

US EPA ARCHIVE DOCUMENT

7-21-89

NOTE TO: Jim Tompkins

SUBJECT: TAS Analysis for Section 18 Request 89-OR-21

FROM: J. R. Tomerlin, TAS Staff *J. R. Tomerlin 7/21/89*

This Section 18 request for the use of oxyfluorfen (Goal) on Kentucky bluegrass, perennial ryegrass, and fine fescues is not expected to result in secondary residues in meat and milk that exceed published tolerances for oxyfluorfen (J. S. Smith memo, 7/18/89). Consequently, a new analysis for this Section 18 is not required. A TAS analysis for published tolerances only is attached for your convenience.

| CHEMICAL           | STUDY TYPE                 | EFFECTS   | REFERENCE DOSES   |        | DATA GAPS/COMMENTS            | STATUS                 |
|--------------------|----------------------------|---|-------------------|--------|-------------------------------|------------------------|
|                    |                            |   | ADI               | UF     |                               |                        |
| Oxyfluorfen (Goal) | 20mo feeding- mice         | Necrosis, hyperplastic nodules in liver, increased liver weights. | 0.003000          | -->100 | No data gaps.                 | HED complete 04/14/86. |
| Caswell #188AAA    | NOEL= 2.00 ppm             | Not oncogenic in rat and mouse.                                   | OPP RED= 0.003000 |        | Mouse most sensitive species. | EPA verified 06/10/86. |
| CAS No. 42874-03-3 | LEI= 3.0000 mg/kg          |   | EPA RED= 0.003000 |        |                               |                        |
| A.I. CODE: 111601  | 20.00 ppm                  |   |                   |        |                               |                        |
| CFR No. 180.381    | ONCO: Negative- 2 species. |   |                   |        |                               | On IRIS.               |

| FOOD CODE | FOOD NAME                  | PETITION NUMBER | TOLERANCE (PPM) |           |
|-----------|----------------------------|-----------------|-----------------|-----------|
|           |                            |                 | PENDING         | PUBLISHED |
| 01014AA   | GRAPES-FRESH               | 9F2197          |                 | 0.050000  |
| 01014DA   | GRAPES-RAISINS             | 9F2197          |                 | 0.050000  |
| 01014JA   | GRAPES-JUICE               | 9F2197          |                 | 0.050000  |
| 03001AA   | ALMONDS                    | 4F3119          |                 | 0.050000  |
| 03002AA   | BRAZIL NUTS                | 4F3119          |                 | 0.050000  |
| 03003AA   | CASHEWS                    | 4F3119          |                 | 0.050000  |
| 03004AA   | CHESTNUTS                  | 4F3119          |                 | 0.050000  |
| 03005AA   | FILBERTS, HAZELNUTS        | 4F3119          |                 | 0.050000  |
| 03006AA   | HICKORY NUTS               | 4F3119          |                 | 0.050000  |
| 03007AA   | MACADAMIA NUTS (BUSH NUTS) | 4F3119          |                 | 0.050000  |
| 03008AA   | PECANS                     | 4F3119          |                 | 0.050000  |
| 03009AA   | WALNUTS                    | 4F3119          |                 | 0.050000  |
| 03010AA   | BUTTER NUTS                | 1F2488          |                 | 0.050000  |
| 03011AA   | PISTACHIO NUTS             | 4F3119          |                 | 0.050000  |
| 03013AA   | BEECHNUTS                  | 4F3115          |                 | 0.050000  |
| 04001AA   | APPLES-FRESH               | 4F3115          |                 | 0.050000  |
| 04001DA   | APPLES-DRIED               | 4F3115          |                 | 0.050000  |
| 04001JA   | APPLES-JUICE               | 4F3115          |                 | 0.050000  |
| 04002AA   | CRAPPLES                   | 4F3115          |                 | 0.050000  |
| 04003AA   | PEARS-FRESH                | 4F3115          |                 | 0.050000  |
| 04003DA   | PEARS-DRIED                | 4F3115          |                 | 0.050000  |
| 04004AA   | QUINCES                    | 4F3115          |                 | 0.050000  |
| 05001AA   | APRICOTS-FRESH             | 4F3115          |                 | 0.050000  |
| 05001DA   | APRICOTS-DRIED             | 4F3115          |                 | 0.050000  |
| 05002AA   | CHERRIES-FRESH             | 4F3115          |                 | 0.050000  |
| 05002DA   | CHERRIES-DRIED             | 4F3115          |                 | 0.050000  |
| 05002JA   | CHERRIES-JUICE             | 4F3115          |                 | 0.050000  |
| 05003AA   | NECTARINES                 | 4F3115          |                 | 0.050000  |
| 05004AA   | PEACHES-FRESH              | 4F3115          |                 | 0.050000  |
| 05004DA   | PEACHES-DRIED              | 4F3115          |                 | 0.050000  |
| 05005AA   | PLUMS (DAMSONS)-FRESH      | 4F3115          |                 | 0.050000  |
| 05005DA   | PLUMS-PRUNES (DRIED)       | 4F3115          |                 | 0.050000  |
| 05005JA   | PLUMS, PRUNE-JUICE         | 4F3115          |                 | 0.050000  |
| 06001AA   | AVOCADOS                   | 4F3117          |                 | 0.050000  |
| 06002AA   | BANANAS-UNSPECIFIED        | 2E2693          |                 | 0.050000  |
| 06002AB   | BANANAS-FRESH              | 2E2693          |                 | 0.050000  |
| 06002DA   | BANANAS-DRIED              | 2E2693          |                 | 0.050000  |
| 06004AA   | DATES                      | 4F3117          |                 | 0.050000  |
| 06005AA   | FIGS                       | 1F2549          |                 | 0.050000  |
| 06006AA   | GUAVA                      | 6E3396          |                 | 0.050000  |

| CHEMICAL  | STUDY TYPE   | EFFECTS   | REFERENCE DOSES   | DATA GAPS/COMMENTS                             | STATUS   |
|---|--|---|---|--|--|
| Oxyfluorfen (Goal)<br>Caswell #188AAA<br>CAS No. 42874-03-3<br>A.I. CODE: 111601<br>CFR No. 180.381 | 20mo feeding- mice<br>NOEL= 0.3000 mg/kg<br>2.00 ppm<br>LEL= 3.0000 mg/kg<br>20.00 ppm<br>ONCO: Negative- 2 species. | Necrosis, hyperplastic nodules in liver, increased liver weights. Not oncogenic in rat and mouse. | ADI UF -->100<br>OPP RfD= 0.003000<br>EPA RfD= 0.003000 | No data gaps.<br>Mouse most sensitive species. | HED complete 04/14/86.<br>EPA verified 06/10/86. |

| FOOD CODE | FOOD NAME                             | PETITION NUMBER | NEW | TOLERANCE (PPM) | PUBLISHED |
|-----------|---------------------------------------|-----------------|-----|-----------------|-----------|
| 06008AA   | LOQUATS                               | 4F3115          |     | 0.050000        |           |
| 06009AA   | OLIVES                                | 4F3117          |     | 0.050000        |           |
| 06015AA   | POMEGRANATES                          | 4F3117          |     | 0.050000        |           |
| 06016AA   | PLANTAINS                             | 2E2693          |     | 0.050000        |           |
| 06018AA   | KIWI                                  | 4F3117          |     | 0.050000        |           |
| 07002AA   | COFFEE                                | 2E2693          |     | 0.050000        |           |
| 13005AA   | BROCCOLI                              | 5E3269          |     | 0.050000        |           |
| 13007AA   | CABBAGE-GREEN AND RED                 | 5E3269          |     | 0.050000        |           |
| 13008AA   | CAULIFLOWER                           | 5E3269          |     | 0.050000        |           |
| 13010AA   | CABBAGE-CHINESE/CELERY, INC. BOK CHOY | 5E3269          |     | 0.050000        |           |
| 13018AA   | ARTICHOKES-GLOBE                      | 4F3118          |     | 0.050000        |           |
| 14007AA   | GARLIC                                | 3F2859          |     | 0.050000        |           |
| 14011AA   | ONIONS-DRY-BULB (CIPOLLINI)           | 3F2859          |     | 0.050000        |           |
| 14011DA   | ONIONS-DEHYDRATED OR DRIED            | 3F2859          |     | 0.050000        |           |
| 14017AA   | SHALLOTS                              | 3F2859          |     | 0.050000        |           |
| 15029AA   | SOYBEANS-SPROUTED SEEDS               | 8F2058          |     | 0.050000        |           |
| 24002EA   | CORN, GRAIN-ENDOSPERM                 | 8F2058          |     | 0.050000        |           |
| 24002HA   | CORN, GRAIN-BRAN                      | 8F2058          |     | 0.050000        |           |
| 270020A   | CORN, GRAIN-OIL                       | 8F2058          |     | 0.050000        |           |
| 270030A   | COTTONSEED-OIL                        | 1H5296          |     | 0.250000        | H         |
| 27003WA   | COTTONSEED-WEAL                       | 1F2488          |     | 0.050000        |           |
| 270100A   | SOYBEANS-OIL                          | 1H5296          |     | 0.250000        | H         |
| 270160A   | OLIVE OIL                             | 4F3117          |     | 0.050000        |           |
| 28023AA   | SOYBEANS-UNSPECIFIED                  | 8F2058          |     | 0.050000        |           |
| 28023AB   | SOYBEANS-MATURE, SEEDS DRY            | 8F2058          |     | 0.050000        |           |
| 28023WA   | SOYBEANS-FLOUR, FULL FAT              | 8F2058          |     | 0.050000        |           |
| 28023WB   | SOYBEANS-FLOUR, LOW FAT               | 8F2058          |     | 0.050000        |           |
| 28023WC   | SOYBEANS-FLOUR, DEFAITED              | 8F2058          |     | 0.050000        |           |
| 280800A   | PEPPERMINT-OIL                        | 1H5296          |     | 0.250000        | H         |
| 280810A   | SEAPERMINT-OIL                        | 1H5296          |     | 0.250000        | H         |
| 500000B   | MILK-NON-FAT SOLIDS                   | 9F2197          |     | 0.050000        |           |
| 50000FA   | MILK-FAT SOLIDS                       | 9F2197          |     | 0.050000        |           |
| 50000SA   | MILK SUGAR (LACTOSE)                  | 9F2197          |     | 0.050000        |           |
| 53001BA   | BEEF-MEAT BYPRODUCTS                  | 9F2197          |     | 0.050000        |           |
| 53001BB   | BEEF (ORGAN MEATS) -OTHER             | 9F2197          |     | 0.050000        |           |
| 53001DA   | BEEF-DRIED                            | 9F2197          |     | 0.050000        |           |
| 53001FA   | BEEF (BONELESS) -FAT (BEEF TALLOW)    | 9F2197          |     | 0.050000        |           |
| 53001KA   | BEEF (ORGAN MEATS) -KIDNEY            | 9F2197          |     | 0.050000        |           |
| 53001LA   | BEEF (ORGAN MEATS) -LIVER             | 9F2197          |     | 0.050000        |           |

| CHEMICAL           | STUDY TYPE                 | EFFECTS   | REFERENCE DOSES   |                               | DATA GAPS/COMMENTS     | STATUS |
|--------------------|----------------------------|---|-------------------|-------------------------------|------------------------|--------|
|                    |                            |   | ADI               | UF -->100                     |                        |        |
| Oxyfluorfen (Goal) | 20mo feeding- mice         | Necrosis, hyperplastic nodules in liver, increased liver weights. Not oncogenic in rat and mouse. | OPP RfD= 0.003000 | No data gaps.                 | HED complete 04/14/86. |        |
| Caswell #188AAA    | NOEL= 0.3000 mg/kg         |   | EPA RfD= 0.003000 | Mouse most sensitive species. | EPA verified 06/10/86. |        |
| CAS No. 42874-03-3 | 2.00 ppm                   |   |                   |                               |                        |        |
| A.I. CODE: 111601  | LEL= 3.0000 mg/kg          |   |                   |                               |                        |        |
| CFR No. 180.381    | 20.00 ppm                  |   |                   |                               |                        |        |
|                    | ONCO: Negative- 2 species. |   |                   |                               | On IRIS.               |        |

| FOOD CODE | FOOD NAME                                  | PETITION NUMBER | TOLERANCE (PPM) |           |
|-----------|--|-----------------|-----------------|-----------|
|           |  |                 | NEW             | PUBLISHED |
| 53001WA   | BEEF (BONELESS)-LEAN (W/O REMOVEABLE FAT)  | 9F2197          |                 | 0.050000  |
| 53002BA   | GOAT-MEAT BYPRODUCTS                       | 9F2197          |                 | 0.050000  |
| 53002BB   | GOAT (ORGAN MEATS)-OTHER                   | 9F2197          |                 | 0.050000  |
| 53002FA   | GOAT (BONELESS)-FAT                        | 9F2197          |                 | 0.050000  |
| 53002KA   | GOAT (ORGAN MEATS)-KIDNEY                  | 9F2197          |                 | 0.050000  |
| 53002LA   | GOAT (ORGAN MEATS)-LIVER                   | 9F2197          |                 | 0.050000  |
| 53002MA   | GOAT (BONELESS)-LEAN (W/O REMOVEABLE FAT)  | 9F2197          |                 | 0.050000  |
| 53003AA   | HORSE                                      | 9F2197          |                 | 0.050000  |
| 53005BA   | SHEEP-MEAT BYPRODUCTS                      | 9F2197          |                 | 0.050000  |
| 53005BB   | SHEEP (ORGAN MEATS)-OTHER                  | 9F2197          |                 | 0.050000  |
| 53005FA   | SHEEP (BONELESS)-FAT                       | 9F2197          |                 | 0.050000  |
| 53005KA   | SHEEP (ORGAN MEATS)-KIDNEY                 | 9F2197          |                 | 0.050000  |
| 53005LA   | SHEEP (ORGAN MEATS)-LIVER                  | 9F2197          |                 | 0.050000  |
| 53005WA   | SHEEP (BONELESS)-LEAN (W/O REMOVEABLE FAT) | 9F2197          |                 | 0.050000  |
| 53006BA   | PORK-MEAT BYPRODUCTS                       | 9F2197          |                 | 0.050000  |
| 53006BB   | PORK (ORGAN MEATS)-OTHER                   | 9F2197          |                 | 0.050000  |
| 53006FA   | PORK (BONELESS)-FAT (INCLUDING LARD)       | 9F2197          |                 | 0.050000  |
| 53006KA   | PORK (ORGAN MEATS)-KIDNEY                  | 9F2197          |                 | 0.050000  |
| 53006LA   | PORK (ORGAN MEATS)-LIVER                   | 9F2197          |                 | 0.050000  |
| 53006WA   | PORK (BONELESS)-LEAN (W/O REMOVEABLE FAT)  | 9F2197          |                 | 0.050000  |
| 55008BA   | TURKEY-BYPRODUCTS                          | 9F2197          |                 | 0.050000  |
| 55008LA   | TURKEY-GIBLETS (LIVER)                     | 9F2197          |                 | 0.050000  |
| 55008MA   | TURKEY-FLESH (W/O SKIN, W/O BONES)         | 9F2197          |                 | 0.050000  |
| 55008NB   | TURKEY-FLESH (+SKIN, W/O BONES)            | 9F2197          |                 | 0.050000  |
| 55008NC   | TURKEY-UNSPECIFIED                         | 9F2197          |                 | 0.050000  |
| 55013BA   | POULTRY, OTHER-BYPRODUCTS                  | 9F2197          |                 | 0.050000  |
| 55013LA   | POULTRY, OTHER-GIBLETS (LIVER)             | 9F2197          |                 | 0.050000  |
| 55013WA   | POULTRY, OTHER-FLESH (+SKIN, W/O BONES)    | 9F2197          |                 | 0.050000  |
| 55014AA   | EGGS-WHOLE                                 | 9F2197          |                 | 0.050000  |
| 55014AB   | EGGS-WHITE ONLY                            | 9F2197          |                 | 0.050000  |
| 55014AC   | EGGS-YOLK ONLY                             | 9F2197          |                 | 0.050000  |
| 55015BA   | CHICKEN-BYPRODUCTS                         | 9F2197          |                 | 0.050000  |
| 55015LA   | CHICKEN-GIBLETS (LIVER)                    | 9F2197          |                 | 0.050000  |
| 55015WA   | CHICKEN-FLESH (W/O SKIN, W/O BONES)        | 9F2197          |                 | 0.050000  |
| 55015WB   | CHICKEN-FLESH (+SKIN, W/O BONES)           | 9F2197          |                 | 0.050000  |

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TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

| CHEMICAL INFORMATION | STUDY TYPE                 | EFFECTS                                  | REFERENCE DOSES   | DATA GAPS/COMMENTS            | STATUS                 |
|----------------------|----------------------------|--|-------------------|-------------------------------|------------------------|
| Oxyfluorfen (Goal)   | 20mo feeding- mice         | Necrosis, hyperplastic nodules in liver, | ADI UF -->100     | No data gaps.                 | HED complete 04/14/86. |
| Caswell #188AAA      | NOEL= 0.3000 mg/kg         | increased liver weights.                 | OPP RfD= 0.003000 | Mouse most sensitive species. | EPA verified 06/10/86. |
| CAS No. 42874-03-3   | 2.00 ppm                   | Not oncogenic in rat and mouse.          | EPA RfD= 0.003000 |                               |                        |
| A.I. CODE: 111601    | LEL= 3.0000 mg/kg          |  |                   |                               |                        |
| CFR No. 180.381      | 20.00 ppm                  |  |                   |                               |                        |
|                      | ONCO: Negative- 2 species. |  |                   |                               | On IRIS.               |

TOTAL TMRC (MG/KG BODY WEIGHT/DAY)

| POPULATION SUBGROUP                                 | CURRENT TMRC* | NEW TMRC** | NEW TMRC AS PERCENT OF RFD | DIFFERENCE AS PERCENT OF RFD | EFFECT OF ANTICIPATED RESIDUES |
|---|---------------|------------|----------------------------|------------------------------|--------------------------------|
| U.S. POPULATION - 48 STATES                         | 0.000902      | 0.000902   | 30.082633                  | 0.000000                     |                                |
| U.S. POPULATION - SPRING SEASON                     | 0.000850      | 0.000850   | 28.336833                  | 0.000000                     |                                |
| U.S. POPULATION - SUMMER SEASON                     | 0.000896      | 0.000896   | 29.879567                  | 0.000000                     |                                |
| U.S. POPULATION - FALL SEASON                       | 0.000938      | 0.000938   | 31.268433                  | 0.000000                     |                                |
| U.S. POPULATION - WINTER SEASON                     | 0.000925      | 0.000925   | 30.822200                  | 0.000000                     |                                |
| NORTHEAST REGION                                    | 0.000925      | 0.000925   | 30.827433                  | 0.000000                     |                                |
| NORTH CENTRAL REGION                                | 0.000916      | 0.000916   | 30.544067                  | 0.000000                     |                                |
| SOUTHERN REGION                                     | 0.000814      | 0.000814   | 27.135233                  | 0.000000                     |                                |
| WESTERN REGION                                      | 0.001004      | 0.001004   | 33.480000                  | 0.000000                     |                                |
| HISPANICS   | 0.001119      | 0.001119   | 37.299533                  | 0.000000                     |                                |
| NON-HISPANIC WHITES                                 | 0.000898      | 0.000898   | 29.925533                  | 0.000000                     |                                |
| NON-HISPANIC BLACKS                                 | 0.000818      | 0.000818   | 27.268133                  | 0.000000                     |                                |
| NON-HISPANIC OTHERS                                 | 0.000998      | 0.000998   | 33.260967                  | 0.000000                     |                                |
| NURSING INFANTS (< 1 YEAR OLD)                      | 0.001406      | 0.001406   | 46.865333                  | 0.000000                     |                                |
| NON-NURSING INFANTS (< 1 YEAR OLD)                  | 0.004583      | 0.004583   | 152.770333                 | 0.000000                     |                                |
| FEMALES (13+ YEARS, PREGNANT)                       | 0.000633      | 0.000633   | 21.093933                  | 0.000000                     |                                |
| FEMALES 13+ YEARS, NURSING CHILDREN (1-6 YEARS OLD) | 0.000805      | 0.000805   | 26.845367                  | 0.000000                     |                                |
| CHILDREN (7-12 YEARS OLD)                           | 0.002369      | 0.002369   | 78.961233                  | 0.000000                     |                                |
| CHILDREN (13-19 YEARS OLD)                          | 0.001466      | 0.001466   | 48.873833                  | 0.000000                     |                                |
| MALES (13-19 YEARS OLD)                             | 0.000939      | 0.000939   | 31.284767                  | 0.000000                     |                                |
| FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)     | 0.000744      | 0.000744   | 24.785567                  | 0.000000                     |                                |
| MALES (20 YEARS AND OLDER)                          | 0.000574      | 0.000574   | 19.120800                  | 0.000000                     |                                |
| FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)     | 0.000516      | 0.000516   | 17.190267                  | 0.000000                     |                                |

\*Current TMRC does not include new or pending tolerances.

\*\*New TMRC includes new, pending, and published tolerances.

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