Exhibit 67

February 22, 2018

Mr. Jordan Page
Risk Management and Implementation Branch III
Pesticide Re-evaluation Division (7508P)
Office of Pesticide Programs
U.S. Environmental Protection Agency
One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202

Subject: Submission of Waivers in Support of Registration Review
DCPA – (GDCI ID# 078701)
Response to EPA Memorandum dated March 21, 2014

Dear Mr. Page:

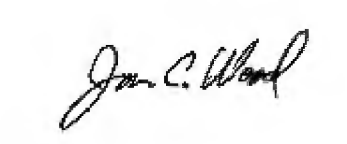
Enclosed please find waiver requests in support of the subject Registration Review of Dacthal (DCPA). These requests are provided, in response to the Agency's memorandum dated March 21, 2014 (received March 17, 2017), to address OPPTS Guideline requirements for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA.

Enclosed please find the following documents (submitted via CDX e-portal system):

- Registration Application form (8570-1, dated 22-Feb-2018).
- Transmittal document (dated 22-Feb-2018).
- Response addressing the following Guidelines:
  - ss-1072 – Chronic Sediment (Leptocheirus plumulosus)
  - 850.1025 – Oyster Acute Toxicity (shell deposition)
  - 850.1035 – Mysid Acute Toxicity
  - 850.1075 – Fish Acute Toxicity, Freshwater and Marine
  - 850.1300 – Daphnid Chronic Toxicity
  - 850.1350 – Mysid Chronic Toxicity
  - 850.1400 – Fish Early Life-Stage Toxicity
  - 850.4400 – Aquatic Vascular Plant Toxicity, Tiers 1, 2 (Lemna)
  - 850.5400 – Aquatic Non-Vascular Plant Toxicity Tier 1, 2 (Algal)
  - 850.4100 – Terrestrial Plant Toxicity Tier 1 (Seedling Emergence)
  - 835.4300 – Aerobic Aquatic Metabolism
  - 835.4400 – Anaerobic Aquatic Metabolism
  - 835.6100 – Terrestrial Field Dissipation

If you have questions or require additional information please do not hesitate to contact me at (949) 221-6109 or jonw@amvac-chemical.com. Thank you for your attention to this matter.

Best regards,



Jon C. Wood
Sr. Regulatory Manager

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
5481-495	Katherine Montague	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Technical Chlorthal Dimethyl	23	

5. Name and Address of Applicant *(Include Zip Code*

AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660

☐ *Check if this is a new address*

6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below
☐ Final printed labels in response to Agency letter dated 06-Jun-2017
☐ Resubmission in response to Agency letter dated _____
☐ "Me Too" Application
☐ Notification - Explain below
☑ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Waiver requests (13) submitted in support of Registration Review of dacthal (DCPA GDCI ID# 078701). See attached transmittal document for list.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
* *Certification must be submitted*	If "Yes" Unit Packaging wt. / No. per container	If "Yes" Package wt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐ On Label ☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithographed ☐ Stenciled ☐ Paper glued ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jon C. Wood	Sr. Regulatory Manager	(949) 221-6109

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete.

I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

8. Date Application Received (Stamped)

2. Signature	3. Title	
Jon C. Wood	Sr. Regulatory Manager	
4. Typed Name	**5. Date**	
Jon C. Wood	22-Feb-2018	

Transmittal Document

Name and Address of Submitter:

AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660-1868

Company No. 5481

Contact Person: Jon C. Wood
Sr. Regulatory Manager
(949) 221-6109
jonw@amvac-chemical.com

Regulatory Actions:

Submission of waivers in support of Registration Review of Dacthal.

Transmittal Date: February 22, 2018

List of Submitted Studies:

Vol. #	Contents	Guideline No.	Study Report Title	MRID No.
1	GDCI Waiver	ss-1072	Chronic Sediment – (Leptocheirus plumulosus)	50533501
2	GDCI Waiver	850.1025	Oyster Acute Toxicity Test (shell deposition)	50533502
3	GDCI Waiver	850-1035	Mysid Acute Toxicity Test	50533503
4	GDCI Waiver	850.1075	Fish Acute Toxicity Test, Freshwater and Marine	50533504
5	GDCI Waiver	850.1300	Daphnid Chronic Toxicity Test	50533505
6	GDCI Waiver	850.1350	Mysid Chronic Toxicity Test	50533506
7	GDCI Waiver	850.1400	Fish Early Life-Stage Toxicity Test	50533507
8	GDCI Waiver	850.4400	Aquatic Vascular Plant Toxicity Test – Tiers I/II (*Lemna spp.*)	50533508
9	GDCI Waiver	850.5400	Aquatic Non-Vascular Plant Toxicity Test – Tiers I/II (Algal species)	50533509
10	GDCI Waiver	850.4100	Terrestrial Plant Toxicity – Tier 1 (Seedling Emergence)	50533510
11	GDCI Waiver	835.4300	Aerobic Aquatic Metabolism	50533511
12	GDCI Waiver	835.4400	Anaerobic Aquatic Metabolism	50533512
13	GDCI Waiver	835.6100	Terrestrial Field Dissipation	50533513

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: SS-1072 – [Chronic Sediment - Leptocheirus plumulosus]

Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

SS-1072: [Chronic Sediment - Leptocheirus plumulosus]

Within our March 17 teleconference with the EPA, AMVAC discussed the outstanding chronic *Leptocheirus plumulosus* data requirement. We were informed that EFED continues to seek an interim 10-day sub-chronic study. In response, we affirmed our view that such a study would not be useful in the Agency's determination of the chronic toxicity potential of Dacthal for reasons that are documented in our two previous submissions. Although we disagree with EFED on this point, we explained that AMVAC remains committed to conducting the chronic study once the performance guidelines are established.

The basis for our position was discussed. It remains our view that the sub-chronic study is really only useful as a measure of survival toxicity. We understand from discussions with CRO experts who are managing these types of laboratory studies that the sub-chronic study is limited in scope as assessing other effects such as the impact of exposure on growth is typically not well defined due to the shortened study period. Based on the established aquatic profile of Dacthal, which includes two chronic studies on sediment-dwelling organisms, there is already substantial evidence for predicting that acute effects will not emerge within the study's 10-day window.

Thus far, our view that the sub-chronic study is not a true indicator of chronic toxicity does not appear to be shared by EFED. For that reason, we discussed the possibility of AMVAC conducting the sub-chronic study as a part of a tiered approach. Under these circumstances, should the sub-chronic study be conducted and found not to reveal any sign of toxicity, we would expect EFED to recommend that the chronic study requirement was fulfilled. It is our understanding that the attending EPA staff on the conference call believed that there was merit in this proposal and that they would seek a response from EFED. We are currently awaiting that response.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1025: Oyster Acute Toxicity Test (shell deposition)

Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1025: Oyster Acute Toxicity Test (shell deposition)

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1035: Mysid Acute Toxicity Test

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1035: Mysid Acute Toxicity Test

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1300: Daphnid Chronic Toxicity Test

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1300: Daphnid Chronic Toxicity Test

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1075: Fish Acute Toxicity Test, Freshwater and Marine

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1075: Fish Acute Toxicity Test, Freshwater and Marine

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1350: Mysid Chronic Toxicity Test

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1350: Mysid Chronic Toxicity Test

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.1400: Fish Early Life-Stage Toxicity Test

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.1400: Fish Early Life-Stage Toxicity Test

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.4400: Aquatic Vascular Plant Toxicity Test – Tiers I/II (*Lemna spp.*)

Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.4400: Aquatic Vascular Plant Toxicity Test – Tiers I/II (*Lemna spp.*)

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850.5400: Aquatic Non-Vascular Plant Toxicity Test – Tiers I/II (Algal species)

Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850.5400: Aquatic Non-Vascular Plant Toxicity Test – Tiers I/II (Algal species)

In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is conducting a limited set of toxicity tests initially for TPA (for example an acute and chronic toxicity study in daphnids); and depending on the results of these initial studies, a full suite of studies may or may not be subsequently required".
AMVAC agrees with the Agency's proposal for conducting acute and chronic TPA studies in daphnids and reviewing those results with the Agency in order to determine whether additional aquatic organism testing is warranted.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 850:4100: Terrestrial Plant Toxicity – Tier 1 (Seedling Emergence)

Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

850:4100: Terrestrial Plant Toxicity – Tier 1 (Seedling Emergence)

The EPA has provided rationale for terrestrial plant toxicity testing, stating that the high conversion efficiency of Dacthal to TPA in soil provides a basis for further assessing the potential for effects due to exposure of this degradate. In the EPA's memorandum of March 21, 2014, the Agency states, "Toxicity data is needed for TPA; therefore one possible solution is in the conducting of a limited set of toxicity tests initially for TPA; and depending on the results of these initial studies a full suite of studies may or may not be subsequently required." On that basis, AMVAC will forthwith initiate the required testing.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 835.4400: Anaerobic Aquatic Metabolism

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

835.4400: Anaerobic Aquatic Metabolism

The EPA has indicated that based on their recognition of the anaerobic degradation pathway leading to the formation of TPA in soil, that it is important for the Agency to develop data on the fate of TPA under anaerobic conditions in an aquatic environment. AMVAC believes that previous studies have already demonstrated that microbial processes are not effective in degrading this compound. We propose that the Agency review the combined data set for the aerobic soil metabolism study, the anaerobic soil metabolism study, and the pending submission on the aerobic aquatic metabolism study to assess our contention. It is worth noting that in the anaerobic soil metabolism study (MRID 114651), TPA residues that are quickly formed remain stable throughout the duration of the study. This has been demonstrated in a sandy loam, a sandy clay loam, and a clay soil. There is also data demonstrating that TPA is fully stable to hydrolysis. Therefore, it is reasonable to assume full stability of TPA under anaerobic aquatic metabolism conditions with the expectation that a short-lived laboratory study would demonstrate no evidence of any degradation. The additional data that is forthcoming from the aerobic aquatic metabolism study will provide further evidence concerning the stability of TPA to microorganisms.

Therefore, we would request that the EPA defers their decision on the need of an anaerobic aquatic metabolism study until it has had the opportunity to consider the finding of all three studies in the context that is herein presented.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 835.4300: Aerobic Aquatic Metabolism

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

835.4300: Aerobic Aquatic Metabolism

The EPA has indicated that based on their recognition of the aerobic soil degradation pathway leading to the formation of TPA, it is important for the Agency to develop data on the aquatic dissipation pathway for DCPA. In a recent response to EPA, we have informed the Agency that we intend to submit a study report that addresses this requirement by providing appropriate fate data for both DCPA and TPA.

Registration Review GDCI for DCPA (chlorthal-dimethyl)
ID # GDCI-0798701-1140
Waiver for OPPTS Guideline: 835.6100: Terrestrial Field Dissipation

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Rebuttal to EPA's March 21, 2014 memorandum, "Response to registrant's data waiver requests for environmental fate and ecological effects related to data for the parent DCPA and degradate TPA".

835.6100: Terrestrial Field Dissipation

AMVAC has previously asserted that the 2003 "DCPA (Dacthal® Small-Scale-Water Monitoring Study" by Cooper, S.C. (MRID 44082601) provides the necessary soil dissipation study data to address the nature of this requirement. We have also requested that the Agency provide us with the DER for this study.

As stated in the report, the two prospective groundwater studies were commissioned as a result of EPA's review of 1984 leaching and dissipation study data, which was viewed as inadequate for addressing the issues of soil persistency and half-life determination of the di-acid metabolite SDS-954. This work was conducted in response to the May 1988 Data Call-In Notice as a means to provide information to address these deficiencies.

The NY study site utilized 2 applications at an initial rate of 7.6 lbs. ai/A, followed by a higher rate of 10.6 lbs. ai/A. The CA study site utilized 3 applications at an initial rate of 14.3 lbs. ai/A, followed by a higher rate at 9.6 lbs. ai/A, and with a final rate of 6.5 lbs. ai/A.

The NY study findings were clear in that there was strong evidence that the biotic community in the soil was induced into a transformation that significantly modified the rate of degradation. Dacthal degradatiuon yielded a half-life after the first application of 36.6 days, which was shortened to 22.6 days after the second application and further reduced to 2.7 days after the third application. Similar assimilation of the microbial community was noted in the CA study.

The metabolite TPA was determined to be formed at the NY site by the day-7 sampling. There was no evidence of significant leaching of parent (i.e., below 12 inches). For the initial degradate SDS-1449 (mono-acid), the decline profile was similar to parent and significant leaching was similarly not evident except at the 57-day sampling interval where residues were detected to a depth of 48 inches. This degradate was measured in the soil profile for up to ca. 2 months in the NY study and up to 6 months in the CA study. The maximum soil concentration did not exceed 0.15 ppm at either site, which represents only a small fraction of the chemical and is consistent with the premise that there is a rapid further transformation of SDS-1449 to SDS-954 (di-acid).

The metabolite of leaching concern was established to be SDS-954, which was demonstrated to be highly mobile, which his consistent with past reported detections of this compound in groundwater. This key degradate was mesured at levels as high as 0.96 ppm in the CA-study and 1.23 ppm in the NY study. This study also provided important information in terms of groundwater contaimination by providing measurements of SDS-954 at lower soil depths using lysimetry and at different locations in the groundwater.

Form this work, one can conclude that the soil disipation half-life of dacthall is highly variable and that the chemical can be somewhat persistent until the microbial community adapts to the presence of the compound and is able to rapidly hydrolyze the ester functionality of the parent compound to create the di-acid. Although the intermediate metabolity SDS-1449 is very transient, the secondary metabolite SDS-954 is highly persistent and mobile. Its high mobility precludes an acurate determination of the soil half-life. However, there is sufficient evidence to support the contention that this compound is stable in the soil profile. The more extended scope of thse studies provides a much more encompassing view of the fate of Dacthal in the soil than is traditionally provided by soil dissipation studies. These studies also include information concerning the persistence of Dacthal residues in the thatch layer.

The EPA has also raised the question of the potential volatility of DCPA; however these studies demonstrate sufficient persistency of the parent compound to refute the notion that volatility would be a meaningful factor in its dissipation in the environment.

In summary, for reasons herein described, it is evident that DCPA dissipation has been well characterized and further attempts to define the degradation rate of the chemical would not be useful as chemical degradation varies widely. What is important to note is that soils once acclimated to the presence of the chemical, can degrade the Dacthal very rapidly. The perspective groundwater studies also provide information not typically available in field dissipation studies, verifying that DCPA is not prone to leaching to groundwater. The study further validates the very transient nature of the mon-acid metabolite and the persistence of the di-acid metabolite and its propensity for leaching. As TPA does not degrade in water or soils appreciably – there is no value in further exploring its fate in a soil environment. It is through other metabolic processes, such as that demonstrated in plants, where the chemical can be further degraded. With the submission of these high tier studies, there is no merit in developing additional field dissipation study data.

Data Submission

DCI Number: GDCI-078701-1140

Data Call-In Information	
Company Name	AMVAC CHEMICAL CORPORATION
Company Address	4695 MACARTHUR COURT, SUITE 1200 NEWPORT BEACH, CA 926601706
DCI Type	Generic
Issued Date	01/31/2013
90-Day Response Deadline	05/11/2013
CRM Information	King, Marquea
Chemical Name	DCPA (or chlorthal-dimethyl?)
Chemical Number	078701

Data Submission Information	
Tracking Number	CDX_DCI_2018_000167

DCI Level Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI Waivers_cover signed.pdf	Submission Cover Letter	N.A.	N	02/23/2018

EPA Product Registration Number(s)

5481-495

EPA Product Registration Documents: 5481-495

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI Waivers_Transmittal_DRAFT.pdf	General Correspondences	N.A.	N	02/23/2018
20180222 DCPA GDCI Waivers_870-1_signed.pdf	General Correspondences	N.A.	N	02/23/2018

Guideline Requirement Number(s)

Guideline Requirement Number - 835.1230	
Study Title	Sediment and soil absorption/desorption for parent and degradates
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR
Time Frame	12 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.

Guideline Requirement Number - 835.1240	
Study Title	Soil column leaching
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR

Time Frame	12 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.
Guideline Requirement Number - 835.2120	
Study Title	Hydrolysis of parent and degradates as a function of pH at 25 C
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR
Time Frame	12 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.
Guideline Requirement Number - 835.4100	
Study Title	Aerobic soil metabolism
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR
Time Frame	24 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.
Guideline Requirement Number - 835.4200	
Study Title	Anaerobic soil metabolism
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR
Time Frame	24 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.
Guideline Requirement Number - 835.4300	
Study Title	Aerobic aquatic metabolism
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	24 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate.
Registrant Response	N.A.
Uploaded Documents	

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 835.4300 Aerobic Aquatic Metabolism.pdf	Data Waiver Request	50533511	No CBI	02/23/2018

Guideline Requirement Number - 835.4400	
Study Title	Anaerobic aquatic metabolism
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	DEGR
Time Frame	24 month(s)
Footnote(s)	3. Test to be conducted with TPA degradate only.
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 835.4400 Anaerobic Aquatic Metabolism.pdf	Data Waiver Request	50533512	No CBI	02/23/2018

Guideline Requirement Number - 835.6100	
Study Title	Terrestrial field dissipation
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	24 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate.
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 835.6100 Terrestrial Field Dissipation.pdf	Data Waiver Request	50533513	No CBI	02/23/2018

Guideline Requirement Number - 850.1010	
Study Title	Aquatic invertebrate acute toxicity, test, freshwater daphnids
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate.
Registrant Response	N.A.

Guideline Requirement Number - 850.1025

Study Title	Oyster acute toxicity test (shell deposition)
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 15. Preferred test species is Crassostrea virginica, Eastern oyster.
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 850.1025 Oyster Acute Toxicity Test (shell deposition).pdf	Data Waiver Request	50533502	No CBI	02/23/2018

Guideline Requirement Number - 850.1035

Study Title	Mysid acute toxicity test
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 13. Preferred test species is Mysidopsis bahia, mysid shrimp.
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 850.1035 Mysid Acute Toxicity Test.pdf	Data Waiver Request	50533503	No CBI	02/23/2018

Guideline Requirement Number - 850.1075

Study Title	Fish acute toxicity test, freshwater and marine
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 16. Preferred test species are rainbow trout, Oncorhynchus mykiss and bluegill sunfish, Lepomis macrochirus (freshwater); and sheepshead minnow, Cyprinodon variegatus (estuarine/marine).
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date

20180222 DCPA GDCI_Waiver 850.1075 Fish Acute Toxicity Test, Freshwater and Marine.pdf	Data Waiver Request	50533504	No CBI	02/23/2018

Guideline Requirement Number - 850.1300	
Study Title	Daphnid chronic toxicity test
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 14. Preferred test species is Daphnia magna.
Registrant Response	N.A.

Uploaded Documents				
File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 850.1300 Daphnid Chronic Toxicity Test.pdf	Data Waiver Request	50533505	No CBI	02/23/2018

Guideline Requirement Number - 850.1350	
Study Title	Mysid chronic toxicity test
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 13. Preferred test species is Mysidopsis bahia, mysid shrimp.
Registrant Response	N.A.

Uploaded Documents				
File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 850.1350 Mysid Chronic Toxicity Test.pdf	Data Waiver Request	50533506	No CBI	02/23/2018

Guideline Requirement Number - 850.1400	
Study Title	Fish early-life stage toxicity test
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 16. Preferred test species are rainbow trout, Oncorhynchus mykiss and bluegill sunfish, Lepomis macrochirus (freshwater); and sheepshead minnow, Cyprinodon variegatus (estuarine/marine).
Registrant Response	N.A.

Uploaded Documents				
File Name	**File Type**	**MRID**	**CBI**	**Submitted Date**
20180222 DCPA GDCI_Waiver 850.1400 Fish Early Life-Stage Toxicity Test.pdf	**Data Waiver Request**	**50533507**	**No CBI**	**02/23/2018**

Guideline Requirement Number - 850.1730	
Study Title	**Fish BCF**
Protocol	**N**
Target Submission Date	**01/31/2014**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**DEGR**
Time Frame	**12 month(s)**
Footnote(s)	**3. Test to be conducted with TPA degradate only.**
Registrant Response	**N.A.**

Guideline Requirement Number - 850.2100	
Study Title	**Avian acute oral toxicity test**
Protocol	**N**
Target Submission Date	**01/31/2014**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**12 month(s)**
Footnote(s)	**12. Preferred test species is redwing blackbird, Agelaius phoneiceus.**
Registrant Response	**N.A.**

Guideline Requirement Number - 850.2300	
Study Title	**Avian reproduction test**
Protocol	**N**
Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**24 month(s)**
Footnote(s)	**17. Preferred test species are mallard duck and Northern bobwhite quail.**
Registrant Response	**N.A.**

Guideline Requirement Number - 850.4100	
Study Title	**Terrestrial Plant Toxicity (Seedling Emergence)**
Protocol	**N**
Target Submission Date	**01/31/2014**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TEP**
Time Frame	**12 month(s)**

Footnote(s)	20. Data are required for six species of dicots from at least four families, one species of which is soybean (Glycine max). Data are required for four species of monocots from at least two families, one species of which is corn (Zea mays). At least one of either the monocot or dicot species must be a root crop. 25. A Tier II study is required. A Tier I plant study may be conducted in lieu of a Tier II study with the understanding that any adverse effects observed by the Tier I study would necessitate conduct and submission of a Tier II study as well. The purpose of a Tier II study is to establish both a definitive No Observed Adverse Effect Concentration (NOAEC), or alternatively, a concentration at which there is a 5%observed inhibition effect (IC05), to be used in a risk assessment and effects determination for endangered or threatened species (listed species), and a definitive IC25 (concentration at which there is a 25%observed inhibition effect) for assessing risk to non-listed nontarget plants. If any adverse effects are observed in a Tier I study and neither a definitive NOAEC nor a definitive IC05 value is available, then the Agency may have to presume in its effects determination, that DCPA "may affect" and is "likely to adversely affect" listed plant species.
Registrant Response	N.A.

Uploaded Documents

File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver 850.4100 Terrestrial Plant Toxicity Tier 1 (Seedling Emergence).pdf	Data Waiver Request	50533510	No CBI	02/23/2018

Guideline Requirement Number - 850.4150

Study Title	Terrestrial plant toxicity, Tier 1 (vegetative vigor)
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 20. Data are required for six species of dicots from at least four families, one species of which is soybean (Glycine max). Data are required for four species of monocots from at least two families, one species of which is corn (Zea mays). At least one of either the monocot or dicot species must be a root crop. 25. A Tier II study is required. A Tier I plant study may be conducted in lieu of a Tier II study with the understanding that any adverse effects observed by the Tier I study would necessitate conduct and submission of a Tier II study as well. The purpose of a Tier II study is to establish both a definitive No Observed Adverse Effect Concentration (NOAEC), or alternatively, a concentration at which there is a 5%observed inhibition effect (IC05), to be used in a risk assessment and effects determination for endangered or threatened species (listed species), and a definitive IC25 (concentration at which there is a 25%observed inhibition effect) for assessing risk to non-listed nontarget plants. If any adverse effects are observed in a Tier I study and neither a definitive NOAEC nor a definitive IC05 value is available, then the Agency may have to presume in its effects determination, that DCPA "may affect" and is "likely to adversely affect" listed plant species.
Registrant Response	N.A.

Guideline Requirement Number - 850.4400

Study Title	Aquatic plant toxicity test using Lemna spp. Tiers I and II
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 22. Data are required for a duckweed species. 24. A Tier II study is required. A Tier I plant study may be conducted in lieu of a Tier II study with the understanding that any adverse effects observed by the Tier I study would necessitate conduct and submission of a Tier II study as well. The purpose of a Tier II study is to establish both a definitive No Observed Adverse Effect Concentration (NOAEC), or alternatively, a concentration at which there is a 5%observed inhibition effect (IC05), to be used in a risk assessment and effects determination for endangered or threatened species (listed species), and a definitive IC50 (concentration at which there is a 50%observed inhibition effect) for assessing risk to non-listed nontarget plants. If any adverse effects are observed in a Tier I study and neither a definitive NOAEC nor a definitive IC05 value is available, then the Agency may have to presume in its effects determination, that DCPA "may affect" and is "likely to adversely affect" listed plant species.

Registrant Response	N.A.

Uploaded Documents				
File Name	**File Type**	**MRID**	**CBI**	**Submitted Date**
20180222 DCPA GDCI_Waiver 850.4400 Aquatic Vascular Plant Toxicity Test, Tiers I_II (Lemna spp.).pdf	Data Waiver Request	50533508	No CBI	02/23/2018

Guideline Requirement Number - 850.5400	
Study Title	Algal toxicity, Tiers 1 and II
Protocol	N
Target Submission Date	01/31/2014
Use Pattern	A; B; C; II; K; U
Test Substance	COMMENT
Time Frame	12 month(s)
Footnote(s)	2. Tests to be conducted with DCPA parent and TPA degradate. 21. Data are required for a freshwater green alga species, a freshwater diatom species, a marine diatom species, and a cyanobacterium (formerly known as blue-green algae). 24. A Tier II study is required. A Tier I plant study may be conducted in lieu of a Tier II study with the understanding that any adverse effects observed by the Tier I study would necessitate conduct and submission of a Tier II study as well. The purpose of a Tier II study is to establish both a definitive No Observed Adverse Effect Concentration (NOAEC), or alternatively, a concentration at which there is a 5%observed inhibition effect (IC05), to be used in a risk assessment and effects determination for endangered or threatened species (listed species), and a definitive IC50 (concentration at which there is a 50%observed inhibition effect) for assessing risk to non-listed nontarget plants. If any adverse effects are observed in a Tier I study and neither a definitive NOAEC nor a definitive IC05 value is available, then the Agency may have to presume in its effects determination, that DCPA "may affect" and is "likely to adversely affect" listed plant species.
Registrant Response	N.A.

Uploaded Documents				
File Name	**File Type**	**MRID**	**CBI**	**Submitted Date**
20180222 DCPA GDCI_Waiver 850.5400 Aquatic Non-Vascular Plant Toxicity Test, Tiers I_II (Algal species).pdf	Data Waiver Request	50533509	No CBI	02/23/2018

Guideline Requirement Number - 860.1300	
Study Title	Nature of the residue - plants, livestock
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	PAIRA
Time Frame	24 month(s)
Footnote(s)	18. Nature of the residue for poultry only. The required poultry nature of the residue study will need supporting storage stability data for all DCPA residues of concern, unless the samples from the feeding study are analyzed within six months of collection.
Registrant Response	N.A.

Guideline Requirement Number - 860.1340	
Study Title	Residue analytical method
Protocol	N
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U

Test Substance	**Residue of Concern**
Time Frame	**24 month(s)**
Footnote(s)	**7. Residue analytical method for livestock commodities only. The registrant has submitted a method for determining residues of DCPA and its metabolites that may be suitable but must be tested by an independent laboratory to ensure that it is useful.**
Registrant Response	**N.A.**
Guideline Requirement Number - 860.1380	
Study Title	**Storage stability data**
Protocol	**N**
Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TEP; res of concrn**
Time Frame	**24 month(s)**
Footnote(s)	**11. Previously submitted data from several field trials did not include necessary information about storage intervals and conditions. This information is required to allow the Agency to evaluate data from the studies with MRID #s 00017975, 00018299, 00033087, 00038919, 00058377, 00058378, 00072099, 00090259, 00114643, 00114678, 00114679, 00114680, 00114681, 00121864, and 00130562.**
Registrant Response	**N.A.**
Guideline Requirement Number - 860.1480	
Study Title	**Meat/milk/poultry/eggs**
Protocol	**N**
Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI; plant metab**
Time Frame	**24 month(s)**
Footnote(s)	**23. Cattle feeding study. The required study will need supporting storage stability data for all DCPA residues of concern, unless the samples from the feeding study are analyzed within 30 days of collection.**
Registrant Response	**N.A.**
Guideline Requirement Number - 860.1900	
Study Title	**Field accumulation in rotational crops**
Protocol	**N**
Target Submission Date	**01/31/2016**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TEP**
Time Frame	**36 month(s)**
Footnote(s)	**1. The scope of this requirement is dependent upon the registrant's intent to support the rotation of particular crops into areas previously treated with DCPA and the desired plantback interval(s) for these crops. Any crop without a registered use and for which the registrant wishes rotation to be allowed requires field trial data to determine a suitable tolerance level. A crop group approach, requiring data on representative commodities, may be appropriate if several crops within a group are to be rotated. For individual crops, testing must include the standard number of trials that would be needed to support tolerances for direct crop treatment, e.g., 20 trials for wheat. In its data submission, the registrant must indicate the crops it wishes to support for rotation and the corresponding proposed plant-back intervals.**
Registrant Response	**N.A.**
Guideline Requirement Number - 870.3465	
Study Title	**90-day inhalation toxicity**
Protocol	**N**

Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**24 month(s)**
Footnote(s)	
Registrant Response	**N.A.**
Guideline Requirement Number - 870.6200	
Study Title	**Neurotoxicity screening battery**
Protocol	**N**
Target Submission Date	**01/31/2014**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**12 month(s)**
Footnote(s)	
Registrant Response	**N.A.**
Guideline Requirement Number - 870.7800	
Study Title	**Immunotoxicity**
Protocol	**N**
Target Submission Date	**01/31/2014**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**12 month(s)**
Footnote(s)	
Registrant Response	**N.A.**
Guideline Requirement Number - SS-1066	
Study Title	**Chronic Sediment - Hyalella Azteca**
Protocol	**Y**
Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**
Test Substance	**TGAI**
Time Frame	**24 month(s)**
Footnote(s)	**6. Test Method 100.4: Hyalella azteca 42-d Test for Measuring the Effects of Sediment-associated Contaminants on Survival, Growth, and Reproduction in USEPA 2000 Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates EPA 600/R-99/064** **8. Protocol must be submitted to the Agency for review and approval prior to study inception. The draft protocol must be submitted to the Agency within 90 days of receipt of this DCI.**
Registrant Response	**N.A.**
Guideline Requirement Number - SS-1069	
Study Title	**Chronic Sediment - Chironomus dilutus**
Protocol	**Y**
Target Submission Date	**01/31/2015**
Use Pattern	**A; B; C; II; K; U**

Test Substance	TGAI
Time Frame	24 month(s)
Footnote(s)	5. Test Method 100.5: Life-cycle Test for Measuring the Effects of Sediment-associated Contaminants on Chironomus dilutus (formerly known as C. tentans) in USEPA 2000 Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates EPA 600/R-99/064 9. Protocol must be submitted to the Agency for review and approval prior to study inception. The draft protocol must be submitted to the Agency within 90 days of receipt of this DCI
Registrant Response	N.A.

Guideline Requirement Number - SS-1072	
Study Title	Chronic Sediment - Leptocheirus plumulosus
Protocol	Y
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	TGAI
Time Frame	24 month(s)
Footnote(s)	9. Protocol must be submitted to the Agency for review and approval prior to study inception. The draft protocol must be submitted to the Agency within 90 days of receipt of this DCI 19. Leptocheirus plumulosus in USEPA 2001 Method for Assessing the Chronic Toxicity of Marine and Estuarine Sediment-associated Contaminants with the Amphipod Leptocheirus plumulosus EPA 600/R-0l/020
Registrant Response	N.A.

Uploaded Documents				
File Name	File Type	MRID	CBI	Submitted Date
20180222 DCPA GDCI_Waiver SS-1072 [Chronic Sediment - Leptocheirus plumulosus].pdf	Data Waiver Request	50533501	No CBI	02/23/2018

Guideline Requirement Number - SS-1075	
Study Title	Avian Acute Inhalation
Protocol	Y
Target Submission Date	10/31/2013
Use Pattern	A; B; C; II; K; U
Test Substance	TGAI
Time Frame	9 month(s)
Footnote(s)	4. Test organism must be most sensitive avian species as shown in acute oral toxicity testing. Registrant must submit a protocol that includes an explanation of the choice of test species.
Registrant Response	N.A.

Guideline Requirement Number - SS-thyroid tox.	
Study Title	comparative thyroid toxicity study
Protocol	Y
Target Submission Date	01/31/2015
Use Pattern	A; B; C; II; K; U
Test Substance	TGAI
Time Frame	24 month(s)
Footnote(s)	10. Protocol must be submitted to the Agency for review and approval prior to study inception. The draft protocol must be submitted to the Agency within 90 days of receipt of this DCI.
Registrant Response	N.A.

Uploaded Documents				
File Name	File Type	MRID	CBI	Submitted Date
20170817 DCPA Thyroid - PTU-Positive Control Report XJ05HV_cover memo signed.pdf	General Correspondences	N.A.	Y	08/17/2017
100-TOX-063_XJ05HV Toxicology Report.pdf	Supplemental Study Data	50357301	No CBI	08/17/2017

Submitter Information	
Submitter	Eileen Rodriguez
Submitted Date	08/17/2017
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