared: 05/06/15 Analyzed: 05/07/15					
Surrogate: EPN	2.78			µg/L	2.50		111	65-135			
Thiobencarb	5.92	0.40	1.0	"	5.00		118	75-120			
LCS Dup (CY03085-BSD1)						Prepared: 05/06/15 Analyzed: 05/07/15					
Surrogate: EPN	2.09			µg/L	2.50		83	65-135			
Thiobencarb	5.17	0.40	1.0	"	5.00		103	75-120	14	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/12/15 13:58

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W2D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0196**
COC #:

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/12/15 13:58

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento, CA, 95827

Project: RPP-W2D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0196**
COC #:



COC# 583734

CYE0196

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W2D1				Analysis		Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
LP. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556				No. of Containers	Type of Containers	Instructions/Remarks: Please provide MDL report		
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix			Thiobencarb (EPA 607)				
1	05/05/15	1225	CBD5-CL-2-1	W	1	1-L Amber	X	QC Sample		
2	<i>Mark Lee</i>									
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
Relinquished By: _____										Date/Time
Relinquished By: _____		Date/Time	Received By: _____							
Relinquished By: <i>Mark Lee</i>		Date/Time 5/5/15 1645	Received By: <i>pm Sue Gardner</i>							

8. WJ 5/5/15 1644 (1.3)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

21 May 2015

CLS Work Order #: CYE0556

COC #: 149289

Sue Gardner
Kleinfelder (Sacramento)

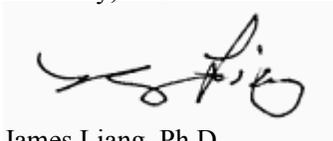
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W3D1

Enclosed are the results of analyses for samples received by the laboratory on 05/14/15 10:20. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

05/21/15 12:23

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP-W3D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYE0556 COC #: 149289
--	--	--

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CRC1-CL-3-1 (CYE0556-01) Water Sampled: 05/12/15 16:00 Received: 05/14/15 10:20										
<i>Surrogate: EPN</i>	<i>131 %</i>		<i>65-135</i>	µg/L		<i>CY03314</i>	<i>05/14/15</i>	<i>05/20/15</i>	<i>EPA 507</i>	
Thiobencarb	1.8	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/21/15 12:23

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP-W3D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYE0556 COC #: 149289
--	--	--

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch CY03314 - EPA 3510B GCNV

Blank (CY03314-BLK1)

Prepared: 05/14/15 Analyzed: 05/20/15

Surrogate: EPN	2.25			µg/L	2.50		90	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY03314-BS1)

Prepared: 05/14/15 Analyzed: 05/20/15

Surrogate: EPN	2.17			µg/L	2.50		87	65-135			
Thiobencarb	4.21	0.40	1.0	"	5.00		84	75-120			

LCS Dup (CY03314-BSD1)

Prepared: 05/14/15 Analyzed: 05/20/15

Surrogate: EPN	2.63			µg/L	2.50		105	65-135			
Thiobencarb	4.99	0.40	1.0	"	5.00		100	75-120	17	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/21/15 12:23

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W3D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYE0556
COC #: 149289

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/21/15 12:23

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W3D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYE0556
COC #: 149289



COC# 149289

CYE0556

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W3D1		No. of Containers	Type of Containers	Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301																				
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556				<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																														
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix			Thiocyanate (EPA 507)																														
1	05/12/15	1600	CRC1-CL-3-1	W	1	1-L Amber	X																													
2																																				
3																																				
4																																				
5																																				
6																																				
7																																				
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14																																				
15																																				
Relinquished By: Mark Lee		Date/Time 5-17-15 1700		Received By: Suzanne White		Instructions/Remarks Standard TAT										Send Results To: criddle@kleinfelder.com sgardner@kleinfelder.com Attn: Sue Gardner, PM 3077 Fite Circle Sacramento CA 95827																				
Relinquished By:		Date/Time:		Received By:																																
Relinquished By: Mark Lee		Date/Time 5-14-15 1020		Received By: Suzanne White																																

5-14-15 1020
(5.4)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

27 May 2015

CLS Work Order #: CYE0816

COC #:

Sue Gardner
Kleinfelder (Sacramento)

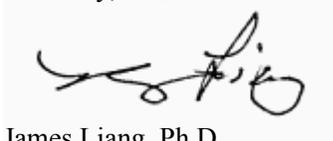
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W4D1

Enclosed are the results of analyses for samples received by the laboratory on 05/20/15 14:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is written over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

05/27/15 14:28

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W4D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0816**
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BS1-CL-4-1 (CYE0816-01) Water Sampled: 05/19/15 11:40 Received: 05/20/15 14:30										
<i>Surrogate: EPN</i>	81 %		65-135	µg/L		CY03528	05/21/15	05/26/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/27/15 14:28

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W4D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0816**
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch CY03528 - EPA 3510B GCNV

Blank (CY03528-BLK1)

Prepared: 05/22/15 Analyzed: 05/26/15

Surrogate: EPN	2.40			µg/L	2.50		96	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY03528-BS1)

Prepared: 05/22/15 Analyzed: 05/26/15

Surrogate: EPN	2.30			µg/L	2.50		92	65-135			
Thiobencarb	4.64	0.40	1.0	"	5.00		93	75-120			

LCS Dup (CY03528-BSD1)

Prepared: 05/22/15 Analyzed: 05/26/15

Surrogate: EPN	2.10			µg/L	2.50		84	65-135			
Thiobencarb	4.56	0.40	1.0	"	5.00		91	75-120	2	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/27/15 14:28

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W4D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0816**
COC #:

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

05/27/15 14:28

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W4D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: **CYE0816**
COC #:



COC# 299475

CYE0816

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W4D1		No. of Containers	Type of Containers	Analysis										Receiving Lab:	
L.P. No. (PO No.)	Samplers: (Signature/Number) <i>Sean Echeverria / Mark Lee</i>					Thiobencarb (EPA 507)											CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix														
1	05/19/15	<i>11:10</i>	BS1-CL-4-1	W	1	1-L Amber	X										
2																	
3																	
4																	
5																	
6																	
7																	See instructions TAT. For Thiobencarb.
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
Relinquished By: <i>Mark Lee</i>		Date/Time <i>5-19-15 1600</i>		Received By: <i>Sample Control</i>		Instructions/Remarks Thiobencarb results must be reported within 7 calendar days										Send Results To: cridde@kleinfelder.com sgardner@kleinfelder.com Attn: Sue Gardner, PM 3077 Fite Circle Sacramento CA 95827	
Relinquished By: <i>Sample Control</i>		Date/Time <i>5/20/15 1405</i>		Received By: <i>[Signature]</i>													
Relinquished By:		Date/Time <i>5/20/15 1408</i>		Received By: <i>Smit</i>													

4.42

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

09 June 2015

CLS Work Order #: CYF0127

COC #: 18661

Sue Gardner
Kleinfelder (Sacramento)

3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP2015

Enclosed are the results of analyses for samples received by the laboratory on 06/02/15 17:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

CASE NARRATIVE

CLS Work Order #: CYF0127

COC #: 18661

Client: Kleinfelder (Sacramento)

Project Name: RPP2015

Samples Received: 06/02/15 17:00

Sample SR1-B-5-1 is a backup sample from one originally analyzed under CLS work order # CYE1146. Due to issues with surrogate recoveries on the original analysis, a backup sample was requested for re-analysis. Although analyzed outside of EPA recommended holding time, surrogate recoveries were within specification upon retests. The sample result was ND of both analyses.

CALIFORNIA LABORATORY SERVICES

06/09/15 11:17

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP2015 Project Number: 20154800.001A-01 Project Manager: Sue Gardner	CLS Work Order #: CYF0127 COC #: 18661
--	--	---

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Analyst	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SR1-B-5-1 (CYF0127-01) Water											HT-1
<i>Surrogate: EPN</i>											
Thiobencarb	nt	103 %	65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507		
	nt	ND	0.40	1.0	"	1	"	"	"	"	

06/09/15 11:17

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP2015 Project Number: 20154800.001A-01 Project Manager: Sue Gardner	CLS Work Order #: CYF0127 COC #: 18661
--	--	---

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch CY03789 - EPA 3510B GCNV

Blank (CY03789-BLK1)

Prepared & Analyzed: 06/04/15

Thiobencarb	ND	0.40	1.0	µg/L							
Surrogate: EPN	2.55			"	2.50		102	65-135			

LCS (CY03789-BS1)

Prepared & Analyzed: 06/04/15

Thiobencarb	5.42	0.40	1.0	µg/L	5.00		108	75-120			
Surrogate: EPN	2.87			"	2.50		115	65-135			

LCS Dup (CY03789-BSD1)

Prepared & Analyzed: 06/04/15

Thiobencarb	5.60	0.40	1.0	µg/L	5.00		112	75-120	3	25	
Surrogate: EPN	3.02			"	2.50		121	65-135			

06/09/15 11:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A-01
Project Manager: Sue Gardner

CLS Work Order #: CYF0127
COC #: 18661

Notes and Definitions

HT-1 The sample was received outside of the EPA recommended holding time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

06/09/15 11:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A-01
Project Manager: Sue Gardner

CLS Work Order #: CYF0127
COC #: 18661

CLS LABS SAMPLE RECEIVING EXCEPTION REPORTS

CLS Labs Job # CYF0127

Problem discovered by: [Signature]

Date: 6/2/15

Nature of problem

Out of Hold?

Client contacted? Yes No Spoke With: Mark Lee

By whom: [Signature] Date: 6/2/15 Time: 1700 HRS

Client instructions:

OK to Run out of Hold

Resolution of problem:

It Logged Accordingly

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

09 June 2015

CLS Work Order #: CYF0128

COC #: 993277

Sue Gardner
Kleinfelder (Sacramento)

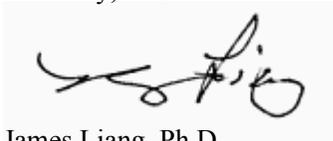
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W6D1

Enclosed are the results of analyses for samples received by the laboratory on 06/02/15 17:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

06/09/15 10:32

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W6D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0128
COC #: 993277

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CBD1-CL-2-1 (CYF0128-01) Water Sampled: 06/02/15 12:25 Received: 06/02/15 17:00										
<i>Surrogate: EPN</i>	<i>111 %</i>		<i>65-135</i>	µg/L		<i>CY03789</i>	<i>06/04/15</i>	<i>06/04/15</i>	<i>EPA 507</i>	
Thiobencarb	0.70	0.40	1.0	"	1	"	"	"	"	J

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/09/15 10:32

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W6D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0128
COC #: 993277

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch CY03789 - EPA 3510B GCNV

Blank (CY03789-BLK1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	2.55			µg/L	2.50		102	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY03789-BS1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	2.87			µg/L	2.50		115	65-135			
Thiobencarb	5.42	0.40	1.0	"	5.00		108	75-120			

LCS Dup (CY03789-BSD1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	3.02			µg/L	2.50		121	65-135			
Thiobencarb	5.60	0.40	1.0	"	5.00		112	75-120	3	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/09/15 10:32

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W6D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0128
COC #: 993277

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/09/15 10:32

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W6D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0128
COC #: 993277



COC# 993277

CYF0128

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W6D1				Analysis		Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556				No. of Containers	Type of Containers	Instructions/Remarks: Please provide MDL report		
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix							
1	06/02/15	1225	CBD1-CL-2-1	W	1	1-L Amber	X		QC Sample	
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
Relinquished By: _____		Date/Time: _____	Received By: _____		Instructions/Remarks: Please provide results within 7 calendar days. Thank you				Send Results To: Kleinfelder 3077 Fite Circle, Sacramento, CA 95827 criddle@kleinfelder.com sgardner@kleinfelder.com	
Relinquished By: _____		Date/Time: _____	Received By: _____							
Relinquished By: <i>Mark Lee</i>		Date/Time: <i>6/2/15 1700</i>	Received By: <i>[Signature]</i>							

Mark Lee

6/2/15 1700 2.3

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

23 June 2015

CLS Work Order #: CYF0729

COC #:

Sue Gardner
Kleinfelder (Sacramento)

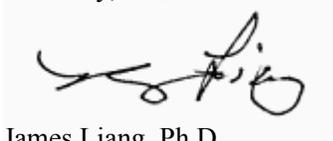
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W8D1

Enclosed are the results of analyses for samples received by the laboratory on 06/16/15 16:40. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

06/23/15 09:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W8D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0729
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SSB-CL-8-1 (CYF0729-01) Water Sampled: 06/16/15 09:20 Received: 06/16/15 16:40										
<i>Surrogate: EPN</i>	92 %		65-135	µg/L		CY04119	06/17/15	06/18/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/23/15 09:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W8D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0729
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch CY04119 - EPA 3510B GCNV

Blank (CY04119-BLK1)

Prepared: 06/17/15 Analyzed: 06/18/15

Surrogate: EPN	2.42			µg/L	2.50		97	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY04119-BS1)

Prepared: 06/17/15 Analyzed: 06/18/15

Surrogate: EPN	2.57			µg/L	2.50		103	65-135			
Thiobencarb	5.70	0.40	1.0	"	5.00		114	75-120			

LCS Dup (CY04119-BSD1)

Prepared: 06/17/15 Analyzed: 06/18/15

Surrogate: EPN	2.56			µg/L	2.50		102	65-135			
Thiobencarb	5.76	0.40	1.0	"	5.00		115	75-120	1	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/23/15 09:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W8D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0729
COC #:

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/23/15 09:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W8D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0729
COC #:



COC# 980390

CYF0729

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP-W8D1				Analysis		Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301		
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee / 1556				No. of Containers	Type of Containers	Instructions/Remarks: Please provide MDL report		
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix							
1	06/18/15	CG 20	SSB-CL-S-1	W	1	1 Liter Amber	X		QC Sample	
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
Relinquished By:		Date/Time	Received By:		Instructions/Remarks Please provide results within 7 calendar days. Thank you				Send Results To:	
Relinquished By:		Date/Time	Received By:						Kleinfelder 3077 Fite Circle, Sacramento, CA 95827 criddle@kleinfelder.com sgardner@kleinfelder.com	
Relinquished By:		Date/Time	Received By:							

6/16/15 16:40 (F.O)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

30 June 2015

CLS Work Order #: CYF0999

COC #: 264408

Sue Gardner
Kleinfelder (Sacramento)

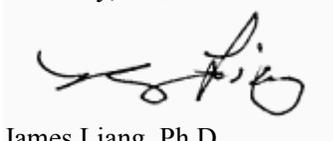
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W9D1

Enclosed are the results of analyses for samples received by the laboratory on 06/23/15 16:45. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

06/30/15 13:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0999
COC #: 264408

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CBD1-CL-9-1 (CYF0999-01) Water Sampled: 06/23/15 13:40 Received: 06/23/15 16:45										
<i>Surrogate: EPN</i>	85 %		65-135	µg/L		CY04330	06/25/15	06/26/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/30/15 13:17

Kleinfelder (Sacramento) 3077 Fite Circle Sacramento CA, 95827	Project: RPP-W9D1 Project Number: 20154800.001A Task 01 Project Manager: Sue Gardner	CLS Work Order #: CYF0999 COC #: 264408
--	--	--

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CY04330 - EPA 3510B GCNV											
Blank (CY04330-BLK1)						Prepared: 06/25/15 Analyzed: 06/26/15					
Surrogate: EPN	2.25			µg/L	2.50		90	65-135			
Thiobencarb	ND	0.40	1.0	"							
LCS (CY04330-BS1)						Prepared: 06/25/15 Analyzed: 06/26/15					
Surrogate: EPN	2.65			µg/L	2.50		106	65-135			
Thiobencarb	5.85	0.40	1.0	"	5.00		117	75-120			
LCS Dup (CY04330-BSD1)						Prepared: 06/25/15 Analyzed: 06/26/15					
Surrogate: EPN	2.25			µg/L	2.50		90	65-135			
Thiobencarb	5.46	0.40	1.0	"	5.00		109	75-120	7	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/30/15 13:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0999
COC #: 264408

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/30/15 13:17

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF0999
COC #: 264408



COC# 264408

CYF0999

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W9D1					Analysis			Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301	
L.P. No. (PO No.)		Samplers: (Signature/Number) Sean Echeverria Mark Lee				No. of Containers	Type of Containers	Throbacarb (EPA 507)			Instructions/Remarks: Please provide MOL report
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix								
1	06/23/15	1340	CBD1-CL-9-1	W	1	1-L Amber	X				RB DC M.L.
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
Relinquished By:		Date/Time	Received By:		Instructions/Remarks			Send Results To:			
Relinquished By:		Date/Time	Received By:		Please provide results within 7 calendar days			Kleinfelder 3077 Fite Circle Sacramento, CA 95827 Attn: sgardner@kleinfelder.com cridle@kleinfelder.com			
Relinquished By: <i>Mark Lee</i>		6-23-15 1645	Received By: <i>Justin Saady 6/23/15</i>								

1645 (1.0)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

02 July 2015

CLS Work Order #: CYF1091

COC #:

Sue Gardner
Kleinfelder (Sacramento)

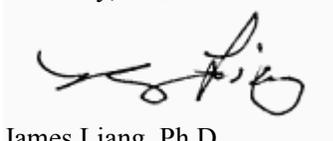
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP-W9D1

Enclosed are the results of analyses for samples received by the laboratory on 06/25/15 08:28. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is written over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

07/02/15 09:59

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF1091
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CRC1-CL-9-1 (CYF1091-01) Water Sampled: 06/25/15 07:30 Received: 06/25/15 08:28										
<i>Surrogate: EPN</i>	88 %		65-135	µg/L		CY04330	06/25/15	06/26/15	EPA 507	
Thiobencarb	2.0	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

07/02/15 09:59

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF1091
COC #:

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch CY04330 - EPA 3510B GCNV

Blank (CY04330-BLK1)

Prepared: 06/25/15 Analyzed: 06/26/15

Surrogate: EPN	2.25			µg/L	2.50		90	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY04330-BS1)

Prepared: 06/25/15 Analyzed: 06/26/15

Surrogate: EPN	2.65			µg/L	2.50		106	65-135			
Thiobencarb	5.85	0.40	1.0	"	5.00		117	75-120			

LCS Dup (CY04330-BSD1)

Prepared: 06/25/15 Analyzed: 06/26/15

Surrogate: EPN	2.25			µg/L	2.50		90	65-135			
Thiobencarb	5.46	0.40	1.0	"	5.00		109	75-120	7	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

07/02/15 09:59

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF1091
COC #:

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

07/02/15 09:59

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP-W9D1
Project Number: 20154800.001A Task 01
Project Manager: Sue Gardner

CLS Work Order #: CYF1091
COC #:



COC# 588250

CYF1091

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP- W9D1				Analysis						Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301								
L.P. No. (PO No.)		Samplers: (Signature/Number) Sean Echeverria Mark Lee				No. of Containers	Type of Containers	Thionebare (EPA 807) [Analysis Columns] Instructions/Remarks: Please provide MDL report						Instructions/Remarks: Please provide MDL report						
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																	
1	08/24/15	0730	CRC1-CL-9-1	W	1	1-L Amber	X													
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
Relinquished By: <i>Mark Lee</i>		Date/Time 6-24-15 1630		Received By: <i>Samuel Cortez #2</i>		Instructions/Remarks Please provide results within 7 calendar days						Send Results To: Kleinfelder 3077 Fite Circle Sacramento, CA 95827 Attn: sgardner@kleinfelder.com criddle@kleinfelder.com								
Relinquished By: <i>Sample Control 29E</i>		Date/Time 6/25/15 0828		Received By: <i>Mark Lee</i>																
Relinquished By:		Date/Time		Received By: <i>DB:28</i>																

(1.0)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

05 June 2015

CLS Work Order #: CYF0212

COC #: 998741

Craig Riddle
Kleinfelder (Sacramento)

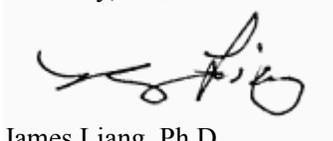
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP2015

Enclosed are the results of analyses for samples received by the laboratory on 06/04/15 07:48. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is written over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

06/05/15 12:52

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A- Task 01
Project Manager: Craig Riddle

CLS Work Order #: CYF0212
COC #: 998741

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
N-CL-1 (CYF0212-01) Water Sampled: 06/03/15 10:50 Received: 06/04/15 07:48										
Surrogate: EPN	114 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	1.1	0.40	1.0	"	1	"	"	"	"	
RD 68-CL-1 (CYF0212-02) Water Sampled: 06/03/15 11:40 Received: 06/04/15 07:48										
Surrogate: EPN	101 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	0.98	0.40	1.0	"	1	"	"	"	"	J
Q-CL-1 (CYF0212-03) Water Sampled: 06/03/15 12:50 Received: 06/04/15 07:48										
Surrogate: EPN	106 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
P-CL-1 (CYF0212-04) Water Sampled: 06/03/15 13:45 Received: 06/04/15 07:48										
Surrogate: EPN	140 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	QS-HI
Thiobencarb	ND	0.44	1.1	"	1	"	"	"	"	
I-CL-1 (CYF0212-05) Water Sampled: 06/03/15 14:20 Received: 06/04/15 07:48										
Surrogate: EPN	114 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
K-CL-1 (CYF0212-06) Water Sampled: 06/03/15 15:00 Received: 06/04/15 07:48										
Surrogate: EPN	115 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	1.5	0.40	1.0	"	1	"	"	"	"	
L-CL-1 (CYF0212-07) Water Sampled: 06/03/15 15:30 Received: 06/04/15 07:48										
Surrogate: EPN	112 %		65-135	µg/L		CY03789	06/04/15	06/04/15	EPA 507	
Thiobencarb	1.4	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/05/15 12:52

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A- Task 01
Project Manager: Craig Riddle

CLS Work Order #: CYF0212
COC #: 998741

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch CY03789 - EPA 3510B GCNV

Blank (CY03789-BLK1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	2.55			µg/L	2.50		102	65-135			
Thiobencarb	ND	0.40	1.0	"							

LCS (CY03789-BS1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	2.87			µg/L	2.50		115	65-135			
Thiobencarb	5.42	0.40	1.0	"	5.00		108	75-120			

LCS Dup (CY03789-BSD1)

Prepared & Analyzed: 06/04/15

Surrogate: EPN	3.02			µg/L	2.50		121	65-135			
Thiobencarb	5.60	0.40	1.0	"	5.00		112	75-120	3	25	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/05/15 12:52

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A- Task 01
Project Manager: Craig Riddle

CLS Work Order #: CYF0212
COC #: 998741

Notes and Definitions

QS-HI	Surrogate recovery was greater than the upper control limit. A reanalysis was not performed since the analytes associated with the surrogate were not detected.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

06/05/15 12:52

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A- Task 01
Project Manager: Craig Riddle

CLS Work Order #: CYF0212
COC #: 998741



COC# 998741

CYF0212

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP2015				Analysis										Receiving Lab:		
L.P. No. (PO No.)		Samplers: (Signature/Number)		No. of Containers	Type of Containers	Thebencaine (EPA 507)												CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301
		Mark Lee Sean Echeverria																
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix															
1	06/03/15	1050	N-CL-1	W	1	1-L Amber	X											
2	06/03/15	1140	RD 68-CL-1	W	1	1-L Amber	X											
3	06/03/15	1250	Q-CL-1	W	1	1-L Amber	X											
4	06/03/15	1345	P-CL-1	W	1	1-L Amber	X											
5	06/03/15	1420	I-CL-1	W	1	1-L Amber	X											
6	06/03/15	1500	K-CL-1	W	1	1-L Amber	X											
7	06/03/15	1530	L-CL-1	W	1	1-L Amber	X											
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Mark Lee

Relinquished By: <i>Mark Lee</i>	Date/Time 6-3-15 1730	Received By: <i>Sample Central</i>	Instructions/Remarks 24-Hour RUSH TAT	Send Results To: KLEINFELDER 3077 FITE CIRCLE, SACRAMENTO, CA criddle@kleinfelder.com sgardner@kleinfelder.com
Relinquished By: <i>Sample Central</i>	Date/Time 6-4-15 0720	Received By: <i>Mark Lee</i>		
Relinquished By: <i>Mark Lee</i>	Date/Time 6-4-15 10720	Received By: <i>[Signature]</i> 6-4-15		

748 (8.4)

ENV-02

CHAIN-OF-CUSTODY

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

24 June 2015

CLS Work Order #: CYF0796

COC #: 960257

Craig Riddle
Kleinfelder (Sacramento)

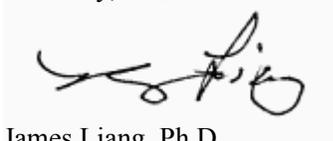
3077 Fite Circle
Sacramento, CA 95827

Project Name: RPP2015

Enclosed are the results of analyses for samples received by the laboratory on 06/17/15 16:55. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is placed over a light gray rectangular background.

James Liang, Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

06/24/15 14:15

Kleinfelder (Sacramento)
3077 Fite Circle
Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A-01
Project Manager: Craig Riddle

CLS Work Order #: CYF0796
COC #: 960257

Nitrogen/Phosphorus Pesticides by EPA Method 507

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
N-CL-2 (CYF0796-01) Water Sampled: 06/17/15 10:10 Received: 06/17/15 16:55										
Surrogate: EPN	98 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
RD 68-CL-2 (CYF0796-02) Water Sampled: 06/17/15 10:45 Received: 06/17/15 16:55										
Surrogate: EPN	91 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	2.8	0.40	1.0	"	1	"	"	"	"	
Q-CL-2 (CYF0796-03) Water Sampled: 06/17/15 11:20 Received: 06/17/15 16:55										
Surrogate: EPN	96 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
P-CL-2 (CYF0796-04) Water Sampled: 06/17/15 12:00 Received: 06/17/15 16:55										
Surrogate: EPN	93 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	1.1	0.40	1.0	"	1	"	"	"	"	
I-CL-2 (CYF0796-05) Water Sampled: 06/17/15 12:30 Received: 06/17/15 16:55										
Surrogate: EPN	97 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
K-CL-2 (CYF0796-06) Water Sampled: 06/17/15 13:15 Received: 06/17/15 16:55										
Surrogate: EPN	89 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	ND	0.40	1.0	"	1	"	"	"	"	
L-CL-2 (CYF0796-07) Water Sampled: 06/17/15 13:43 Received: 06/17/15 16:55										
Surrogate: EPN	100 %		65-135	µg/L		CY04182	06/19/15	06/23/15	EPA 507	
Thiobencarb	1.1	0.40	1.0	"	1	"	"	"	"	

CA DOHS ELAP Accreditation/Registration Number 1233

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Sacramento CA, 95827

Project: RPP2015
Project Number: 20154800.001A-01
Project Manager: Craig Riddle

CLS Work Order #: CYF0796
COC #: 960257

Nitrogen/Phosphorus Pesticides by EPA Method 507 - Quality Control

CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CY04182 - EPA 3510B GCNV											
Blank (CY04182-BLK1)						Prepared: 06/19/15 Analyzed: 06/23/15					
Surrogate: EPN	2.54			µg/L	2.50		102	65-135			
Thiobencarb	ND	0.40	1.0	"							
LCS (CY04182-BS1)						Prepared: 06/19/15 Analyzed: 06/23/15					
Surrogate: EPN	2.68			µg/L	2.50		107	65-135			
Thiobencarb	5.64	0.40	1.0	"	5.00		113	75-120			
LCS Dup (CY04182-BSD1)						Prepared: 06/19/15 Analyzed: 06/23/15					
Surrogate: EPN	2.35			µg/L	2.50		94	65-135			
Thiobencarb	5.55	0.40	1.0	"	5.00		111	75-120	2	25	

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Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

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COC# 960257

CYF0796

Page 1 of 1

Project No. 20154800.001A Task 01		Project Name RPP2015				Analysis										Receiving Lab: CLS Labs 3249 Fitzgerald Road Rancho Cordova, CA 95742 Attn: Scott Furnas 916-638-7301				
L.P. No. (PO No.)		Samplers: (Signature/Number) Mark Lee Sean Echeverria		No. of Containers		Type of Containers		Thiocyanate (EPA 507)										Instructions/Remarks: Please provide MDL report		
Date MM/DD/YY	Sample I.D. Time HH-MM-SS	Sample I.D.	Matrix																	
1	06/17/15	1010	N-CL-2	W	1	1-L Amber	X													
2	06/17/15	1045	RD 68-CL-2	W	1	1-L Amber	X													
3	06/17/15	1120	Q-CL-2	W	1	1-L Amber	X													
4	06/17/15	1200	P-CL-2	W	1	1-L Amber	X													
5	06/17/15	1230	I-CL-2	W	1	1-L Amber	X													
6	06/17/15	1315	K-CL-2	W	1	1-L Amber	X													
7	06/17/15	1343	L-CL-2	W	1	1-L Amber	X													
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Reinquired By: _____ Date/Time: _____ Received By: _____
 Instructions/Remarks: Please provide results within 7-calendar days.
 Send Results To: KLEINFELDER
 3077 FITE CIRCLE,
 SACRAMENTO, CA
 criddle@kleinfelder.com
 sgardner@kleinfelder.com

Reinquired By: _____ Date/Time: _____ Received By: _____

Reinquired By: *Mark Lee* Date/Time: *6:17 PM 6/17/15* Received By: *[Signature]* Date/Time: *6/17/15 1655 (17)*

ENV-02

CHAIN-OF-CUSTODY

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