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California Regional Water Quality Control Board Central Valley Region

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30 April 2010

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APPROVAL OF PROPANIL MANAGEMENT PLAN FOR THE CALIFORNIA RICE COMMISSION

Thank you for submittal of the California Rice Commission (CRC) Propanil Management Plan on 27 April 2010. The submission of this management plan was voluntary and not required by the CRC Monitoring and Reporting Program (MRP).

Central Valley Water Board staff reviewed the Propanil Management Plan and determined it is acceptable. Therefore, I grant approval of the Propanil Management Plan for 2010 with monitoring results to be reported in the 2010 Annual Monitoring Report (AMR). The reporting should also include recommendations for any further action or monitoring.

Thank you for your proactive approach in protecting water quality in the Sacramento Valley. Your experience in dealing with water quality problems and implementing mitigation measures has benefited the Irrigated Lands Regulatory Program.

If you have questions, please contact Margaret Wong at 916-464-4857 or Susan Fregien at 916-464-4813.

Original signed by Pamela Creedon

Pamela C. Creedon
Executive Officer

cc: Ms. Summer Bundy, CH2MHill

California Environmental Protection Agency





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TO: Susan Fregien
Sr. Environmental Scientist
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FROM: Margaret Wong
Water Resources Control Engineer
Monitoring & Implementation Unit
Irrigated Lands Regulatory Program

DATE: 20 April 2010

SIGNATURE: Original signed by Margaret Wong

REVIEW OF DRAFT PROPANIL MANAGEMENT PLAN

Summary

At a meeting on 14 December 2009, the California Rice Commission (CRC) voluntarily submitted the draft Propanil Management Plan to the Central Valley Water Board. A revised plan was sent by email on 1 February 2010. The draft management plan was initiated by unexpected high concentrations of propanil detected in 2009 monitoring at primary (core) sites. A June monitoring event at Lurline Creek, a secondary (assessment) site showed the highest level (47 µg/L), with no detection at the reporting limit of 0.05 µg/L in July. Two sampling events for propanil occurred at secondary sites during the 2009 season.

The draft Propanil Management Plan proposes weekly sampling during the month of June (and possible into early July) at the primary (core) sites and at the Lurline Creek secondary site. The sampling will be performed in conjunction with thiobencarb sampling under the Rice Pesticide Program (RPP). The sampling period may be adjusted if there is a delay in planting due to weather related conditions. The CRC also proposes to implement additional outreach to propanil stakeholders, including applicators (aerial and ground) and growers.

The proposed sampling period will capture the majority of the propanil applications. The purpose of monitoring at Lurline Creek is to determine if the high concentration observed in 2009 was an unusual event. If high concentrations are observed again, Central Valley Water Board staff will work with the CRC on actions to either identify the area(s) of concern, or if additional measures, such as a special meeting or a letter to rice growers in the subwatershed, should be implemented.

Background

Propanil is the largest volume pesticide used by rice growers, with over 1.7 million pounds of active ingredient applied to 348,174 acres¹. Staff recommends sampling of propanil due to the quantity being used and due to detections during sampling for the general pesticide TMDL. In addition, the limited data collected to date suggest that there may be a risk to the most sensitive aquatic species, although the risk appears to be limited to the application period.

¹ Based 2008 DPR data.

On 15 September 2009, the CRC met with Central Valley Water Board staff and provided propanil monitoring results for the CRC primary sites (CBD5, BS1, CBD1 and SSB) from 2006 through 2009. Data also included monitoring results for the Sacramento River site, SR1, in 2006 and 2008, and two propanil sampling events at the secondary sites (Lurline Creek, Cherokee Canal, and Obanion Outfall) during June and July 2009. Valent, the propanil registrant, funded the propanil sampling from 2006 through 2009 and had agreed to release the monitoring results to Central Valley Water Board staff.

Of the 116 samples taken at the primary sites from 2006 to 2009, (see Attachment 1), 59 were above the reportable limit of 0.05 µg/L. Three of the 59 detections were above 10 µg/L with the maximum concentration of 31.2 µg/L found at CBD5 on 21 June 2006.

The only detection of propanil at the secondary sites was on the 6 June 2009 sampling event of 47 µg/L at Lurline Creek, the upstream site for CBD5. The following sampling event on 9 June showed 11 µg/L of propanil at CBD5. The 30 June sampling event had no detections at the primary sites. There were three detections below 1 µg/L on the 7 July event at CBD5, CBD1, and SSB, and a non-detect at BS1. A concentration of 12 µg/L propanil was detected at SSB on 14 July with the other primary sites showing non-detects. The following sampling event on 27 July showed no detection at any primary sites.

Draft Propanil Management Plan

At a 5 November meeting between the CRC and Central Valley Water Board staff, the CRC proposed to voluntarily submit a Propanil Management Plan that would include monitoring and additional management measures. Submission of a Propanil Management Plan is not required since two or more exceedances of a water quality objective at the same site within a three year period have not occurred. However, the CRC has chosen to proactively address propanil concerns with this approach.

A draft Propanil Management Plan was submitted by email 11 December 2009, with a revision sent 1 February 2010. The latest draft plan proposes to monitor weekly at the four primary sites and at Lurline Creek during the month of June and possibly into early July. This time period is normally peak application for propanil. The CRC maintains the discretion to modify the monitoring schedule in the event there is a delay in planting due to weather-related conditions.

The draft plan also implements additional outreach and communication with propanil stakeholders that includes:

- coordination with the registrants on a combined meeting with the California Association of Pest Control Advisors (CAPCA), the California Agricultural Aircraft Association (CAAA), Pest Control Operators of California (PCOC) and county agricultural commissioners (CACs),
- providing propanil use information in the CRC newsletter and grower letter, and
- include links to the regulations and permit conditions on the CRC website, pending CRC Executive Committee and/or CRC Board approval.

Minor edits/changes

- Please clarify or correct the following items found in the draft Propanil Management Plan:

- Page 2 - Table 24 and 25 are referenced, but not found in the draft management plan. Please add the tables, eliminate the reference, or clarify.
- Page 4 - The 2009 RL is listed as 0.05 ug/L in the McCampbell Lab reports. EMA reported a similar RL for the 2006-2008 data.
- Page 4: First sentence under "2010 Propanil Management Plan" needs to be re-written.
- Page 6 - Under schedule, please specify the most recent MRP Order No. R5-2010-0805. Also, sampling should occur at core sites and at Lurline Creek in conjunction with the Rice Pesticides Program.
- Page 7 - Under "Reporting", please change that a progress report on the management plan monitoring should be due two weeks within receipt of all data for the season.
- Page 7 - The Central Valley Water Board has reviewed Dr. Halls report and responded to the CRC on 31 December 2009.

No date is noted for reporting the monitoring results or any findings/conclusions. The results may be presented as part of the 2010 Annual Monitoring Report or in a separate report, but should be stated in the management plan itself.

Review and Comments on Proposed Propanil Management Plan

The occurrence of the 47 µg/L propanil concentration at Lurline Creek was unexpected by the CRC since this level is close to the field concentration after application. At CBD5, downstream from the Lurline Creek sampling site, the concentration was 1.9 µg/L. One week later the propanil concentration at CBD5 was 11 µg/L, higher than levels generally seen in previous years. Propanil sampling did not occur again at Lurline Creek until July 2009 when there was no detection.

The 11 µg/L observed at CBD5 is unlikely from the same source as the 47 µg/L seen at Lurline Creek. The aquatic half-life of propanil is 6-12 hours, so the 47 µg/L should have degraded to non-detectable levels. There were other sources of propanil being discharged to CBD5. The CRC subsequently proposed a Propanil Management Plan that would include monitoring and management measures, including outreach.

The proposed monitoring captures the peak application period for propanil. Monitoring at this time would indicate if drift or application techniques need to be addressed. The June period will capture about 90% of all propanil applications in the Sacramento Valley. Sampling will occur concurrent with the Rice Pesticides Program monitoring schedule.

My recommendation is to accept the Propanil Management Plan as proposed and review the monitoring data after this year. There will be more data that can be used to correlate upstream and downstream sampling results (Lurline Creek and CBD5, CBD5 and CBD1). If monitoring results suggest a need for additional monitoring, the CRC may be willing to do more upstream sampling since propanil is being looked at by the TMDL unit as part of the general pesticides TMDL, and since DPR has informed the registrants that it will be initiating the risk assessment process for propanil.²

² California Notice 2010-02.

ATTACHMENT 1: Propanil monitoring data 2006-2009

Sample Date	CBD5	BS1	CBD1	SSB	SR1	F	G	H
6/7/2006	0.08	ND	0.06	ND	ND	--	--	--
6/21/2006	31.2	1.36	3.30	ND	0.18	--	--	--
6/23/2006	0.35	0.45	0.67	ND	ND	--	--	--
6/28/2006	0.24	0.88	0.18	ND	ND	--	--	--
7/6/2006	ND	0.79	ND	ND	ND	--	--	--
7/12/2006	0.07	0.46	0.23	ND	ND	--	--	--
6/6/2007	2.42	0.46	1.60	ND	--	--	--	--
6/13/2007	0.85	1.08	0.64	0.20	--	--	--	--
6/20/2007	0.20	0.37	0.13	0.08	--	--	--	--
6/27/2007	0.14	0.14	0.11	0.29	--	--	--	--
7/4/2007	0.36	0.37	0.06	0.05	--	--	--	--
7/11/2007	ND	0.11	ND	ND	--	--	--	--
7/18/2007	ND	ND	0.08	ND	--	--	--	--
7/24/2007	ND	ND	ND	ND	--	--	--	--
6/4/2008	ND	ND	ND	ND	ND	--	--	--
6/11/2008	ND	ND	ND	ND	ND	--	--	--
6/18/2008	1.34	1.29	ND	ND	ND	--	--	--
6/25/2008	0.24	0.16	ND	ND	ND	--	--	--
7/2/2008	ND	ND	ND	ND	ND	--	--	--
7/16/2008	0.31	0.14	0.35	ND	0.23	--	--	--
7/23/2008	ND	ND	ND	4.18	ND	--	--	--
6/2/2009	1.9	ND	ND<0.10	ND<0.25	--	47	ND<0.25	ND<0.25
6/9/2009	11	1.7	3.5	0.36	--	--	--	--
6/16/2009	3.1	1.3	2.0	0.76	--	--	--	--
6/23/2009	0.64	0.66	0.26	ND	--	--	--	--
6/30/2009	ND	ND	ND	ND	--	--	--	--
7/7/2009	0.38	ND	0.065	0.25	--	ND	ND	ND
7/14/2009	ND	ND	ND	12	--	--	--	--
7/21/2009	ND	ND	ND	ND	--	--	--	--

RL = 0.05 ug/L unless noted otherwise

ND = non-detect

-- no propanil sampling