

US EPA ARCHIVE DOCUMENT

(10-14-94)



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

OCT 14 1994  
OCT 14 1994

MEMORANDUM

SUBJECT: EUP for ARSENAL on Aquatic Sites DP D205457

TO: PM 25 Robert Taylor  
Registration Division (H7505C)

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

From: *AM* Anthony Maciorowski, Chief,  
Ecological Effects Branch (7507C)  
Environmental Fate and Effects Division

*Stephen Kleban*  
10/14/94

American Cyanamid Corporation proposes an experimental use for the isopropylamine salt of imazapyr (here after called ISO) including use on ditch banks and "where impounded water is present in and around noncrop areas". This EUP proposal involves the treatment of 2254 pounds acid equivalent (essentially the same as pounds a.i.) within six states. The maximum application rate is six pints of formulation or 1.5 lbs a.e. per acre.

Toxicity to Vertebrates and Other Animal Life

All the required acute studies have been submitted and they demonstrate that ISO is essentially non toxic to fish and birds on an acute basis. Chronic data are not available at this time.

Toxicity to Plants

A June 1 1987 EEB review presented data which had been submitted to the Agency by American Cyanamid in summarized form. These summarized data were judged unacceptable for meeting guideline requirements. These summarized data were not EC25's but were of the form:

- Corn                    21 days after exposure to 0.056 lbs a.i. per acre.  
                              Stopped growing. Some stunted. Some dying.
- Sugarbeets            21 days after exposure to 0.002 lbs per acre were  
                              still much smaller than untreated.
- Chara sp.            not affected at rates to 1 lb a.i./acre



<sup>1</sup>The maximum application rate is six pints per acre. The formulation is described as 2 lbs acid per gallon. Since there are eight pints in a gallon, the maximum application rate is 6/8ths of 2 lbs or 1.5 lbs acid per acre.



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Water hyacinth Eichornia crassipes   Controlled at 0.5 lb/ai/a  
 Elodea Elodea canadensis           "       "  
 Hydrilla Hydrilla verticillata       "       "  
 Duckweed Spirodela polyrhiza       "       "

Phytotoxicity test requirements have only recently been agreed upon by the Agency and American cyanamide. As per Jay Ellenburger's April 19, 1994 letter (attached) to John Wruble of American Cyanamid Company the phytotoxicity requirements are:

Guideline 123-1, 123-2 Seed Germination, Seedling Emergence, Vegetative Vigor and Aquatic Plant Growth with TEP

The TEP will be tested against soybean, sugarbeet, and onion in the vegetative vigor study (123-1(b)) and testing with the Lemna gibba and Selenastrum capricornutum in the aquatic plant growth study. No TEP testing is required for seed germination and seedling emergence for risk assessment.

NOTE: In this case, the term "TEP" refers to the chemical form, isopropylamine salt of imazapyr (Pers. Comm. Mike Davey, EEB).

Summary of Chemical Fate Data

The Environmental Fate One-Liner indicates that the active ingredient is very soluble in water (6.25 E 5 ppm at 20 °C) and that it is stable to hydrolysis. The 1/2 life for aerobic soil metabolism is more than 100 days. The active ingredient has little tendency to bind to soil. Paul Mastradone, Pat Ott, and Arnet Jones of EFGWB have also provided information.

Risk Assessment

Mammals, fish, and wildlife are relatively insensitive to ISO on an acute basis and should not be impacted by acute exposure. Chronic studies with vertebrate organisms have not been submitted.

It is reasonable to expect that there might be herbicidal effects but there are currently no conclusive guideline phytotoxicity data for ISO.

EEB has "CORE" phytotoxicity studies on file for imazapyr acid. However, EEB has judged that the sensitivity of plants to ISO is likely to be different. For this reason terrestrial and aquatic testing must be conducted with the isopropylamine salt of imazapyr in order support use of that form.

A conclusive regulatory risk assessment can not be prepared on the basis of the phytotoxicity data evaluated in the 1 June 1987 review but those data were volunteered by the registrant and they indicate potential risk. The proposed label stipulates a maximum of six pints of formulation per acre which is equivalent to 1.5 lbs a.e.. This level is higher than that which is said to be necessary to "control" duckweed and elodea.

### Conclusions

The registrant proposes a 3000 acre/year EUP involving treatment of impoundments of unspecified dimension. Support for this EUP is weak. At this time the Agency has no conclusive phytotoxicity data. The phytotoxicity data on hand, while not "Core", were provided by the registrant. These phytotoxicity data indicate that effect levels would be exceeded for some water plants. Two better known plants which (by these nonguideline data) might be at risk were the duckweed (the small floating, flowering plant) and elodea (a ubiquitous submergent flowering plant which provides forage and cover for fish).

Also important to our considerations, EFGWB, our chemical support Branch, characterizes ISO chemical as persistent and likely to run off. If the material runs off, then nontarget surface water may become contaminated. If the material persists, then chronic fish and avian study results should be on hand to evaluate use in wet areas.

Attachment: Ellenburger's letter

NOTE TO PM:

RE: EUP and Endangered Plants

**Ecological Significance of EUP**

The overall impact of this proposed EUP is expected to be minimal on a regional or national ecosystem level. The total poundage of arsenal released into the environment will be **diluted** in a relatively short time.

Locally, however, there may be some significant effects to semi-aquatic and aquatic plants and aquatic habitats where arsenal moves, as drift or with surface water, out of the target area.

**Consideration of Section 3 Registration**

Of much greater ecological significance would be a **section 3** registration for this proposed use pattern where many more acres in more states may be treated.

**Endangered Species**

In states where substantial acreage will be treated it is recommended that protective measures be imposed to avoid exposure to endangered plant species. Therefore, the EEB is identifying the endangered plant species, and the counties where they occur in Florida and Texas. According to our information, there are no endangered plant species in Louisiana.

One alternative is to avoid counties where endangered plant species occur (see list).

If use is essential in a county where endangered plant species occur, another alternative would be to ensure that the specific treated sites do not contain endangered plant species **and** that endangered plants do not occur downstream from, or within the drift zone of, treated sites such that exposure may occur.

If you have further questions, please contact Bob Hitch.

*Daniel Reich*

10-14-94



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

APR 19 1991

CERTIFIED MAIL

P 065 165 543 OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

John Wruble  
Product Registration Manager  
American Cyanamid Company  
Agricultural Research Division  
P.O. Box 400  
Princeton, NJ 08543-0400

SUBJECT: Rebuttal to upgrade two ecological study reviews, and review of protocol for plant studies using Arsenal, case 3021.

Dear Mr. Wruble:

In response to your rebuttal submitted with your 90 day response, the Agency has made the following conclusions:

Guideline 72-3b Estuarine/marine Mollusk

MRID 41315802

The Agency has reviewed your request to upgrade this study. We maintain that a less than 2mm of new shell growth is indicative of an oyster undergoing stress. The test conditions may have contributed to stress on the oysters by having the flow-through rate of 1.05 L/oyster/hour with no supplemental food added. The SEP provides for a flow-through rate of 5 L/oyster/hour. Based on the distance from the ocean to the test site, it appears that the seawater was trucked in. During such time, the food organisms in the seawater (such as algae) may have been inhibited during the transport and storage. The oysters may not have been feeding well because of low flow and no supplemental food added thereby causing the inadequate shell deposition. This study remains unacceptable, but because preliminary calculations for estimated environmental exposure is 1.5 ppm and the EC<sub>50</sub> for oysters is >137 ppm, further data are not required.

173

Guideline 72-4a Early Life Stage Fish

MRID 41315804

This study showed poor embryo survival in the control. You have indicated that the Agency's SEP state that the test should be terminated if the average percent of embryo (after thinning) that produce live fry for release into the control treatment is less than 50%. Although the SEP allows no less than 50% average of embryos that produce live fry for release into the test chambers, the current thinking among the professionals in the field, the ASTM in 1987 and OECD in 1992, is that no less than 66% of the embryos



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should be permitted. Following this guidance, the study is upgraded to supplemental and no further testing is necessary.

Guideline 123-1, 123-2 Seed Germination, Seedling Emergence, Vegetative Vigor and Aquatic Plant Growth with TEP

The Agency has determined that the data required for risk assessment for Arsenal would be the TEP for Arsenal testing of soybean, sugarbeet and onion in the vegetative vigor study (123-1(b)), and testing with only Lemna gibba and Selenastrum capricornutum in the aquatic plant growth study (123-2(b)). No TEP testing is required for seed germination and seedling emergence for risk assessment.

A copy of our review is enclosed. If you have any further questions, please contact Bonnie Adler in the Accelerated Reregistration Branch at (703) 308-8523.

Sincerely yours,



Jay Ellenberger, Chief  
Accelerated Reregistration Branch  
Special Review and  
Reregistration Division

Enclosure

cc: Robert Taylor, PM-25  
Mike Davy, EEB, EFGWB

PLANT  
 ENDANGERED SPECIES BY COUNTY LIST

STATE: FLORIDA	CERTAINTY OF OCCURRENCE	GROUP	STATUS
<u>COUNTY: BAKER</u> IXIA, BARTRAM'S	KNOWN	PLANT	W
<u>COUNTY: BAY</u> BIRDS-IN-A-NEST, WHITE SPURGE, TELEPHUS	KNOWN KNOWN	PLANT PLANT	P P
<u>COUNTY: BRADFORD</u> IXIA, BARTRAM'S	KNOWN	PLANT	W
<u>COUNTY: CHARLOTTE</u> PAWPAW, BEAUTIFUL	KNOWN	PLANT	L
<u>COUNTY: CLAY</u> IXIA, BARTRAM'S RHODODENDRON, CHAPMAN	KNOWN KNOWN	PLANT PLANT	W L
<u>COUNTY: COLLIER</u> SNAKEROOT	KNOWN	PLANT	L
<u>COUNTY: DADE</u> EUPHORBIA GARBERI LEAD-PLANT, CRENUATE MILKPEA, SMALL'S POLYGALA, TINY SPURGE, TELEPHUS	KNOWN KNOWN KNOWN KNOWN KNOWN	PLANT PLANT PLANT PLANT PLANT	L L L L L
<u>COUNTY: DE SOTO</u> WHITLOW-WORT, PAPERY	POSSIBLE	PLANT	L
<u>COUNTY: DUVAL</u> IXIA, BARTRAM'S	KNOWN	PLANT	W
<u>COUNTY: FRANKLIN</u> BEAUTY, HARPER'S BIRDS-IN-A-NEST, WHITE SKULLCAP, FLORIDA SPURGE, TELEPHUS	KNOWN KNOWN KNOWN KNOWN	PLANT PLANT PLANT PLANT	L P P P
<u>COUNTY: GADSDEN</u> CAMPION, FRINGED RHODODENDRON, CHAPMAN TORREYA, FLORIDA	KNOWN KNOWN KNOWN	PLANT PLANT PLANT	L L L
<u>COUNTY: GULF</u> BIRDS-IN-A-NEST, WHITE	KNOWN	PLANT	P

(7)



PLANT  
 ENDANGERED SPECIES BY COUNTY LIST

STATE: FLORIDA	CERTAINTY OF OCCURRENCE	GROUP	STATUS
RHODODENDRON, CHAPMAN	KNOWN	PLANT	L
SKULLCAP, FLORIDA	KNOWN	PLANT	P
SPURGE, TELEPHUS	KNOWN	PLANT	P
<u>COUNTY: HARDEE</u>			
BONAMIA, FLORIDA	KNOWN	PLANT	L
FRINGE TREE, PYGMY	KNOWN	PLANT	L
<u>COUNTY: HERNANDO</u>			
BELLFLOWER, BROOKSVILLE	KNOWN	PLANT	L
WATER-WILLOW, COOLEY'S	KNOWN	PLANT	L
<u>COUNTY: HIGHLANDS</u>			
BLAZING STAR, SCRUB	KNOWN	PLANT	L
BONAMIA, FLORIDA	KNOWN	PLANT	L
FRINGE TREE, PYGMY	KNOWN	PLANT	L
HYPERICUM, HIGHLANDS SCRUB	KNOWN	PLANT	L
MINT, GARRETT'S	KNOWN	PLANT	L
MINT, SCRUB	KNOWN	PLANT	L
MUSTARD, CARTER'S	KNOWN	PLANT	L
PLUM, SCRUB	KNOWN	PLANT	L
SNAKEROOT	KNOWN	PLANT	L
WHITLOW-WORT, PAPERY	KNOWN	PLANT	L
WIREWEED	KNOWN	PLANT	L
ZIZIPHUS, FLORIDA	KNOWN	PLANT	L
<u>COUNTY: HILLSBOROUGH</u>			
ASTER, FLORIDA GOLDEN	KNOWN	PLANT	L
<u>COUNTY: INDIAN RIVER</u>			
MINT, LAKELA'S	KNOWN	PLANT	L
<u>COUNTY: JACKSON</u>			
TORREYA, FLORIDA	KNOWN	PLANT	L
<u>COUNTY: JEFFERSON</u>			
GOOSEBERRY, MICCOSUKEE (FLORIDA)	KNOWN	PLANT	L
<u>COUNTY: LAKE</u>			
BONAMIA, FLORIDA	KNOWN	PLANT	L
FRINGE TREE, PYGMY	KNOWN	PLANT	L
PLUM, SCRUB	KNOWN	PLANT	L
WAREA, WIDE-LEAF	KNOWN	PLANT	L
WHITLOW-WORT, PAPERY	POSSIBLE	PLANT	L
<u>COUNTY: LEE</u>			
PAWPAW, BEAUTIFUL	KNOWN	PLANT	L

STATE: FLORIDA

PLANT  
 ENDANGERED SPECIES BY COUNTY LIST

STATE: FLORIDA	CERTAINTY OF OCCURRENCE	GROUP	STATUS
<u>COUNTY: LIBERTY</u>			
BEAUTY, HARPER'S	KNOWN	PLANT	L
BIRDS-IN-A-NEST, WHITE	KNOWN	PLANT	P
RHODODENDRON, CHAPMAN	KNOWN	PLANT	L
SKULLCAP, FLORIDA	KNOWN	PLANT	P
TORREYA, FLORIDA	KNOWN	PLANT	L
<u>COUNTY: MARION</u>			
BONAMIA, FLORIDA	KNOWN	PLANT	L
MINT, LONGSPURRED	KNOWN	PLANT	L
<u>COUNTY: MARTIN</u>			
PAWPAW, FOUR-PETAL	KNOWN	PLANT	L
<u>COUNTY: MONROE</u>			
CACTUS, KEY TREE-	KNOWN	PLANT	L
EUPHORBIA GARBERI	KNOWN	PLANT	L
<u>COUNTY: ORANGE</u>			
BONAMIA, FLORIDA	KNOWN	PLANT	L
LUPINE, SCRUB	KNOWN	PLANT	L
PAWPAW, BEAUTIFUL	KNOWN	PLANT	L
WHITLOW-WORT, PAPERY	KNOWN	PLANT	L
<u>COUNTY: OSCEOLA</u>			
FRINGE TREE, PYGMY	KNOWN	PLANT	L
<u>COUNTY: PALM BEACH</u>			
PAWPAW, FOUR-PETAL	KNOWN	PLANT	L
<u>COUNTY: POLK</u>			
BLAZING STAR, SCRUB	KNOWN	PLANT	L
BONAMIA, FLORIDA	KNOWN	PLANT	L
FRINGE TREE, PYGMY	KNOWN	PLANT	L
HYPERICUM, HIGHLANDS SCRUB	KNOWN	PLANT	L
LUPINE, SCRUB	KNOWN	PLANT	L
MUSTARD, CARTER'S	KNOWN	PLANT	L
PLUM, SCRUB	KNOWN	PLANT	L
WAREA, WIDE-LEAF	KNOWN	PLANT	L
WHITLOW-WORT, PAPERY	KNOWN	PLANT	L
WIRE NEED	KNOWN	PLANT	L
ZIZIPHUS, FLORIDA	KNOWN	PLANT	L
<u>COUNTY: PUTNAM</u>			
IXIA, BARTRAM'S	KNOWN	PLANT	W
SNAKEROOT	KNOWN	PLANT	L

**PLANT  
ENDANGERED SPECIES BY COUNTY LIST**

<b>STATE: FLORIDA</b>	<b><u>CERTAINTY OF OCCURRENCE</u></b>	<b><u>GROUP</u></b>	<b><u>STATUS</u></b>
<b><u>COUNTY: ST. JOHNS</u> IXIA, BARTRAM'S</b>	KNOWN	PLANT	W
<b><u>COUNTY: ST. LUCIE</u> MINT, LAKELA'S PRICKLY-APPLE, FRAGRANT</b>	KNOWN KNOWN	PLANT PLANT	L L
<b><u>COUNTY: UNION</u> IXIA, BARTRAM'S</b>	POSSIBLE	PLANT	W
<b><u>COUNTY: VOLUSIA</u> PAWPAW, RUGEL'S</b>	KNOWN	PLANT	L
<b><u>COUNTY: WALTON</u> MEADOWRUE, COOLEY'S</b>	KNOWN	PLANT	L

PLANT  
 ENDANGERED SPECIES BY COUNTY LIST

STATE: TEXAS	CERTAINTY OF OCCURRENCE	GROUP	STATUS
<u>COUNTY: BANDERA</u> CACTUS, TOBUSCH FISHHOOK	KNOWN	PLANT	L
<u>COUNTY: BRAZOS</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: BREWSTER</u> CACTUS, BUNCHED CORY CACTUS, CHISOS MOUNTAIN HEDGEHOG CACTUS, LLOYD'S HEDGEHOG CACTUS, LLOYD'S MARIPOSA CACTUS, NELLIE CORY CAT'S-EYE, TERLINGUA CREEK PITAYA, DAVIS' GREEN	KNOWN KNOWN KNOWN KNOWN KNOWN KNOWN KNOWN	PLANT PLANT PLANT PLANT PLANT PLANT PLANT	L L L L L P L
<u>COUNTY: BURLESON</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: COKE</u> POPPY-MALLOW, TEXAS	KNOWN	PLANT	L
<u>COUNTY: CULBERSON</u> CACTUS, LLOYD'S HEDGEHOG CACTUS, SNEED PINCUSHION PENNYROYAL, MCKITTRICK	KNOWN KNOWN KNOWN	PLANT PLANT PLANT	L L L
<u>COUNTY: EDWARDS</u> CACTUS, TOBUSCH FISHHOOK SNOWBELLS, TEXAS	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: EL PASO</u> CACTUS, SNEED PINCUSHION	KNOWN	PLANT	L
<u>COUNTY: FORT BEND</u> DAWN, PRAIRIE	KNOWN	PLANT	L
<u>COUNTY: GRIMES</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: HARDIN</u> PHLOX, TEXAS TRAILING	KNOWN	PLANT	P
<u>COUNTY: HARRIS</u> BITTERWEED, TEXAS	KNOWN	PLANT	L

PLANT  
 ENDANGERED SPECIES BY COUNTY LIST

STATE: TEXAS	CERTAINTY OF OCCURRENCE	GROUP	STATUS
<u>COUNTY: HAYS</u> WILD-RICE, TEXAS	KNOWN	PLANT	L
<u>COUNTY: HIDALGO</u> MANIOC, WALKER'S	KNOWN	PLANT	P
<u>COUNTY: HUDSPETH</u> CACTUS, LLOYD'S HEDGEHOG CACTUS, SNEED PINCUSHION	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: JASPER</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: JEFF DAVIS</u> PONDWEED, LITTLE AGUJA CREEK	KNOWN	PLANT	P
<u>COUNTY: JIM WELLS</u> CACTUS, BLACK LACE	KNOWN	PLANT	L
<u>COUNTY: KERR</u> CACTUS, TOBUSCH FISHHOOK	KNOWN	PLANT	L
<u>COUNTY: KIMBLE</u> CACTUS, TOBUSCH FISHHOOK	KNOWN	PLANT	L
<u>COUNTY: KINNEY</u> CACTUS, TOBUSCH FISHHOOK	KNOWN	PLANT	L
<u>COUNTY: KLEBERG</u> CACTUS, BLACK LACE RUSH-PEA, SLENDER	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: LEON</u> LADIES'-TRESSES, NAVASOTA SAND-VERBENA, LARGE-FRUITED	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: MADISON</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: MITCHELL</u> POPPY-MALLOW, TEXAS	KNOWN	PLANT	L
<u>COUNTY: NUECES</u> RUSH-PEA, SLENDER	KNOWN	PLANT	L

PLANT  
ENDANGERED SPECIES BY COUNTY LIST

STATE: TEXAS	CERTAINTY OF OCCURRENCE	GROUP	STATUS
<u>COUNTY: PECOS</u> CACTUS, LLOYD'S HEDGEHOG	KNOWN	PLANT	L
<u>COUNTY: PRESIDIO</u> CACTUS, LLOYD'S HEDGEHOG CACTUS, LLOYD'S MARIPOSA OAK, HINCKLEY	KNOWN KNOWN KNOWN	PLANT PLANT PLANT	L L L
<u>COUNTY: REAL</u> CACTUS, TOBUSCH FISHHOOK SNOWBELLS, TEXAS	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: REFUGIO</u> CACTUS, BLACK LACE	KNOWN	PLANT	L
<u>COUNTY: ROBERTSON</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: RUNNELS</u> POPPY-MALLOW, TEXAS	KNOWN	PLANT	L
<u>COUNTY: SAN AUGUSTINE</u> BLADDERPOD, WHITE	KNOWN	PLANT	L
<u>COUNTY: STARR</u> FRANKENIA, JOHNSTON'S MANIOC, WALKER'S	KNOWN POSSIBLE	PLANT PLANT	L P
<u>COUNTY: TERRELL</u> CACTUS, BUNCHED CORY	KNOWN	PLANT	L
<u>COUNTY: TYLER</u> PHLOX, TEXAS TRAILING	KNOWN	PLANT	P
<u>COUNTY: UVALDE</u> CACTUS, BLACK LACE CACTUS, TOBUSCH FISHHOOK	KNOWN KNOWN	PLANT PLANT	L L
<u>COUNTY: VAL VERDE</u> SNOWBELLS, TEXAS	POSSIBLE	PLANT	L
<u>COUNTY: WASHINGTON</u> LADIES'-TRESSES, NAVASOTA	KNOWN	PLANT	L
<u>COUNTY: ZAPATA</u> DOGWEED, ASHY	KNOWN	PLANT	L

Updated Through: June 24, 1991

Page Number: 71

STATE: TEXAS

PLANT  
ENDANGERED SPECIES BY COUNTY LIST

STATE: TEXAS

FRANKENIA, JOHNSTON'S

CERTAINTY OF  
OCCURRENCE

GROUP

STATUS

KNOWN

PLANT

L

DP BARCODE: D205457

CASE: 014135  
SUBMISSION: S469825

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 07/14/94  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: EUP (SECT 5) ACTION: 740 EUP OC N-F/F USE  
RANKING : 20 POINTS (J)  
CHEMICALS: 128829 Imazapyr, isopropylamine salt

28.7000%

ID#: 000241-EUP-REO  
COMPANY: AMERICAN CYANAMID COMPANY  
PRODUCT MANAGER: 25 ROBERT TAYLOR 703-305-6800 ROOM: CM2 241  
PM TEAM REVIEWER: EDWARD ALLEN 703-305-6098 ROOM: CM2 257  
RECEIVED DATE: 07/06/94 DUE OUT DATE: 11/03/94

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 205457 EXPEDITE: N DATE SENT: 07/14/94 DATE RET.: / /  
CHEMICAL: 128829 Imazapyr, isopropylamine salt  
DP TYPE: 001 Submission Related Data Package  
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 10/02/94
DIV : EFED	07 / 15 / 94	/ /	NEGOT DATE: / /
BRAN: EEB	07 / 15 / 94	/ /	PROJ DATE: / /
SECT:	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

REVIEW FIFRA

\* \* \* DATA PACKAGE EVALUATION \* \* \*

No evaluation is written for this data package

\* \* \* ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION \* \* \*

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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DP Barcode : D205457  
 PC Code No : 128829  
 EEB Out :  
**OCT 14 1994**

To: ROBERT TAYLOR PM 25  
 Product Manager  
 Registration Division (H7505C)

From: Anthony F. Maciorowski, Chief  
 Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 241-EUP-REO  
 Chemical Name : IMAZAPYR, ISOPROPYLAMINE SALT  
 Type Product : HERBICIDE  
 Product Name : ARSENAL  
 Company Name : AMERICAN CYANAMID  
 Purpose : REVIEW PROPOSED EXPERIMENTAL USE FOR NONFOOD  
 AQUATIC AREAS SUCH AS NONIRRIGATION DRAINAGE DITCHES AND OTHER  
 AREAS WHERE IMPOUNDED WATER IS PRESENT ON NONCROP SITES  
 Action Code : 740 Date Due : 10-15-94  
 Reviewer : HITCH Date In EEB: 7-15-94

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur  
 P=Partial (Study partially fulfilled Guideline but additional information is needed)  
 S=Supplemental (Study provided useful information but Guideline was not satisfied)  
 N=Unacceptable (Study was rejected)/Nonconcur