DATE OUT:  

SUBJECT: PRODUCT CHEMISTRY REVIEW OF MP [ ] EP [X]  
DP BARCODE No.: D226250  REG./File Symbol No.: 524-UOG  
PRODUCT NAME: MON 58420 Herbicide  

DATE: September 12, 1996  

TO: Robert Taylor, PM 25  
Fungicide-Herbicide Branch  
Registration Division(7505C)  

FROM: Shyam B. Mathur, Ph.D., Chemist  
Product Chemistry Review Section  
Registration Support Branch/RD (7505W)  

THRU: Harold Podall, Ph.D., Section Head  
Product Chemistry Review Section  
Registration Support Branch/RD(7505W)  

SUMMARY OF FINDINGS  

1. The basic formulation CSF(dated April 15, 1996) is filled out correctly and completely in compliance with PR Notice 91-2 and agree with the label claim nominal concentration.[61-1 & 62-2].  
2. The data submitted corresponding to guideline reference 61-2 and 61-3 satisfy the data requirements of 40CFR§158.165 and 158.167 respectively.  
3. The data submitted corresponding to guideline reference 62-1 and 62-3 satisfy the data requirements of 40CFR§158.170 and 158.180 respectively.  
4. The data submitted corresponding to guideline reference 63-3, 12,14-16,18, & 21 satisfy the data requirements of 40CFR §158.190. The registrant informed that the studies on storage stability(63-17) and corrosion characteristics will be initiated this year(1996).  
5. The registrant carried out analysis for following nitrosamines: N-nitrosoglyphosate(NNG), N-nitrososarcosine(NNSAR), N-nitrosomethylaminomethyl phosphonic acid(NNMAMPA), N-nitrosoiminodiacetic acid(NNIDA), and N-nitrosoimino-bis-methylene-bis-phosphonic acid(NNTB). Out of all these nitrosamines, only N-nitroso glyphosate(NNG) was detected in less than 1 ppm.  

Note to PM:  

a. The acetochlor has been shown to be in REFS, whereas the registrant in CSF indicated it to be.  

b. N-Phosphonomethylglycine, MON 0139 isopropylamine salt has been shown to be in REFS, whereas the registrant in the CSF indicated it to be.
PRODUCT CHEMISTRY REVIEW OF MP [ ] EP [X]
DP BARCODE No.: D226250 REG./File Symbol No.: 524-UOG
PRODUCT NAME: MON 58420 Herbicide
DATE: September 12, 1996


3. Type of Submission: Registration [X] Reregistration [ ]
   New [X] Resubmission [ ] Amendment [ ] "ME-TOO" [ ]
   Alternate Formulation [ ] Experimental Use Permit [ ]
   Other (Specify)

4. If "ME-TOO" Registration, this product is [ ] is not [ ]
   similar or substantially similar to EPA’s Reg. No.:_______
   If not, comment in Confidential Appendix A on the differences
   between the registered and the new source where significant.

CONFIDENTIAL STATEMENT OF FORMULA

5. Type of formulation and the sources of active ingredients:
   • Non-integrated formulation system..................[X]
   • Are all technical grade active ingredients used registered?
     • yes [ ] • no [ ], If no, specify _______________________
   • Integrated formulation system......................[ ]

6. Clearance of intentionally added ingredients in the
   formulation for the intended use (indicate in the Confidential
   Appendix those that are not cleared; the PC Codes should be
   provided by the chemist on the CSF for those that are
   cleared):

6(a) Formulation intended for food use under 40CFR§180.1001:
   • yes [X] • no [ ] • Some are cleared, others are not [ ]
   Cleared under list: • c[X] • d[X] • e [X]
   Are there any limitations for use as an inert under 40CFR§180.
   1001?
   • yes [ ] • no [ ], If yes, specify _______________________

6(b) Formulation intended for non-food use:
   • yes [ ] • no [X] • Some are cleared, others are not [ ]

6(c) Clearance by the FDA of certain formulations under 21CFR§170
   to 199. Examples: (a) indirect food additives, such as food
   contact surface sanitizers; adhesives, coatings, paper and
   paperboard products that may contact food in packaging or
   holding; and (b) substances generally recognized as safe
   (GRAS).
   • yes [ ] • no [ ] • Some are cleared, others are not [ ]
   If yes, the entire formulation is cleared under 21CFR§_____.
7. The density, pH, and flammability values given on the CSF are identical with those of GRN 63-7, 63-12, and 63-15, respectively:  
   - yes [X]  
   - no [ ]

8. The nominal concentrations (NC) of the active ingredients and the upper and lower certified limits (UCL & LCL) are as follows:

<table>
<thead>
<tr>
<th>Active ingredient(s)</th>
<th>% by weight</th>
<th>NC</th>
<th>UCL</th>
<th>LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MON 0139 Isopropyl amine salt</td>
<td>(21.50)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atrazine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8.10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(16.10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. The calculated NCs, based on the pure active ingredients (PAI), are identical to those on the label:
   - yes [X]  
   - no [ ]

10. The certified limits are within the standard limits as per 40CFR§158.175 or are adequately explained if different:
   - yes [X]  
   - no [ ]

PRODUCT LABEL

11. The chemical names of the active ingredients on the label are identical to those on the CSF:
   - yes [X]  
   - no [ ]

12. The appropriate physical and chemical hazards statement regarding flammability or explosive characteristics of the product are given on the label:
   - yes [ ]  
   - no [ ]  
   - not applicable [X]

13. The storage and disposal instructions for the pesticide and container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses:
   - yes [X]  
   - no [ ]
<table>
<thead>
<tr>
<th>14. Chemical IDs/Manufacture/ Analytical Information</th>
<th>Data Required Fulfilled</th>
<th>MRID No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>61-1 Chemical Identity (CSF)</td>
<td>Y</td>
<td>04-15-96</td>
</tr>
<tr>
<td>61-3 Discussion of Impurities</td>
<td>Y</td>
<td>&quot;</td>
</tr>
<tr>
<td>62-1 Preliminary Analysis</td>
<td>Y</td>
<td>&quot;</td>
</tr>
<tr>
<td>62-2 Certified Limits (CSF)</td>
<td>Y</td>
<td>04-15-96</td>
</tr>
<tr>
<td>62-3 Enforcement Analytical Method</td>
<td>Y</td>
<td>440004-01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Physical/Chemical Properties</th>
<th>Data Required Fulfilled</th>
<th>Value or Qualitat. Descrip.</th>
<th>MRID No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>63-3 Physical State</td>
<td>Y</td>
<td>Liquid</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-7 Density/Bulk Density</td>
<td>Y</td>
<td>9.3 lbs per gal.</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-12 pH of Product</td>
<td>Y</td>
<td>5.48</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-14 Oxid/Red Action</td>
<td>Y</td>
<td>Note 1</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-15a Flamma.-Flsh.Pt.</td>
<td>Y</td>
<td>&gt;210°F</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-15b Flame Extension</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>63-16 Explodability</td>
<td>Y</td>
<td>None</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-17 Storage Stability</td>
<td>I</td>
<td>Note 2</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-18 Viscosity</td>
<td>Y</td>
<td>682 cPs at 30 RPM</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-19 Miscibility</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>63-20 Corros.Charact.</td>
<td>I</td>
<td>Note 2</td>
<td>&quot;</td>
</tr>
<tr>
<td>63-21 Dielec.Bkd.Vltg.</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Explanations: Y = The Requirements Were Fulfilled; W = The Requirements Were Not Fulfilled; NA = Not Applicable; G = Data Gap; U = Requires Upgrading; I = Incomplete or In Progress; W = Waived.

Note 1. 63-14. Oxid./Red. Property: The reagents were added to the EP in a mass ratio 5:1 of EP to the reagent. The reagents used were water, Zn, NH₄PO₄, and 1% KNO₃. The product was oxidized by 1% KNO₃.

Note 2. 63-17 and 63-20: the registrant reported that these two studies will be initiated together in 1996.
The material not included contains the following type of information:

- Identity of product inert ingredients.
- Identity of product impurities.
- Description of the product manufacturing process.
- Description of quality control procedures.
- Identity of the source of product ingredients.
- Sales or other commercial/financial information.
- A draft product label.
- The product confidential statement of formula.
- Information about a pending registration action.
- FIFRA registration data.
- The document is a duplicate of page(s) ________.
- The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.
organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination.

Acetochlor has properties that may result in surface water contamination via dissolved runoff and erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

Physical or Chemical Hazards

Spray solution of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flames, sparks, welder's torch, lighted cigarette or other ignition sources.

ACTIVE INGREDIENTS:*

Acetochlor, [2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide] .................................................. 21.5%  
Atrazine, [2-chloro-4-(ethylamino)-6-(isopropylamino)s-triazine] and related triazines .......... 16.1%  
Glyphosate, [N-phosphonomethyl]glycine, in the form of its isopropylamine salt ........................................... 8.1%  
INERT INGREDIENTS: ........................................................... 54.3%  
.............................................................................. 100.0%

*Contains 240 grams/liter or 2.0 pounds/gallon of acetochlor, 180 grams/liter or 1.5 pounds/gallon of atrazine and related compounds and 90 grams/liter or 0.75 pound/gallon of glyphosate, in the form of its isopropylamine salt which is equivalent to 0.56 pounds/gallon of the acid, glyphosate.

This product is protected by U.S. Pat. No. 4,256,481 and U.S. Patent No. 4,405,531. Other patents pending. No license is granted under any non-U.S. patent(s)