

US EPA ARCHIVE DOCUMENT

NOV 18 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Date: November 13, 2003
Chemical: 2,4-D
PC Code: 030001, 030019,
and 030063

Subject: Data Evaluation Records (DER) for Forest Field Dissipation Studies
Submitted in Support of 2,4-dichlorophenoxyacetic acid (2,4-D)

To: Mark Seaton, Chemical Review Manager
Reregistration Branch II
Special Review and Reregistration Division (7508C)

From: Mark Corbin, Environmental Scientist
Environmental Risk Branch I
Environmental Fate and Effects Division (7507C)

Mark Corbin 11-12-03

Attached are the final Data Evaluation Records (DER) for the Forest Field Dissipation (FFD) studies submitted in support of the re-registration of 2,4-D (PC Code 030001). Two FFD studies are included using the DMAS and EHE formulations of 2,4-D are included in this package. Both studies have been determined to be supplemental in accordance with Subdivision N Guidelines. However, EFED is not requesting additional FFD studies at this time. **EFED is not requesting additional forest field dissipation studies at this time. The half lives estimated in these studies for both 2,4-D acid and 2,4-D EHE were significantly longer than in other field dissipation studies. The registrant should provide an explanation of the reason for this increased persistence and the significance of the difference compared with results from terrestrial field dissipation studies. Finally, EFED reserves the right to request additional studies pending the receipt of this information..**

US EPA ARCHIVE DOCUMENT



2010744

NOV 18 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Date: May 28, 2003
Chemical: 2,4-D
PC Code: 030001, 030019,
and 030063

Subject: Data Evaluation Records (DER) for Terrestrial Field Dissipation Studies
Submitted in Support of 2,4-dichlorophenoxyacetic acid (2,4-D)

To: Mark Seaton, Chemical Review Manager
Reregistration Branch II
Special Review and Reregistration Division (7508C)

From: Mark Corbin, Environmental Scientist
Environmental Risk Branch I
Environmental Fate and Effects Division (7507C)

Handwritten signature: Mark Corbin - 5-29-03

Attached are the final Data Evaluation Records (DER) for the Terrestrial Field Dissipation (TFD) studies submitted in support of the re-registration of 2,4-D (PC Code 030001). A total of 30 TFD studies using the DMAS and EHE formulations of 2,4-D are included in this package. All studies have been determined to be supplemental in accordance with Subdivision N Guidelines. However, EFED is not requesting additional TFD studies at this time. **EFED believes that the studies do provide sufficient information to evaluate the risk of 2,4-D and is not requesting additional terrestrial field dissipation studies at this time.**

EFED believes that sufficient evidence is provided in the studies to evaluate the environmental fate of 2,4-D. The following table summarizes the studies included in this review package.

Formulation	PC Code	MRID	Status
2,4-D DMAS	030019	43470401	Supplemental
2,4-D DMAS	030019	43669702	Supplemental
2,4-D DMAS	030019	43500301	Supplemental
2,4-D DMAS	030019	43669701	Supplemental
2,4-D DMAS	030019	43592802	Supplemental
2,4-D DMAS	030019	43612101	Supplemental
2,4-D DMAS	030019	43676803	Supplemental



2010746

US EPA ARCHIVE DOCUMENT

NOV 18 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Date: November 13, 2003
Chemical: 2,4-D
PC Code: 030001, 030019,
and 030053

Subject: Data Evaluation Records (DER) for Aquatic Field Dissipation Studies
Submitted in Support of 2,4-dichlorophenoxyacetic acid (2,4-D)

To: Mark Seaton, Chemical Review Manager
Reregistration Branch II
Special Review and Reregistration Division (7508C)

From: Mark Corbin, Environmental Scientist
Environmental Risk Branch I
Environmental Fate and Effects Division (7507C)

Handwritten signature and date: 11-12-03

Attached are the final Data Evaluation Records (DER) for the Aquatic Field Dissipation (AFD) studies submitted in support of the re-registration of 2,4-D (PC Code 030001). A total of three aquatic field dissipation studies for 2,4-D DMAS were deemed supplemental. **EFED believes that these studies may be upgraded through submission of additional data to address the issues identified and is not requesting additional terrestrial field dissipation studies at this time. However, EFED reserves the right to request additional studies pending the receipt of this information.** A single aquatic field dissipation study conducted on three separate ponds was submitted for 2,4-D butoxyethyl ester (2,4-D BEE). All three ponds used in this study were alkaline (pH ranged from 7.9 to 8.1). As noted in the environmental fate assessment, the esters of 2,4-D convert to 2,4-D acid by hydrolysis however, the rate at which hydrolysis occurs is pH dependent. 2,4-D BEE (as well as 2,4-D DMAS) is likely to be used under alkaline as well as neutral and acidic conditions. EFED believes that the studies on 2,4-D BEE do not represent the complete range of conditions under which 2,4-D BEE is likely to be used. **Therefore, EFED believes that additional data on the behavior of 2,4-D BEE under acidic to neutral aquatic conditions is needed to fully evaluate the aquatic use of 2,4-D BEE.**



2010747

DATA EVALUATION RECORD

STUDY 48

CHEM 030001	2,4-D DMAS	§164-2
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43954701

Hatfield, M. W. 1995. Aquatic dissipation of the dimethylamine salt of 2,4-D in a small pond in North Carolina. Study Number AA940026. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories Inc., Northwood, ND (processing and water analytical phase); Hazleton Wisconsin, Inc., Madison, WI (sediment analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 65 Hours

REVIEWED BY:	D. E. Toland, M.S.	Signature:
TITLE:	Scientist	Date:

EDITED BY:	P. C. DeLeo, Ph.D.	Signature:
TITLE:	Senior Scientist	Date:

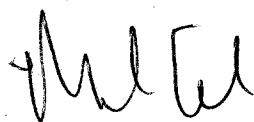
APPROVED BY:	P. H. Howard, Ph.D.	Signature:
TITLE:	Project Manager	Date:

ORG:	Syracuse Research Corp. Arlington, VA 22202
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TEL:	703/413-9369
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APPROVED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

 11-12-03

DATA EVALUATION RECORD

STUDY 16

CHEM 030001

2,4-D

§163-1

FORMULATION--00--ACTIVE INGREDIENT

STUDY ID 44117901 030001

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-D on representative agricultural soils. Laboratory Project ID: CHW 6397-166. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

STUDY ID 44105201 030001

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-DCP on representative agricultural soils. Laboratory Project ID: CHW 6397-168. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

STUDY ID 44158501 030001

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-DCA on representative agricultural soils. Laboratory Project ID: CHW 6397-170. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

APPROVED BY: Mark Corbin
TITLE: Environmental Scientist
ORG: ERB I/EFED/OPP
TEL: 703/605-0033

gml 5-28-03

SIGNATURE:

NOTE: A secondary review of these studies on the adsorption/desorption of 2,4-D, 2,4-DCP, and 2,4-DCA was previously completed by Dr. Richard Mahler in March 2001. However, the final DER was not signed. This tertiary review has been completed to confirm the results of the secondary review. Any corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER prepared by Dr. Mahler.



NOV 18 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Date: May 28, 2003

Chemical: 2,4-D

PC Code: 030001, 030019,
030025, 030035, 030016,
030053, 030063, 030066

Subject: Data Evaluation Records (DER) for Moeity Studies Submitted in Support of
2,4-dichlorophenoxyacetic acid (2,4-D)

To: Mark Seaton, Chemical Review Manager
Reregistration Branch II
Special Review and Reregistration Division (7508C)

From: Mark Corbin, Environmental Scientist
Environmental Risk Branch I
Environmental Fate and Effects Division (7507C)

Handwritten signature and date: 5-28-03

Attached are the final Data Evaluation Records (DER) for the moeity studies submitted in support of the re-registration of 2,4-D (PC Code 030001). EFED required the submission of aerobic soil metabolism, aerobic aquatic metabolism, and anaerobic aquatic metabolism studies for the moeities for each of the formulations of 2,4-D. The moeities included in this package are dimethylamine (DMAS), isopropylamine (IPA), triisopropanolamine (TIPA), ethylhexyl ester (EHE), butoxyethyl ester (BEE), diethanolamine (DEA), and isopropyl ester (IPE). The following table summarizes the studies included in this package.

Formulation	PC Code	MRID	Review Status
2,4-D DMAS	030019	43779601	Supplemental
2,4-D DMAS	030019	43908301	Acceptable
2,4-D IPA	030025	43821501	Supplemental
2,4-D IPA	030025	43799107	Supplemental
2,4-D IPA	030025	43799104	Supplemental
2,4-D TIPA	030035	43799102	Acceptable
2,4-D TIPA	030035	43799108	Supplemental



2010757

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

STUDY 30

CHEM 030001	2,4-D Dimethylamine Salt	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE (SC/L)		

STUDY ID 43834301

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D on bare soil in a corn use pattern in Ohio. AASI Study No. AA940012, Agvise Project No. RES94009, HWI Study No. 6397-135. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase), and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

Mark Corbin 11/17/03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler



DATA EVALUATION RECORD

STUDY 31

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43676803

Barney, W. P. 1995. Terrestrial field dissipation study of 2,4-D DMAS on pasture in Texas. ETI Study No: 2000PA02. Laboratory Project ID: 10-9305-02. Unpublished study performed by ETI, Inc., Research Triangle Park, NC (in-life phase); AGVISE Laboratories Inc., Northwood, ND (processing phase); Minnesota Valley Testing Laboratories, Inc., New Ulm, MN (analytical phase); and A & L Great Lakes Laboratories, Inc., IN (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

 11.12.03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler



DATA EVALUATION RECORD

STUDY 29

CHEM 030001 2,4-D DMAS §164-1

CAS No. 2008-39-1

FORMULATION--04--GRANULAR

STUDY ID 43872702

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D granules in bare soil in North Dakota. Study No. AA940023. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

AMENDED BY: Mark Corbin
TITLE: Environmental Scientist
ORG: ERB I/EFED/OPP
TEL: 703/605-0033

SIGNATURE:

Mark Corbin 11/12/03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler



DATA EVALUATION RECORD

STUDY 28

CHEM 030001	2,4-D DMAS	\$164-1
CAS No. 2008-39-1		
FORMULATION--04--GRANULAR		

STUDY ID 43872701

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D granules on turf in North Dakota. Study No. AA940022. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); Agvise Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

 11/2-03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler



DATA EVALUATION RECORD

STUDY 27

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43872401

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D on a bare soil in a wheat use pattern in North Dakota. Study No. AA940014. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

Mark Corbin 11/12/03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler



NOV 18 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Date: May 28, 2003
Chemical: 2,4-D
PC Code: 030001, 030019,
and 030063

Subject: Data Evaluation Records (DER) for Terrestrial Field Dissipation Studies
Submitted in Support of 2,4-dichlorophenoxyacetic acid (2,4-D)

To: Mark Seaton, Chemical Review Manager
Reregistration Branch II
Special Review and Reregistration Division (7508C)

From: Mark Corbin, Environmental Scientist
Environmental Risk Branch I
Environmental Fate and Effects Division (7507C)

Handwritten: Muel WL-5-28-03

Attached are the final Data Evaluation Records (DER) for the Terrestrial Field Dissipation (TFD) studies submitted in support of the re-registration of 2,4-D (PC Code 030001). A total of 30 TFD studies using the DMAS and EHE formulations of 2,4-D are included in this package. All studies have been determined to be supplemental in accordance with Subdivision N Guidelines. However, EFED is not requesting additional TFD studies at this time. **EFED believes that the studies do provide sufficient information to evaluate the risk of 2,4-D and is not requesting additional terrestrial field dissipation studies at this time.**

EFED believes that sufficient evidence is provided in the studies to evaluate the environmental fate of 2,4-D. The following table summarizes the studies included in this review package.

Formulation	PC Code	MRID	Status
2,4-D DMAS	030019	43470401	Supplemental
2,4-D DMAS	030019	43669702	Supplemental
2,4-D DMAS	030019	43500301	Supplemental
2,4-D DMAS	030019	43669701	Supplemental
2,4-D DMAS	030019	43592802	Supplemental
2,4-D DMAS	030019	43612101	Supplemental
2,4-D DMAS	030019	43676803	Supplemental



DATA EVALUATION RECORD

STUDY 17

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43705201

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D in bare soil in California. Study Nos.: AA940020 and 6397-143. Laboratory Project ID: RES94005. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); Agvise Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

 11-12-03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler.



2010786

DATA EVALUATION RECORD

STUDY 18

CHEM: 030001

2,4-D DMAS

§164-1

CAS No. 2008-39-1

FORMULATION--15--SOLUBLE CONCENTRATE

STUDY ID 43864002

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D in pasture in California. Study No: AA940016. Hazelton Project No: 6397-139. Unpublished study performed by American Agricultural Services, Inc., Cary NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and by Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

AMENDED BY: Mark Corbin
TITLE: Environmental Scientist
ORG: ERB I/EFED/OPP
TEL: 703/605-0033

SIGNATURE:

 1112-03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler.



DATA EVALUATION RECORD

STUDY 19

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43831703

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D in turf in California. Study Number AA940018. Unpublished study performed by Hazleton Wisconsin, Inc., Madison, WI (analytical phase); AGVISE Laboratories Inc., Northwood, ND (processing phase); and American Agricultural Services, Inc., Cary, NC (in-life phase); and submitted by the Industry Task Force II on 2,4-D Research Data.

AMENDED BY:	Mark Corbin
TITLE:	Environmental Scientist
ORG:	ERB I/EFED/OPP
TEL:	703/605-0033

SIGNATURE:

 11/12/03

NOTE - This amendment to the DER was prepared in order to correct minor errors in the DER signed by Dr. Richard Mahler (signature page attached) in December 2001. The corrections clarify statements and add references cited which were inadvertently left out of the final copy. The revisions do not change the conclusions of the final DER signed by Dr. Mahler.



DATA EVALUATION RECORD

STUDY 30

CHEM 030001 2,4-D Dimethylamine Salt §164-1
CAS No. 2008-39-1
FORMULATION--15--SOLUBLE CONCENTRATE (SC/L)

STUDY ID 43834301

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D on bare soil in a corn use pattern in Ohio. AASI Study No. AA940012, Agvise Project No. RES94009, HWI Study No. 6397-135. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase), and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

DIRECT REVIEW TIME = 55 Hours

REVIEWED BY: R. S. Jones Signature:
Sr. Scientist/Asst. Project Manager Date:

EDITED BY: C. A. Little Signature:
TITLE: Senior Scientist Date:

APPROVED BY: P. H. Howard Signature:
TITLE: Project Manager Date:

ORG: Syracuse Research Corp.
Arlington, VA 22202

TEL: 703/413-9369

APPROVED BY: Richard J. Mahler
TITLE: Chemist
ORG: ERCB/EFED/OPP
TEL: 703/305-7991

SIGNATURE:



DATA EVALUATION RECORD

STUDY 31

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43676803

Barney, W. P. 1995. Terrestrial field dissipation study of 2,4-D DMAS on pasture in Texas. ETI Study No: 2000PA02. Laboratory Project ID: 10-9305-02. Unpublished study performed by ETI, Inc., Research Triangle Park, NC (in-life phase); AGVISE Laboratories Inc., Northwood, ND (processing phase); Minnesota Valley Testing Laboratories, Inc., New Ulm, MN (analytical phase); and A & L Great Lakes Laboratories, Inc., IN (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 53.5 hours

REVIEWED BY:	D. E. Toland, M.S.	Signature:
TITLE:	Scientist	Date:

EDITED BY:	C. A. Little, Ph.D.	Signature:
TITLE:	Sr. Scientist/Asst. Project Manager	Date:

APPROVED BY:	P. H. Howard, Ph.D.	Signature:
TITLE:	Project Manager	Date:

ORG:	Syracuse Research Corp. Arlington, VA 22202
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TEL:	703/413-9369
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APPROVED BY:	Richard J. Mahler
TITLE:	Chemist
ORG:	ERB I/EFED/OPP
TEL:	703/305-7991

SIGNATURE:



DATA EVALUATION RECORD

STUDY 29

CHEM 030001 2,4-D DMAS §164-1

CAS No. 2008-39-1

FORMULATION--04--GRANULAR

STUDY ID 43872702

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D granules in bare soil in North Dakota. Study No. AA940023. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 61 Hours

REVIEWED BY: H. L. Evans, B.S.

Signature:

TITLE: Scientist

Date:

EDITED BY: P. C. DeLeo, Ph.D.

Signature:

TITLE: Senior Scientist

Date:

APPROVED BY: P. H. Howard, Ph.D.

Signature:

TITLE: Project Manager

Date:

ORG: Syracuse Research Corp.
Arlington, VA 22202TEL: 703/413-9369

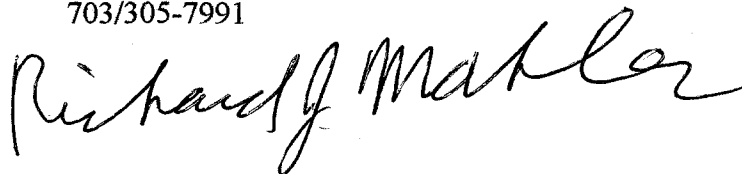
APPROVED BY: Richard J. Mahler

TITLE: Chemist

ORG: ERB I/EFED/OPP

TEL: 703/305-7991

SIGNATURE:



DATA EVALUATION RECORD

STUDY 28

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--04--GRANULAR		

STUDY ID 43872701

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D granules on turf in North Dakota. Study No. AA940022. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); Agvise Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 61 Hours

REVIEWED BY:	D. A. Saccone, B.S.	Signature:
TITLE:	Scientist	Date:

EDITED BY:	P.C. DeLeo, Ph.D.	Signature:
TITLE:	Senior Scientist	Date:

APPROVED BY:	P. H. Howard, Ph.D.	Signature:
TITLE:	Project Manager	Date:

ORG:	Syracuse Research Corp. Arlington, VA 22202
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TEL:	703/413-9369
------	--------------

APPROVED BY:	Richard J. Mahler
TITLE:	Chemist
ORG:	ERB I/EFED/OPP
TEL:	(703) 305-7991

SIGNATURE:



DATA EVALUATION RECORD

STUDY 27

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43872401

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D on a bare soil in a wheat use pattern in North Dakota. Study No. AA940014. Unpublished study performed by American Agricultural Services, Inc., Cary, NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by the Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

DIRECT REVIEW TIME = 56 Hours

REVIEWED BY:	H. L. Evans, B.S.	Signature:
TITLE:	Scientist	Date:

EDITED BY:	C. A. Little, Ph.D.	Signature:
TITLE:	Sr. Scientist/Asst. Project Manager	Date:

APPROVED BY:	P. H. Howard, Ph.D.	Signature:
TITLE:	Project Manager	Date:

ORG:	Syracuse Research Corp. Arlington, VA 22202
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TEL:	703/413-9369
------	--------------

APPROVED BY:	Richard J. Mahler
TITLE:	Chemist
ORG:	ERB I/EFED/OPP
TEL:	703/305-7991

SIGNATURE:



US EPA ARCHIVE DOCUMENT

STUDY ID 43705201

DIRECT REVIEW TIME = 55 Hours

TEL: 703/413-9369

SIGNATURE:

DATA EVALUATION RECORD

STUDY 18

CHEM: 030001 2,4-D DMAS §164-1

CAS No. 2008-39-1

FORMULATION--15--SOLUBLE CONCENTRATE

STUDY ID 43864002

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D in pasture in California. Study No: AA940016. Hazleton Project No: 6397-139. Unpublished study performed by American Agricultural Services, Inc., Cary NC (in-life phase); AGVISE Laboratories, Northwood, ND (processing phase); and by Hazleton Wisconsin, Inc., Madison, WI (analytical phase); and submitted by Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 62.5 Hours

REVIEWED BY: E. A. Heger, M.S.

Signature:

TITLE: Scientist

Date:

EDITED BY: P. C. DeLeo, Ph.D.

Signature:

TITLE: Senior Scientist

Date:

APPROVED BY: P. H. Howard, Ph.D.

Signature:

TITLE: Project Manager

Date:

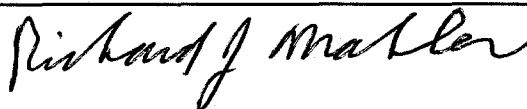
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APPROVED BY: Richard J. Mahler

TITLE: Chemist

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SIGNATURE:



DATA EVALUATION RECORD

STUDY 19

CHEM 030001	2,4-D DMAS	§164-1
CAS No. 2008-39-1		
FORMULATION--15--SOLUBLE CONCENTRATE		

STUDY ID 43831703

Hatfield, M. W. 1995. Field soil dissipation of the dimethylamine salt of 2,4-D in turf in California. Study Number AA940018. Unpublished study performed by Hazleton Wisconsin, Inc., Madison, WI (analytical phase); AGVISE Laboratories Inc., Northwood, ND (processing phase); and American Agricultural Services, Inc., Cary, NC (in-life phase); and submitted by the Industry Task Force II on 2,4-D Research Data.

DIRECT REVIEW TIME = 49.5 hours

REVIEWED BY:	D. E. Toland, M.S.	Signature:
TITLE:	Scientist	Date:

EDITED BY: C. A. Little, Ph.D. Signature:
TITLE: Sr. Scientist/Asst. Project Manager Date:

APPROVED BY: P. H. Howard, Ph.D. Signature:
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DATA EVALUATION RECORD

STUDY 16

CHEM 030001

2,4-D

§163-1

FORMULATION--00--ACTIVE INGREDIENT

STUDY ID 44117901

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-D on representative agricultural soils. Laboratory Project ID: CHW 6397-166. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

STUDY ID 44105201

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-DCP on representative agricultural soils. Laboratory Project ID: CHW 6397-168. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

STUDY ID 44158501

Fathulla, R. 1996. The adsorption and desorption of ^{14}C -2,4-DCA on representative agricultural soils. Laboratory Project ID: CHW 6397-170. Unpublished study performed by Corning Hazleton Inc., Madison, WI; and submitted by The Industry Task Force II on 2,4-D Research Data, c/o DowElanco, Indianapolis, IN.

REVIEWED BY: H. L. Evans, B.S.
TITLE: Scientist

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Date:

EDITED BY: C. A. Little, Ph.D.
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