MEMORANDUM OF UNDERSTANDING

Between the

Wisconsin Department of Agriculture, Trade & Consumer Protection
and
Wisconsin Department of Natural Resources

DISCHARGE OF HAZARDOUS SUBSTANCES

March, 2005

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Between the Wisconsin Departments of Agriculture, Trade & Consumer Protection And Natural Resources

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Table of Contents:

SECTION I: PURPOSE & SCOPE…….. 1

SECTION II: DEFINITIONS…… 1

SECTION III: CONTACT PERSONS…….. 2

(A) *DATCP PROGRAM ISSUES*……. 2
(B) *DATCP SITE SPECIFIC ISSUES*……. 2
(C) *DNR PROGRAM ISSUES*……. 2
(D) *DNR SITE SPECIFIC ISSUES*……. 2
(E) *COMMUNICATION AND PROGRAM OPERATIONS*……. 3

SECTION IV: COORDINATING RESPONSE AND CLOSE-OUT EFFORTS…… 3

(A) *REPORTING AND RECORDKEEPING*……. 3
(B) *SITE DISCOVERY*……. 4
(C) *APPLICATION OF NATURAL RESOURCES RULES*……. 4
(D) *ENFORCEMENT*……. 5
(E) *USE OF ENVIRONMENTAL FUND APPROPRIATION* ……. 5
(F) *CASE CLOSE-OUTS*……. 6

SECTION V: SITE REMEDIATION OPTIONS…… 6

(A) *LANDSPREADING POLICY AGREEMENT*……. 6
(B) *SOILS CONTAINING CURRENTLY REGISTERED PESTICIDES*……. 7
(C) *SOILS CONTAINING CANCELLED OR SUSPENDED PESTICIDES*……. 8
(D) *SOILS CONTAINING PERSISTENT CHLORINATED OR RELATED PESTICIDES*….. 9
(E) *SOILS CONTAMINATED WITH FERTILIZERS*……. 10
(F) *SOILS CONTAMINATED WITH LEAD ARSENATE*……. 10
(G) *COMPLIANCE WITH WASTEWATER PERMIT DISCHARGE REQUIREMENTS*…….. 10

SECTION VI: EMERGENCY RESPONSE…… 11

(A) *GENERAL*……. 11
(B) *INITIAL DISCOVERY BY EITHER DATCP OR DNR*……. 11
(C) *DNR IMMEDIATE RESPONSE RESPONSIBILITIES*……. 12
(D) *DATCP IMMEDIATE RESPONSE RESPONSIBILITIES*……. 13

SECTION VII: NONEMERGENCY CORRECTIVE ACTION…… 13

(A) *GENERAL*……. 13
(B) *LEAD AGENCY AND SITE LEAD DETERMINATIONS*……. 13
(C) *LEAD RESPONSIBILITY*……. 16
(D) *REVIEW AND CORRESPONDENCE*……. 17

SECTION VIII: HOUSEHOLD AND INDUSTRIAL PESTICIDES…… 19

SECTION IX: CONFLICT RESOLUTION…… 19

(A) *SITE SPECIFIC ISSUES*……. 19
(B) *PROGRAM ISSUES*……. 19

SECTION X: REVIEW AND MODIFICATION…… 20

ATTACHMENT A - DATCP AND DNR CONTACTS…… 21

ATTACHMENT B - DATCP AND DNR FACILITY AND SITE DATABASES…… 25

ATTACHMENT C .1 - FORMAT FOR ADDITIONAL COMPOUND AND SITE SPECIFIC LANDSPREADING AGREEMENTS…… 28

ATTACHMENT C.2 - SPECIFIC AGREEMENT FOR SOILS CONTAINING CYANAZINE… 29

ATTACHMENT C.3 - SPECIFIC AGREEMENT FOR SOILS CONTAINING DINOSEB…… 38

ATTACHMENT D - DNR'S "CONTAINED OUT" PROVISION FOR SOIL OR WATER…… 43

ATTACHMENT E - ALLOWABLE RESIDUAL LEVELS OF PERSISTENT CHLORINATED PESTICIDE COMPOUNDS IN SOILS…… 44

MEMORANDUM OF UNDERSTANDING
Between the Wisconsin Departments of Agriculture, Trade & Consumer Protection And Natural Resources

Related To
DISCHARGE OF HAZARDOUS SUBSTANCES

SECTION I: PURPOSE & SCOPE

(A) *Purpose:*

The purpose of this Memorandum of Understanding (MOU) is to maintain the framework of roles, responsibilities, coordination, conflict resolution, and contacts agreed to between the two agencies for corrective actions in response to discharges of agricultural chemicals as required by s. 94.73(12), Stats. This MOU is intended to better define agency roles in areas of possible overlapping authority related to discharges of agricultural chemicals. Specific sites may also need to comply with additional regulations of either agency that are not detailed in this memorandum. This MOU updates the August, 1994 MOU.

(B) *Scope:*

This MOU applies to discharges of pesticide products intended for use by private and commercial applicators and the general public, including historic discharges of pesticides that are now banned, cancelled or suspended, and fertilizers. These products and media contaminated with these products may also be hazardous wastes in some circumstances, as further defined in this MOU. The agencies agree this MOU does not apply to products that are not fertilizers or registered pesticides[1] that are discharged at a pesticide manufacturing site.

SECTION II: DEFINITIONS

(A) *"Agricultural Chemical"* as used in this MOU has the meaning specified under s. 94.73 (1)(a), Stats.

(B) *"Discharge"* as used in this MOU has the meaning specified under s. 292.01(3), Stats.

(C) *"Hazardous substance"* has the meaning specified under s. 292.01(5), Stats.

(D) *"Hazardous waste"* has the meaning specified under s. 291.01(7), Stats.

(E) *"Media"* as used in this MOU, includes soil, surface water and ground water.

[1] *Registered as a pesticide by USEPA*

(F) *"Nonhousehold pesticide"* as used in this MOU has the meaning specified under s. 94.681(1)(c), Stats.

(G) *"Solid waste"* has the meaning specified under s. 289.01(33), Stats.

SECTION III: CONTACT PERSONS

(A) *DATCP Program Issues*
Containment and Remediation Section Chief.

(B) *DATCP Site Specific Issues*

(1) Emergencies: The DATCP Spills Coordinator is the primary contact, and the DATCP Regional Field Investigator is the secondary contact (see DATCP map in Attachment A for field investigator assignments).

(2) Non-Emergencies: The DATCP Containment and Remediation Section Chief is the primary contact.

(C) *DNR Program Issues*

(1) Solid and Hazardous Waste Generation and Management Issues: Bureau of Waste Management, Policy Section Chief.

(2) All other Pesticide and Fertilizer Facility Issues: Bureau for Remediation and Redevelopment, Fiscal and Information Technology Section Chief or the designee of the Bureau Director.

(3) Enforcement: Office of Environmental Enforcement Director or Bureau of Law Enforcement Emergency Response Coordinator.

(D) *DNR Site Specific Issues*

(1) Emergencies:

(a) During normal business hours, the order of contact is:
1. the DNR Regional Spills Coordinator,
2. the DNR Madison Duty officer.

(b) After hours, the DNR Madison Duty Officer is the primary contact.

(2) Non-Emergencies: The DNR Regional Remediation and Redevelopment Team Supervisors are the initial contact, follow-up with the assigned technical staff. The DNR Regional Waste Team Supervisors are contacts for solid and hazardous waste issues.

(E) *Communication and Program Operations*
DATCP and DNR agree to exchange and update as needed, respective program organizational charts with the names and phone numbers of staff. Attachment A lists the current contacts.

SECTION IV: COORDINATING RESPONSE AND CLOSE-OUT EFFORTS

(A) *Reporting and Recordkeeping*

(1) Sharing Facility Records: Each agency will maintain records for the facilities and activities which it regulates. These records include reports required to be submitted by the regulated party and agency generated documents such as inspection reports. Each agency also requires those regulated to maintain certain records. DATCP and DNR agree to share information and utilize their inspection authorities when such records would assist the state in responding to a discharge of agricultural chemicals.

(2) Sharing Facility Listings: Each agency will maintain lists of regulated facilities and sites where soil and/or groundwater contamination is suspected or known from discharges of agricultural chemicals (the DNR lists also address other substances). Attachment B contains a current list and description of these databases, along with information on how they can be accessed. The agencies agree to update this attachment every three years and assist the other agency in obtaining information from these databases. Except for web accessible databases, each agency will provide the other agency with a current copy of these lists and updates when requested. DATCP agrees to provide DNR with data for updating the Bureau for Remediation and Redevelopment Tracking System (BRRTS) as mutually agreed upon.

(3) Communicating Reported Discharges: Pursuant to s. 292.11(2)(d), Stats., DNR shall notify DATCP of discharges of fertilizers and pesticides that are reported to DNR. Notification will routinely occur on the same business day or the next business day if reported outside normal office hours and will include all available information regarding the discharge. DNR shall assure that its immediate responders (wardens) and other spills staff are aware of DATCP's role in agricultural chemical discharges, and that DATCP should be promptly notified of the spill.

(4) Communicating Reporting Requirement: By means of routine inspections of sites covered by this agreement, DATCP staff will inform its regulated community of their responsibility to report discharges of hazardous substances to DNR in accordance with s. 292.11(2)(a), Stats. Reporting is not required for fully

contained releases into containment structures complying with ch. ATCP 29, 32 or 33, Wis. Adm. Code, or discharges exempt from reporting under s. NR 706.07, Wis. Adm. Code and s. 292.11(9)(d)2., Stats.

(5) Communicating Groundwater Results: The DNR Bureau of Drinking Water and Groundwater (DG) has the lead responsibility for monitoring of potable water supplies and informing well owners and users of the monitoring results. DATCP also samples and analyzes potable water supplies. Each agency will provide water sample results it generates to the well owner and the other agency. DATCP may request the DG to provide sampling support of these wells. The DG will notify DATCP if support can not be provided within the requested timeframe. DG will be responsible for liaison with the Wisconsin Department of Health and Family Services, local health departments, and other local officials on drinking water issues and monitoring results.

(B) *Site Discovery*

(1) Determination of Emergency: When an agency discovers soil or groundwater contamination that is caused by or is potentially related to discharges of agricultural chemicals, that agency will determine, based on preliminary data, whether an emergency situation exists or is imminent. Emergency situations are those in which there is an actual or imminent threat to public health, safety or the environment which requires an immediate action. In emergency situations, the discovering agency will proceed with an emergency response, in accordance with Section VI of this MOU.

(2) Non-Emergencies: If an emergency situation does not exist and is not imminent, the agency discovering the discharge shall gather the basic site information identified in s. NR 706.05(1)(c), Wis. Adm. Code, forward that information to the other agency and proceed according to Section VII of this MOU. Although spills will typically be reported the same business day under subsection (A)(3), this information will be forwarded within ten days of laboratory verification when the incident is discovered through some other agency investigation.

(C) *Application of Natural Resources Rules*

Response actions under this MOU by either agency shall be conducted in compliance with chs. NR 700, 706, 708, 712 through 726, and 140 and 141, Wis. Adm. Code, as applicable. Both agencies agree in implementing these response actions, that the lead agency for the specific response action will evaluate submittals for compliance with chs. NR 706, 708 and 712 through 726, Wis. Adm. Code[2]. Responsible persons shall be

[2] *Guidance on the NR 700 rule series is available at* *http://www.dnr.state.wi.us/org/aw/rr/technical/index.htm*

directed in writing to send submittals required under chs. NR 706, 708 and 712 through 726, Wis. Adm. Code, to the site lead agency, as designated by Sections VI and VII of this MOU. Responsible persons shall be further informed that the site lead agency will issue approvals and otherwise provide direction in response actions under chapters NR 706, 708 and 712 through 726, Wis. Adm. Code. This provision does not affect submittals, approvals or compliance determinations required under any other statutes or rules, even where required to complete a discharge response action.

(D) *Enforcement*

If full review under Section VII(D) is provided by the non-lead agency, then both agencies shall discuss an enforcement strategy, considering each agency's authorities, options, and responsibilities before initiating enforcement actions beyond a "Notice of Violation" or "Warning Notice". These discussions serve to keep both agencies notified and aware of the intended actions, promote coordination of timing, and avoid duplication of efforts. Both agencies will seek to maintain consistency with actions required of a responsible person by prior Warning Notices or Notices of Violations.

(E) *Use of Environmental Fund Appropriation – s. 20.370(2)(dv), Stats.*

(1) The DNR will consider using Environmental Fund monies appropriated by s. 20.370(2)(dv), Stats., for use under s. 292.11 or s. 292.31, Stats., for discharges of agricultural chemicals resulting in soil or water contamination if the responsible party is unknown, unwilling or unable to undertake the necessary response action(s), and subject to the following conditions as outlined in Wisconsin's Contingency Plan for Hazardous Substance Discharges:

(a) The priority of the site justifies the use of state funds and commitment of DNR staff; and,

(b) Sufficient funds and staff resources are available.

(2) It is understood that:

(a) The agencies will function under the cooperative lead approach described in Section VII(B)(3);

(b) DNR is able to exercise its option to place the site on the U.S. Environmental Protection Agency's (EPA) National Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list, thereby initiating potential federal Superfund action (including investigation and, if the site qualifies, cleanup);

(c) DNR has the option to narrow the focus of the response action, pending the outcome of the initiated enforcement action or future Superfund action;

(d) DNR will address cost-recovery issues when using funds from s. 20.370(2)(dv) Stats.; and

(e) DNR will keep DATCP informed of any Superfund actions or RCRA Corrective Actions at any sites covered by this MOU, and will seek DATCP advice before and while proceeding.

(f) DNR may request assistance from the Environmental Protection Agency (EPA) Region 5, Emergency Response Branch to conduct a Federal-lead Superfund Removal Action.

(F) *Case Close-outs*

(1) General: Case closure requests will be evaluated by the DNR Regional Closeout Committee for DNR lead cases and by the DATCP Closeout Committee for DATCP lead cases. When the non-lead agency has actively participated in case progression, the lead agency will provide the non-lead agency with the opportunity to participate in the closeout decision. In such cases, the lead agency will provide the non-lead agency with the information contained in DNR Case Summary and Closeout Form (NR 4400-202) at least 30 days prior to a closeout review by the lead agency. Cooperative lead cases will be reviewed for closure by each agency and may be closed by one agency before the other if incomplete work falls only within the jurisdiction of a single agency. Cooperative lead closures will be discussed with the other agency in advance of closure actions and must clearly communicate to the responsible party and other interested persons the scope of the closure decision by that agency and the fact that other work outside of the jurisdiction of the agency issuing the case closure remains incomplete.

(2) Use of Soil and Groundwater Registries: Closure of cases where contaminated soil or groundwater have not been adequately removed must be included in DNR's Registry of Closed Remediation Sites (GIS Registry). DATCP will not issue a closure letter to the responsible party until DATCP confirms that the DNR has received the appropriate GIS Registry processing fee and all items for the packet have been reviewed by DATCP staff for accuracy and completeness. DATCP will forward the complete GIS registry packet and its final closure letter to DNR upon final closure and DNR will subsequently record this data to its registry.

SECTION V: SITE REMEDIATION OPTIONS

(A) *Landspreading Policy Agreement*

(1) Categorizing Contaminated Media and Options: DATCP and DNR agree on the six procedures identified under (B)-(G) to manage agricultural chemical contaminated media at these discharge sites. Landspreading or disposal of these contaminated media are two common practices. The agencies agree that DATCP's approval process under subsections (B) and (E) is the preferred remedy for media containing fertilizers or currently registered pesticides, and that

landspreading may be an appropriate practice for the management of certain media contaminated with cancelled pesticides. Subsections (C) and (D) allow for landspreading of media contaminated with these cancelled pesticides when identified criteria are met. Both agencies agree that the unique circumstances of historic lead arsenate use require management through a separate mechanism described in subsection (F). Subsection (G) addresses compliance with wastewater discharge permit requirements. This section does not apply to applications of liquids containing agrichemical residues recovered from spill containment systems, that are determined by DATCP to be pesticide or fertilizer use, and that comply with the label for pesticides and with generally accepted agricultural practices for fertilizers.

(2) Landspreading as Use: Where appropriate, DATCP will issue a permit to allow landspreading of agricultural chemical contaminated media. Landspreading of pesticide or fertilizer contaminated media will be regulated by DATCP in accordance with subsections (B) through (E). Media containing contaminants in addition to agricultural chemicals will be subject to applicable solid or hazardous waste management requirements of DNR.

(3) Waste determination: DATCP and DNR agree to use DNR's hazardous waste "contained out" policy (see Attachment D) and allow for landspreading of agricultural chemical contaminated media which have limited concentrations of compounds that could be listed hazardous wastes. Media contaminated with suspended or cancelled pesticides that could be listed hazardous wastes are not subject to regulation as listed hazardous wastes if their concentrations are below residual concentration levels described in ch. NR 720, Wis. Adm. Code, and the media does not have other hazardous characteristics as defined in the NR 600 rule series. These excavated contaminated media are subject to regulation as solid waste or hazardous waste by DNR, under the NR 500 and NR 600 rule series, if not landspread in compliance with this MOU. In this situation, the initial point of contact at DNR is the Regional Waste Team supervisor.

(B) *Landspreading of Soil Containing Currently Registered Pesticides*
If media are contaminated with currently registered pesticides and landspreading is feasible, DATCP may issue a written approval to authorize landspreading in accordance with the process specified in s. ATCP 35.03, Wis. Adm. Code. Landspreading authorized by DATCP will be done on the same crop for which the pesticide contaminant is labeled and at or below label application rates and in accordance with generally accepted agricultural practices. DATCP may authorize one-time landspreading on non-labeled locations only if the landspreading will be of beneficial agricultural use and DATCP concludes the application will not result in adverse impacts to human health and the

environment. DATCP will not authorize landspreading under this subsection for contaminated media that:

(1) Exhibits a hazardous characteristic as described under hazardous waste rules unless that hazard is an intended characteristic of a currently registered pesticide contained in the media;

(2) Also contains a cancelled or suspended pesticide, unless landspreading of that pesticide is determined to be acceptable under subsections (C) or (D). Contaminated media containing cancelled or suspended pesticides may be landspread under this subsection if the cancellation or suspension notice allows use of existing stocks. Once the use of existing stock provision ends, then this material is subject to subsection (C) or (D).

(C) *Landspreading of Soil Containing Cancelled or Suspended Pesticides through Compound Specific Agreements*

In site-specific circumstances, media may be contaminated with cancelled or suspended pesticides. In these cases, landspreading may take place provided:

(1) Landspreading is feasible for that contaminated media,

(2) DATCP has issued a site specific written approval to authorize landspreading in accordance with the process specified in s. ATCP 35.03, Wis. Adm. Code; and,

(3) The cancelled pesticide is subject to an interagency compound specific agreement approved in writing by both DATCP and DNR. Included in Attachment C.2 and C.3 of this MOU as part of the initial agreement are compound specific agreements for Cyanazine and Dinoseb. At the request of DATCP, compound specific agreements will be prepared by staff from the two agencies for the approval of the Administrators for the DATCP Agricultural Resource Management Division and the DNR Air and Waste Management Division, or their designees. Any future compound specific agreements will be based on this agreement and the information shown in Attachment C.1. Future compound specific agreements will be identified as supplements to this MOU. Either agency may request that staff from the two agencies shall re-evaluate the criteria in any of the previously signed compound specific agreements if new information becomes available that may be relevant. Previously signed compound specific agreements may be terminated by either agency through the Conflict Resolution process outlined in Section IX.

(4) If the criteria in a compound specific agreement under Attachment C can not be met, then the contaminated media can not be landspread without a site specific written agreement between DATCP and DNR.

(D) *Landspreading of Soil Containing Cancelled or Suspended Persistent Chlorinated and Related Pesticide Compounds*

(1) Agricultural chemical contaminated soils also commonly contain low level residues of cancelled or suspended persistent chlorinated pesticide compounds, resulting from past use. These soils may be landspread if the concentration of pesticides will not present a risk to persons or the environment, the media do not exhibit a hazardous characteristic; and the responsible party, in consultation with DATCP, determine the contamination is from intended use on the land of those cancelled or suspended pesticides and not the result of a product spill disposal, or from any spill or disposal at a facility that manufactured that pesticide. DATCP may permit landspreading of soils containing these residues, if DATCP, determines that the concentration of the pesticide is consistent with paragraph (2) and Attachment E. Risk will be minimized by limiting the landspreading rates to a maximum of 5% of historic annual use rate for DDT and historic single use application rates for other compounds.

(2) DATCP may permit landspreading of these contaminated soils without DNR review if:

a. The contaminant concentrations in the excavated soils are less than or equal to the concentration resulting from the historic application rate as indicated in Attachment E.
b. In determining the necessary acreage, the active ingredient (A.I.) application rate per acre will not exceed 5% of a historic single application rate, as indicated in Attachment E.

(3) If contaminant concentrations exceed those indicated in column B of Attachment E, DATCP may permit landspreading of contaminated soils, at application rates up to 5% of the historic application rate indicated in Attachment E, under a site-specific agreement with DNR. The site specific agreement will address:

a. The maximum contaminant concentration allowed in excavated soils.
b. Sampling requirements at the landspreading site, both before and after landspreading operations.
c. Post landspreading requirements at the landspreading site including soil incorporation of landspread soil, maintenance of a vegetative cover, and use of subsequent crops from the site.

d. The format and approval process for this site-specific agreement will be consistent with the compound specific agreements discussed in subsection (C).

(4) DATCP will maintain a list of sites on which cancelled or suspended persistent chlorinated pesticide contaminated soils have been landspread, including the application rate and total mass landspread on the site. DATCP will provide this list to DNR upon request.

(5) DNR will advise DATCP on waste classification and disposition of contaminated soils containing cancelled or suspended persistent chlorinated pesticide compounds that can not be landspread under the provisions of this Section.

(E) *Landspreading of Soil Contaminated With Fertilizers*
Landspreading of soil contaminated with fertilizer in accordance with DATCP's landspreading authorization will be viewed by both agencies as a beneficial use or reuse of a fertilizer, not disposal subject to solid or hazardous waste regulation provided that the contaminated soil is applied in accordance with generally accepted agricultural practices. Soil contaminated with fertilizer that can not be landspread is subject to solid waste regulations and may be subject to hazardous waste regulations.

(F) *Lead Arsenate*
Movement of soils at or from a property impacted by application, mixing and loading, or spills of lead arsenate pesticides will be managed under a separate interagency agreement being prepared by the DATCP, DNR and the Department of Health and Family Services – Division of Health. Agency responsibilities defined by that separate agreement will be carried out consistent with this MOU except as otherwise provided in that agreement.

(G) *Compliance With Wastewater Permit Discharge Requirements*

(1) Except as provided in par.(2), a responsible party must notify the DATCP Bureau of Agrichemical Management prior to landspreading, discharging, or disposing of any agricultural chemical contaminated wastewater generated by a remedial action at a discharge site, or any other pesticide containing wastewater that cannot be used as a product under par. (2). The DATCP will subsequently notify the DNR Bureau of Watershed Management to determine if the activity is subject to coverage under WPDES General Permit No. WI-0046566-4, or whether an individual WPDES permit is necessary.

(2) Notification of DNR and WPDES permit coverage is not required for landspreading water contaminated with agricultural chemicals that is managed as a pesticide or fertilizer product and subsequently used consistent with pesticide product label directions, or according to normal nutrient management practices

for fertilizer products. This paragraph applies to rinsates, accumulated rainwater and product spills recovered from spill containment systems under ch. ATCP 29, 32 or 33, and subsequently used as an agricultural chemical product consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products, provided the product is managed in compliance with state and federal pesticide law. This paragraph also applies to pumped, contaminated groundwater when used as an agricultural chemical product consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products, provided that DATCP has issued a landspreading permit to the responsible party. This paragraph does not apply to pesticide mixtures that cannot be used consistent with pesticide product label directions because they contain concentrations of pesticides with differing allowable use sites that exceed federal cross-contamination standards for pesticides under Pesticide Registration Notice 96-8 issued by the USEPA on October 31, 1996. Further, this paragraph does not allow direct discharge of contaminated waters to land adjacent to spill containment systems without authorization under a WPDES permit.

SECTION VI: EMERGENCY RESPONSE

(A) *General*

Emergency situations are those in which there is an actual or imminent threat to public health, safety or the environment which requires an immediate response. DNR is the lead agency for emergency response. DATCP may respond to an emergency and take those actions necessary to contain the site and mitigate any immediate threat until DNR responds. The objective of emergency response actions are: to protect life, drinking water supplies, surface water bodies and property; to identify and control the source of the discharge; and to prevent and abate the migration of the discharge. DNR will be responsible for completing the DNR spill form when notified by DATCP.

(B) *Initial Discovery by Either DATCP or DNR*

When either DATCP or DNR is the first agency contacted or the first agency to discover or respond to an emergency situation, its emergency response actions will consist of the following:

(1) Promptly (typically the same day) notify the other agency of the discharge and discuss and coordinate actions required at the site[3];

[3] *DATCP will notify the DNR regional spill coordinator or contact the Madison Duty Officer (Spills Hotline 24 hour Phone Number: 1(800)943-0003). DNR will notify DATCP by calling the DATCP spill coordinator.*

(2) Collect information regarding chemicals, quantities, and other pertinent information as needed in order to identify the pesticide and/or fertilizer substances involved and assess their immediate hazards;

(3) Identify immediate and short-term requirements to stop the discharge and contain discharged materials;

(4) Provide the responsible party or its contractor with recommendations on a plan of action designed to address containment, recovery of discharged materials and any contaminated media, product/waste storage and disposition, security, and other issues needing prompt or immediate attention;

(5) Provide all pertinent information to the other agency for identifying the substances of concern and the hazards posed by them;

(6) Discuss and coordinate emergency response actions, and provide technical assistance on requirements needed to address and remediate long-term impacts from the discharge; and,

(7) Coordinate with other emergency responders such as local police and fire departments that may also be present taking priority action regarding protection of life and property.

(C) *DNR Immediate Response Responsibilities*

In situations where DNR is the immediate responder, it is also responsible for taking the following actions:

(1) When necessary, determine the appropriate use of the Environmental Fund per Section VII(B)(3);

(2) Contract with a private contractor to provide remedial response actions to mitigate the emergency if the responsible party is unknown, unwilling or unable to adequately respond following procedures outlined in the spill response manual[4]; and

(3) Provide DATCP with technical assistance on the classification of wastes generated.

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[4] *DNR staff invoking this contract follow their regional spill response manuals. Other agencies may also invoke the contract to provide emergency response actions if a responsible party is unknown, unwilling or unable to adequately respond. Information on the current contract may be obtained from Mr. James Nelson, Administrator of the Bureau of Procurement, Department of Administration, 101 East Wilson Street, Madison, Wisconsin. (608/266-2313)*

(D) *DATCP Immediate Response Responsibilities*

In situations where DATCP is the immediate responder, it is also responsible for taking the following actions:

(1) Provide DNR with sampling assistance and analytical support for soil or residue samples needed to assess hazards posed by the discharge, where convenience, costs or other issues make DATCP capabilities preferable to private contractors;

(2) Determine the presence and concentration of potentially significant pesticide or fertilizer compounds in any soil or ground water for determining clean-up levels and the beneficial use of contaminated media; and

(3) DATCP may request DNR to reimburse costs associated with sample analysis conducted by DATCP under par. (1). Reimbursement may only be provided if there is an agreement between the agencies prior to sample collection analysis.

SECTION VII: NONEMERGENCY CORRECTIVE ACTION

(A) *General*

Both agencies agree to provide a coordinated and timely response which will take advantage of existing agency expertise, facilitate environmental protection and promote voluntary compliance at sites where an emergency has been addressed or where one does not exist at the time. Both agencies recognize that one facility may be contaminated by both agricultural chemicals and other compounds. Experience has shown in most cases these contaminants are not co-mingled in soils nor jointly remedied in groundwater, and that cases progress more efficiently if consultants work independently with each agency. Nevertheless, there may be instances where it is most reasonable to have one or the other agency take the lead on all contamination at a given facility, or for the agencies to coordinate actions through a Cooperative Lead under subsection (B)(3).

(B) *Lead Agency and Site Lead Determinations*

(1) DATCP Lead Designation: Except as otherwise provided for by this MOU, DATCP is the lead agency for corrective actions for discharges of agricultural chemicals. DATCP may request that DNR take the site lead on a site where DNR's technical expertise, statutory authority or site specific experience best represent the needs for the site. If DATCP requests that DNR serve as the site lead, DNR will notify DATCP within 14 days whether DNR is willing to serve as the site lead. If DNR declines the site lead role, DATCP shall maintain lead responsibilities or proceed according to par. (5).

(2) DNR Lead Designation: DNR may request that DATCP take the lead on a site where DATCP's technical expertise, statutory authority or site-specific experience

best represent the needs for the situation. If DNR requests DATCP serve as the site lead, DATCP will notify DNR within 14 days whether DATCP is willing to serve as the site lead. If DATCP declines the site lead role, DNR shall maintain lead responsibilities or proceed according to par. (5). In accordance with the authority in s. 94.73 (2m) (b) and (e), Stats., DNR is the lead agency on the sites referenced below:

(a) Major discharges to surface waters of the state.

(b) Sites involving abandoned containers of agricultural chemicals if the responsible party is unknown.

(c) Except as provided under Section V(C), (D) and (F), discharges of pesticide products prohibited from use under s. 94.707(1) at facilities that are storing these pesticides for disposal.

(d) Discharges of household pesticides and industrial pesticides, as defined in s. 94.681(1)(a) and (b), Stats.

(e) Discharges from solid or hazardous waste treatment, storage and disposal facilities licensed or regulated by DNR. For purposes of this paragraph, "treatment, storage and disposal facilities" does not include sites or discrete areas of contamination resulting from releases of agricultural chemicals that occurred solely as an incidental component of agricultural chemical mixing and loading operations.

(f) Sites at which the DNR is taking corrective action pursuant to hazardous waste contamination under s. 291.37(2), Stats. For purposes of this paragraph, this lead does not include areas of contamination resulting from releases of agricultural chemicals that occurred solely as an incidental component of agricultural chemical mixing and loading operations.

(g) DNR shall have the lead in issuing approvals, exemptions and letters for land recycling actions when such an approval, exemption or letter is requested as described in par. (3)(a).

(3) Cooperative Lead Cases: Some cases will require ongoing interaction of both agencies throughout the progress of the case. In these cases, the agencies may agree to each identify a project manager who will jointly agree on the primary roles and responsibilities to be fulfilled by each agency at the outset of the case and at appropriate transition points as the case progresses. The project managers will be responsible for case documentation, intra-agency communication and exchange of information, communication with the responsible party, and tracking case progress for those case components for which the individual agency is responsible. On those case components where both agencies play an active role, the agencies will assure their correspondence with the responsible person reflects this two-agency involvement and directs the responsible person to provide documentation to both agencies. Those cases where cooperative leads are anticipated, and the expected primary roles of each agency include:

(a) *Land Recycling Actions:* The actions needed to comply with ss. 94.73 or 292.11(3) through (7), Stats., may differ from those necessary to obtain a DNR approval or letter under ss. 292.13 though 292.55, and ss. 75.105, 75.106, and 75.17, Stats. A few examples of possible additional actions under these statutes include conducting phase one and phase two assessments or obtaining a certificate of completion under the voluntary party liability exemption (VPLE) process, pursuing cost recovery under s. 292.35, Stats. or seeking general liability clarification under s. 292.55, Stats. Where a party is pursuing land recycling actions related to investigation and remediation of agricultural chemicals and may seek approvals, exemptions or letter under ss. 94.73 and 292.13 though 292.55, and ss. 75.105, 75.106, and 75.17, Stats., DATCP and DNR agree to early and frequent communication to coordinate review and comments on such approvals, exemptions and letters. Generally in these cases DATCP shall have jurisdiction in evaluating which corrective actions are necessary to comply with ss. 94.73, 292.11(3), (4) and (7)(c), Stats., and DNR shall have jurisdiction in evaluating additional measures and issuance of approvals, exemptions and letters necessary under ss. 292.13 through 292.55, and ss. 75.105, 75.106, and 75.17, Stats.

(b) *Use of Environmental Fund Appropriation s. 20.370(2)(dv), Stats.:* Use of the environmental fund appropriation may occasionally become necessary to accomplish those corrective actions deemed necessary by the agencies. DNR has jurisdiction in evaluating whether the circumstances of any particular case justify use of environmental funds under s. 292.11 or 292.31, Stats. In those circumstances where DNR has determined that use of the environmental fund is appropriate, the agencies shall jointly determine which corrective measures will be taken. DATCP has jurisdiction in determining whether any costs incurred directly by the responsible party or recovered from the responsible party under s. 292.11(7)(b) or 292.31(8), or 292.81, Stats., are eligible for reimbursement under s. 94.73, Stats.

(c) *Site Contaminated by Hazardous Substances in addition to Agricultural Chemicals*. The agencies agree to work together to formulate a single remedy for these sites using authorities of both agencies. Both agencies will actively participate in all investigative or remedial actions related to areas of over-lapping soil or groundwater contamination, unless either agency concludes their component of the contamination in the over-lap area does not require any corrective measures. Notwithstanding this, both agencies shall still consider the impacts of over-lapping contamination on any soil or water removed for use, treatment or disposal. Both agencies will attempt to coordinate placement and use of monitoring wells, timing of soil excavation and other activities where coordination is advantageous to either agency or the responsible party

and not detrimental to these parties or the environment. In general, where the corrective actions associated with agricultural chemicals may be eligible for reimbursement under s. 94.73, Stats., DATCP will have jurisdiction in evaluating corrective measures necessary to investigate and remedy the agricultural chemical contamination. DNR will have jurisdiction in evaluating corrective measures necessary to investigate and remedy the other hazardous substances.

(4) Assignment of Site Lead:

(a) The agencies agree to determine the site lead at the following points:

1. Upon reporting of a discharge under Section IV(A)(3),
2. Upon completion of an emergency response under Section VI,
3. Upon discovery of a discharge by either agency under Section IV(B)(2).

(b) If staff do not concur on a site lead decision, the dispute resolution process under Section VIII will commence within 14 days to either agree upon site lead or identify additional information that is necessary to determine site lead and how this information should be collected.

(5) No Active Review: It is also understood that given staffing levels and priorities for both agencies, some sites may not be actively reviewed by the agency determined to have the lead authority under pars. (1) through (3). For those sites, the responsible party, if one exists, will be directed by the lead agency to proceed with the corrective action. The lead agency is responsible for developing and maintaining a tracking system to document the progress and timeliness of the investigation and clean up for all sites for which they are lead regardless of whether a site is actively reviewed.

(6) DATCP Review Under s. 94.73(4), Stats.: Regardless of lead determination, DATCP may provide work plan review and comment to comply with s. 94.73(4)(a), Stats.

(C) *Lead Responsibility*

The site lead agency will contact the responsible party, and meet as appropriate to discuss the requirements and the proposed time schedule for investigation and clean-up. The site lead agency will also assure coordination with the non-lead agency as described under subsection (D), and will incorporate timely review comments from the other agency in correspondence with the responsible party or provide an explanation to the non-lead agency as to why the comments were not incorporated. In contacting the responsible party, the site lead should indicate any coordinating efforts of the two agencies and identify the site lead as the primary contact. Any correspondence should also identify specific concerns and requirements of the agencies and inform the responsible party on

how to proceed. To maintain eligibility for reimbursement under s. 94.73(3) and (4), Stats., DATCP must approve any work plan within 30 calendar days of submittal, regardless of the site lead designation[5]. Where DNR is the site lead and corrective action costs may total more than $7,500, a work plan approval shall either be signed by both agencies or DNR shall notify the responsible party that work plan approval by DATCP is required. DATCP may incorporate or reference DNR's technical review and approval in its approval under s. 94.73(4), Stats.

(D) *Review and Correspondence*

Both agencies will provide information and documents requested by the other agency and may provide review comments related to response actions at sites involving discharges of agricultural chemicals. At the time the site lead agency is selected, the non-lead agency shall identify the level of correspondence and review of draft and final documents it wishes to maintain on the case. Paragraphs (1) through (3) provide default review levels. The level of review shall be discussed on a site-specific basis for sites with water supplies contaminated with agricultural chemicals for which no groundwater standards exist. When draft and final documents are requested, they shall be provided in a timely manner. Site specific information necessary for BRRTS database management will be tracked and exchanged in accordance with Section IV(A)(2). The site-specific contacts identified in Section III(D) of this MOU shall provide and receive the preliminary evaluation and correspondence related to site lead determination. Other pertinent site-specific correspondence regarding sites covered under this agreement will be provided as they are generated, to the person designated by the primary contact. The DNR Bureau of Drinking Water and Groundwater and the applicable Regional Water Leader shall receive copies of all correspondence relating to public and private wells including well construction and well water quality. DNR will incorporate this data into the Groundwater Retrieval Network.

[5] *To comply with this requirement, the lead agency shall promptly furnish the other agency with a copy of each work plan for comment. Within 14 days after receiving a copy of the work plan, the DATCP or DNR may provide any comments on the work plan. DATCP comments shall be forwarded to the responsible person within 30 days.)*

(1) Review by DNR of DATCP Lead Sites:

(a) DATCP will provide for full review by DNR of response actions taken or planned at any sites where DATCP is the site lead and public water supplies have been impacted over a preventive action limit, or where such impacts appear imminent. DATCP shall assure that DNR receives all reports, work plans and other correspondence promptly for these sites (e.g., within 3 calendar days). DATCP will provide 14 calendar days for DNR to review work plans and provide comments to DATCP[6].

(b) DATCP will provide DNR with copies of correspondence for sites where private water supplies are impacted over a preventive action limit, or where such impacts appear imminent. Correspondence will routinely be provided in final form and need not include copies of work plans and reports.

(c) DATCP will provide information to DNR for tracking purposes of case initiation and case close-out for all other sites covered by this MOU.

(2) Review by DATCP of DNR Lead Sites:

(a) DNR will provide for full review by DATCP of response actions taken or planned at any of the following sites where DNR is the site lead. DNR shall assure that DATCP receives all reports, work plans and other correspondence promptly for these sites (e.g. within 3 calendar days). DNR will provide 14 calendar days for DATCP to review work plans and provide comments to DNR.

1. Sites where DATCP has requested DNR serve as the site lead under s. 94.73(2m)(b), Stats.
2. Sites involving contamination from agricultural chemicals.

(b) DNR will provide DATCP with copies of correspondence for the following sites. Correspondence will routinely be provided in final form and need not include copies of work plans and reports, unless copies are received earlier to review potential reimbursement as noted under subsection (C):

1. Sites involving major discharges to surface water.
2. Sites involving discharges of pesticides that are not agricultural chemicals as described in Section IX of this agreement.
3. Corrective actions at hazardous waste sites that could be eligible for reimbursement under s. 94.73, Stats.

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[6] *DNR anticipates charging fees where appropriate when the responsible party is seeking a DNR review or letter. For instance, if DNR assists DATCP in review of a work plan, there would not be a fee charged. However, if the responsible party requests DNR review for the purpose of obtaining an NR 749 letter, then DNR would expect to charge a fee.*

(c) DNR will provide notice to DATCP of case initiation and case close-out on the following sites.

1. Immediate spill response actions involving pesticides that are not agricultural chemicals.
2. Actions involving abandoned containers of agricultural chemicals.

SECTION VIII: HOUSEHOLD AND INDUSTRIAL PESTICIDES

Household and industrial pesticides are not agricultural chemicals, but are of mutual concern to DATCP and DNR, since both agencies regulate aspects of these products and their wastes. DNR will normally maintain lead responsibility for sites contaminated with these pesticides. DNR may request that DATCP take a lead role on household or industrial pesticide discharge response actions where such a change in lead role best serves the interests of both departments. Both agencies agree to provide information to each other consistent with Sections I through VII and will provide for review of response actions by the other agency, if requested.

SECTION IX: CONFLICT RESOLUTION

(A) *Site Specific Issues*

In the event a disagreement over a site specific issue pertinent to this agreement occurs, the DATCP Containment and Remediation Section Chief and the DNR Regional Remediation and Redevelopment Team Supervisor and, if appropriate, the DNR Regional Waste Program Team Supervisor and DNR enforcement staff, shall meet with staff assigned to the site to resolve the issue. DNR and DATCP Bureau Directors will be notified of the times, dates, locations and issues to be resolved at dispute resolution meetings. If the issue cannot be resolved at this level, the matter shall be elevated to the appropriate DATCP Bureau of Agrichemical Management Director and the DNR Regional A&W Leader. The appropriate DNR Bureau Directors will also be invited to participate. In the event that the issue cannot be resolved at this level, the division administrators of the DATCP Division of Agricultural Resource Management and the DNR Division of Air and Waste will attempt to reach a mutual agreement. The Secretaries of each Department are the final arbiters of any dispute. Unresolved issues will be forwarded to the next level in a timely manner (typically within 30 days of a decision at the prior level). Within 30 days of the decision being made on the disputed issue, the lead agency will prepare a position paper on the specific decision for sign-off by both agencies.

(B) *Program Issues*

In the event a disagreement occurs over a programmatic issue which is pertinent to this agreement but is not site specific, the respective DATCP and DNR Section Chiefs and one regional team supervisor shall meet to resolve the issue. In the event the issue cannot be resolved at this level, the matter shall be elevated to appropriate DATCP and DNR Bureau Directors. If the issue remains unresolved, the division administrators of the DATCP Division of Agricultural Resource Management and the DNR Division of Air

and Waste will attempt to reach a mutual agreement. The Secretaries of each Department are the final arbiters of any dispute. Within 30 days of the decision being made on the disputed issue, the lead agency will prepare a position paper on the specific decision for sign-off by both agencies.

SECTION X: REVIEW AND MODIFICATION

This MOU has been developed by mutual cooperation and consent, and hereby becomes an integral part of the working relationship between DATCP and DNR. DATCP and DNR agree to provide each other with prompt notice of changes to the statutes, administrative rules, and guidance, and practices that may impact both the agencies and this MOU. Each agency shall make copies of this agreement available to appropriate staff. This agreement shall be reviewed by DATCP and DNR at least biennially to update agency contacts and organizational structures and determine whether other modifications are necessary.

This MOU shall commence upon its signing by both agencies and shall continue to be in effect until termination. It shall be reviewed at the request of either agency and may be terminated by either agency following the Conflict Resolution process outlined in Section IX.

For the Wisconsin Department of Agriculture, Trade and Consumer Protection

3-14-05

Rodney J. Nilsestuen, Secretary — Date
Department of Agriculture, Trade and
Consumer Protection

For the Wisconsin Department of Natural Resources

Scott Hassett — 3-18-05

Scott Hassett, Secretary — Date
Department of Natural Resources

ATTACHMENT A
DATCP and DNR Contacts – February, 2005

DATCP

Bureau of Agrichemical Management Director - Ned Zuelsdorff (608/224-4550)
Containment and Remediation Section Chief - Duane Klein (608/224-4519) *(Also Enforcement Contact)*
Spills Coordinator – Matt Laak (608/224-4518)
See attached map for DATCP Field Investigator Assignments

Also at: http://www.datcp.state.wi.us/arm/agriculture/pest-fert/pesticides/accp/ees_staff.html

DATCP Field Investigators are field investigators, located throughout Wisconsin, assigned to long-term cleanup projects and landspreading contaminated soil.

Kevin Brey
3610 Oakwood Hills Parkway
Eau Claire, WI 54701-7754
715-839-1641

Steve Buchanan
N3829 Highway 22
Montello, WI 53949
608-297-2274

Art Fonk
819 North 6th Street - Room 99
Milwaukee, WI 53203
414-278-0119

David Hyer
2957 Church Street
Stevens Point, WI 54481
715-342-2640

Mark McCloskey
2811 Agriculture Drive
PO Box 8911
Madison, WI 53708-8911
608-224-4532

Corinne Ness
1518 1/2 11th Street
Monroe, WI 53566
608-329-4477

John Peters
200 N. Jefferson Street - Suite 146A
Green Bay, WI 54301
920-448-5102

Lenny Weiss
437 Milwaukee Avenue
Burlington, WI 53105
262-763-7987

Mike Brown
373 W. 6th St., Suite C
Richland Center, WI 53581
608-647-3008

Vacant
2129 Jackson Street
Oshkosh, WI 54901
920-232-5605

Bob Gutknecht
1200 Lakeview Drive - Suite 160
Wausau, WI 54401
715-845-6407

Gary LeMasters
820 Industrial Drive
Sparta, WI 54656
608-366-1190

John Morris
Washburn County Law Enforcement Center
1341 2nd Ave.
P.O. Box 397
Cumberland, WI 54829
715-822-3945

Liz O'Donnell
2811 Agriculture Drive
PO Box 8911
Madison, WI 53708-8911
608-224-4531

Jeff Saatkamp
141 NW Barstow Street - Room 404
Waukesha, WI 53188
262-524-3959

DNR Contacts

Central Office

Bureau for Remediation and Redevelopment Director - Mark Giesfeldt (608/267-7562)
Ed Lynch (608/266-3084)
Bureau of Waste Management Director - Suzanne Bangert (608/266-1327)
Policy Section Chief – John Melby (608/264-8884)
Bureau of Drinking Water and Groundwater Director – Jill Jonas (608/267-7545)
Bureau of Watershed Management – Jeff Brauer, Environmental Engineer – (608/267-7643)
Office of Environmental Enforcement Director – Steve Sisbach (608/266-7317)
Law Enforcement Emergency Response Coord. – David Woodbury (608/266-2598
DNR Madison Duty Officer - 1-800-943-0003

Regional Contacts - See attached map identifying DNR Regions

Northern

Air and Waste Leader - Mark Stokstad (715/365-8911)
Remediation and Redevelopment Team Supervisor – John Robinson (715/365-8976)
Waste Team Supervisor –Connie Antonuk (715/365-8946)
Water Leader – Tom Jerow (715/365-8901)
Spills Coordinator – Norm Dunbar (715/365-8963)

West Central

Air and Waste Leader - Thomas Woletz (715/839-3756)
Remediation and Redevelopment Team Supervisor - Bill Evans (715/839-3710)
Waste Team Supervisor – Dave Lundberg (715/839-3708)
Water Leader –Dan Bauman (608/785-9014)
Spills Coordinator – John Grump (715/839-3775)

Northeast

Air and Waste Leader - David Hildreth (920/492-5820)
Remediation and Redevelopment Team Supervisor - Bruce Urben (920/492-5860)
Waste Team Supervisor – Len Polczinski (920/492-5870)
Water Leader – Charlie Verhoeven (920/492-5831)
Spills Coordinator – Roxanne Chronert (920/492-5592)

South Central

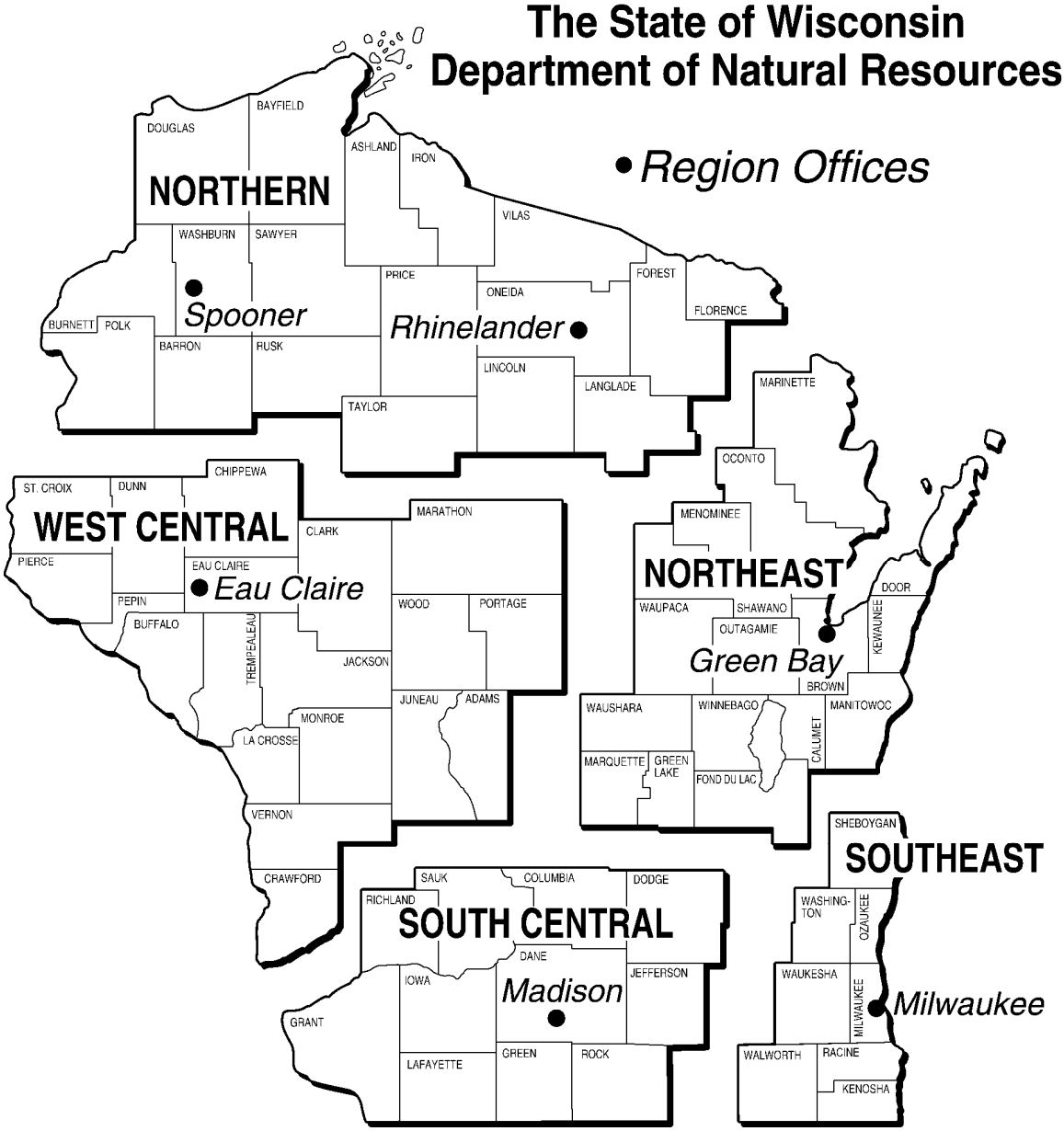
Air and Waste Leader - Joe Brusca (608/275-3296)
Remediation and Redevelopment Team Supervisor - Pat McCutcheon (608/275-3241)
Waste Team Supervisor– Gene Mitchell (608/275-3466)
Water Leader – Margie Devereaux (608/275-3310)
Spills Coordinator – Ted Amman (608/275-3332)

Southeast

Air and Waste Leader - Lakshmi Sridharan (414/263-8512)
Remediation and Redevelopment Team Supervisor- Jim Schmidt (414/263-8561)
Waste Team Supervisor – Frank Schultz (414/263-8694)
Water Leader – Charles Krohn (414/263-8514)
Spills Coordinator – Scott Ferguson (414/263-8685)

DATCP Field Investigator Assignments

The State of Wisconsin Department of Natural Resources



ATTACHMENT B
DATCP and DNR Facility and Discharge Site Databases

DATCP Databases

Licensed Fertilizer and Pesticide Facilities: DATCP licenses commercial pesticide application businesses. Examples of entities on this list are agricultural coops and farm centers, lawn care companies, structural pest control companies, plus a number of less common pest control firms, such a aquatic, right-of-way and bird control businesses. The agricultural entities likely also have licenses to sell restricted-use pesticides and fertilizers. The list identifies Wisconsin locations and very general information about each operation. They are maintained in DATCP's Case Tracking System.

Contact: Lori Bowman lori.bowman@datcp.state.wi.us 608/224-4542

Longterm Cleanup Sites: As part of its Agricultural Chemical Cleanup Program, DATCP maintains a database of all active and closed cases where soil or groundwater contamination appears to be related to discharges of agricultural chemicals. The majority of these cases are places where fertilizers or pesticides were mixed and loaded at storage facilities, such as agricultural coops and farm centers. Additional but less common types of facilities include farms, nonagricultural pesticide application businesses, golf courses and former orchard mixing/loading sites. This data is maintained in DATCP's Case Tracking System and includes the site name and location, the case status and limited additional detail for open cases.

Contact: Duane Klein duane.klein@datcp.state.wi.us 608/224-4519

Spills: Also part of the Agricultural Chemical Cleanup Program, DATCP tracks acute spills (discharges) involving agricultural chemicals. This data set tracks the DATCP responses to the spills reported through DNR regional spills coordinators and the state spills hotline, including any spills that are first reported to DATCP, where information is then forwarded to the DNR spills contacts. On occasion, particularly severe spill cases become long-term cases and may be tracked as a Longterm Cleanup Site (see above).

Contact: Matt Laak matt.laak@datcp.state.wi.us 608/224-4518

Groundwater Cases: DATCP tracks all occurrences of pesticides in groundwater as a subset of the DNR groundwater database, with additional detail for many of these detections. As a further measure, DATCP conducts an investigation of each groundwater detection in a private or public water supply that exceeds an enforcement standard for any pesticide. These investigations are called groundwater cases and the investigation is tracked in DATCP's Case Tracking System. In cases where the investigation concludes that a discharge of an agricultural chemical has resulted in groundwater contamination or may still be contributing to the groundwater contamination, the case may be tracked as a Longterm Cleanup Site (see above).

Contact: Jim VandenBrook jim.vandenbrook@datcp.state.wi.us 608/224-4501

Lead Arsenate Sites - Database of pre-1960 orchard locations. These sites are of concern because, prior to 1960, lead arsenate was frequently used on orchards and significant levels of lead and arsenic may remain on these properties. Many of these sites have been, and are being developed as residential properties. Information in this database includes:

- Clickable map of Wisconsin that identifies pre-1960 orchard locations.
- Aerial photos showing locations that we have identified as old orchards.
- Confidence level indicating the likelihood of an orchard existing on a property.

Contact: Duane Klein duane.klein@datcp.state.wi.us 608/224-4519

DNR Databases

The Wisconsin Department of Natural Resources (DNR) maintains several lists of contaminated sites and solid and hazardous waste facilities that are available to the public. The DNR's Remediation and Redevelopment (RR) Program as well as the Waste Management Program maintain several of these lists (highlighted below), including Superfund sites, hazardous substance spills (discharges), sites with leaking underground storage tanks, sites undergoing investigation and cleanup, as well as lists of facilities that generate hazardous waste and treat, store and dispose of solid and hazardous wastes. DNR staff strongly encourage consultants, well drillers and prospective purchasers to check BRRTS on the Web (BOTW) and the GIS Registry before drilling a well to determine the need for a set-back distance from a waste site, or for special casing or construction features. You can access BOTW and the GIS Registry at www.dnr.state.wi.us/org/aw/rr/brrts/index .

DNR RR program databases may not be comprehensive. These lists only show what contaminated sites and spills the DNR has information about. All spills or discharges of hazardous substances are to be reported by law to the DNR. Spill or any type of release of a contaminant into the environment may be reported to the DNR by calling the DNR's 24-hour Spill Hotline at 1-800-943-0003.

BRRTS on the Web (BOTW) – The DNR's Bureau for Remediation and Redevelopment's Tracking System (BRRTS) is the RR Program's main database for tracking contaminated properties and this database is accessible via the Internet (www.dnr.state.wi.us/org/aw/rr/brrts/index.htm). New sites are added as they are reported to DNR. Information available on BRRTS On The Web includes:

- ⇨ A list of thousands of contaminated sites, including spill sites, Superfund sites, etc.;
- ⇨ Clean underground storage tank removals;
- ⇨ Search capabilities that allow you to find these sites using several different key words, including
- ⇨ the county, city or specific location of the site;
- ⇨ A list of investigation and remediation activities conducted at each site;
- ⇨ Names of companies/businesses connected to the site; and
- ⇨ Names of DNR project managers responsible for each site.

GIS Registry of Closed Remediation Sites – Sites listed on the Geographic Information System (GIS) Registry of Closed Remediation Sites are those that have groundwater contamination remaining above levels listed in ch. NR 140, Wis. Administrative Codes. This list generally includes sites using natural attenuation as a DNR-approved remedy (natural attenuation makes use of natural processes in soil and groundwater to contain the spread of contamination and to reduce the amount of contamination). In 2002 the GIS Registry was expanded to include sites with soil contamination remaining above levels listed in ch. NR 720, Wis. Admin Code. (gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm)
Information available on the GIS Registry includes:

- ⇨ List of closed sites with groundwater contamination remaining above ch. NR 140, Wis. Adm. Code, enforcement standards;
- ⇨ List of closed sites since August, 2002 with soil contamination remaining above levels listed in ch. NR 720, Wis. Admin Code;
- ⇨ Closed sites with institutional controls;
- ⇨ Geographic search function that allows the user to zero in on sites at the click of a button;

MOU Between DATCP and DNR on Discharge of Hazardous Substances

- ⇨ If the user is unsure of the exact location of a site, the GIS Registry provides multiple search options that allow the user to search for sites by county, city or village name;
- ⇨ Site specific information, including site maps and groundwater contaminant maps;
- ⇨ A link to BRRTS data providing information on site activities and submittals, along with the dates of those activities; and
- ⇨ GIS data at your fingertips, including important topography as well as key rivers, railroads and roads / highways.

All sites listed on the GIS Registry are also located on BRRTS on the Web. · The GIS Registry includes groundwater plumes for closed sites, but not open sites. However, open sites are listed on BOTW.

SHWIMS – The Solid and Hazardous Waste Information Management System (SHWIMS) is the system used by the Waste Management program to track most facility and site data for both solid and hazardous waste entities. The purpose of SHWIMS is to store this data, provide easy access to it by DNR staff, and provide information to federal and state agencies and the general public as needed. SHWIMS data are stored in Oracle tables and is accessed through a client server application that is installed and operates on an individual's PC.

SHWIMS is designed to track facility and site data. A site is a place that the DNR has an interest in tracking because an environmentally related event has occurred there. This includes sites with ongoing activities as well as sites where an activity or incident occurred in the past such as operations that are regulated, monitored or licensed by the Department by the solid and hazardous waste program. Areas of detail that may be applicable to a site and are tracked in SHWIMS include information on: waste program activities, contact persons, ownership, wastes handled, license records (current and historical), landfill tonnage figures, hazardous waste manifests and annual reporting, and infectious waste annual reporting.

Currently there are 77,000 sites in our SHWIMS database, which includes solid and hazardous waste facilities that are active or inactive, sites where discharges have occurred, and sites where other types of remediation and cleanup activities are or were involved. Multiple activities at any one site can be tracked in the SHWIMS database.

Contact: Aggie Cook - Agnes.Cook@dnr.state.wi.us 608/266-2414

The DNR RR program also maintains a list of Superfund Sites In Wisconsin (www.dnr.state.wi.us/org/aw/rr/archives/pubs/RR005.pdf). Since the 1980s, the DNR has been a partner with the U.S. Environmental Protection Agency (EPA) in managing the investigation and cleanup of sites on the Superfund National Priority List (NPL). Currently there are 39 sites on the NPL in Wisconsin.

Another site list is the Registry of Waste Disposal Sites in Wisconsin (www.dnr.state.wi.us/org/aw/rr/archives/ pubs/RR108.pdf) first created in the early 1980s to identify abandoned landfills. Over the years, this abandoned landfill list was expanded, modified or re-named several times. The current database, last updated in 1999, is a broad catalog of sites that had some record of solid waste activity (e.g. active and inactive landfills, demolition sites, old burn pits) and is widely used by well drillers and consultants when drilling wells or doing property assessments.

Guidance on the NR 700 rule series is available at http://www.dnr.state.wi.us/org/aw/rr/technical/index.htm

ATTACHMENT C.1
Additional DATCP and DNR Landspreading Agreement Format for Compound and Site Specific Agreements.

Any additional compound specific and site specific agreements will include the following:

1. Pesticide name
2. Narrative discussion including the pesticide's common name and applicable brand names, a brief history (e.g., years of use, when cancelled, etc.) and information on use (e.g., pesticide characteristics, breakdown conditions, etc.) and crops to which the pesticide was applied.
3. General pre-cancellation label conditions on the pesticide including information on application rates, crop usage, and environmental restrictions
4. Cancellation notes on the pesticide including why the pesticide was cancelled and a list of provisions allowing for use of existing stocks.
5. Criteria under which DATCP may grant landspreading authorization without site-specific DNR review. This section should discuss how the landspreading activity would follow DATCP's guidance as well as identify applicable compound specific criteria.
6. Waste Management Requirements. Contaminated media that exhibits a hazardous waste characteristic or contains a listed hazardous waste constituent that is neither a fertilizer nor currently registered pesticide in a concentration that exceeds an RCL under the contained out policy may not be landspread. In this circumstance, excavated or extracted contaminated media are hazardous wastes. The agreement shall address applicable waste management practices and identify any characteristic or listed hazardous waste constituent in the contaminated media that may provide a basis for the material being a hazardous waste. The applicability of DNR's contained out policy should be mentioned in this discussion.
7. Sign off by agency administrators or designated bureau directors.
8. Attachments including a copy of the pesticide cancellation agreement as published in the Federal Register and an example of a recent label if available.

ATTACHMENT C.2
DATCP and DNR Compound Specific Agreement on Landspreading Pesticide Contaminated Soil for: Cyanazine

Note this agreement only applies to the application of soil contaminated with Cyanazine. It does not apply to any other compound or to the use of product cyanazine.

1. Pesticide name**. – Cyanazine**

2. **Narrative discussion.** Cyanazine (Bladex, Extrazine and other brand names) was a selective herbicide registered by US EPA in 1971 and used primarily on corn in Wisconsin. Throughout the 1980s and into the 1990s, cyanazine was one of the four most used herbicides in Wisconsin. Moving through the 1990s, its market share diminished in favor of other products. Cyanazine undergoes microbial breakdown in use conditions, with a published field half-life of 2 weeks. As with other herbicides, its breakdown is much slower at mixing/loading sites. Two of its metabolites are shared with atrazine and have been found in groundwater (although they cannot be traced back to cyanazine use since atrazine has typically also been used and atrazine parent may also be present in groundwater). While typically not a primary chemical remaining in soils at agrichemical facilities, cyanazine is still commonly found.

3. Pre-Cancellation Label Conditions:
   (a) Application rates: Generally1-4 #/acre prior to 1998, depending upon soil organic matter. Rates were reduced to 1#/acre from 1999 through 2002, its last year of use.
   (b) Wisconsin crops: Field corn, popcorn, seed corn and sweet corn.
   (c) Environmental Restrictions: Some uses were not permitted on sand or sandy loam or soils with <1% organic matter.

4. **Cancellation Notes:** A voluntary cancellation agreement was reached in 1996, following a data call-in requesting additional cancer risk studies (61 FR 39023 July 25, 1996, FRL-5385-7). Technical grade production ended in 1997 and the last formulated products were produced in August 1998. Distribution and use of existing stocks were allowed through December 2002.

5. **General criteria under which DATCP may grant landspreading authorization without site-specific DNR review.** Application of soil contaminated with cyanazine must follow ATCP 35.03 and DATCP's landspreading guidance in Landspreading Instructions, including completion of:
   (a) DATCP form ARM.ACP198 (rev.11/00), *Landspreading Agreement Form*, a form that must be signed by the landowner which provides specific information on the landspreading site, the product credit, and the landowner.
   (b) DATCP Form ARM.ACM.268 (11/00), *Land Use Agreement form*, a form for paying landowners for tillage and the use of their fields which provides information on tillage and costs, land access fees, landowner agreement, and the responsible person.
   (c) DATCP form ARM.ACP 199 (rev.1/02), *Landspreading Post-Application Report*, that is completed after landspreading which provides general information on the application of the soil or water, landspreading site information, and the landspreading permit holder.
   (d) Prior to the issuance of the written landspreading agreement, DATCP staff will conduct an onsite field inspection to:
      1. Verify site information on the landspreading agreement form such as soil type ,
      2. Review site for topographic features such as sink holes, ground slope, etc.,
      3. Evidence of high groundwater, wetlands and adjacent surface waters
      4. Ability for the site to meet set back requirements

6. **Specific criteria under which DATCP may grant landspreading authorization without site-specific DNR review.** [*Proposals that cannot meet these conditions will require written site-specific DATCP & DNR concurrence*]: In addition to the general criteria outlined in section 5., above, the following compound specific criteria must also be met and must be incorporated into DATCP's written landspreading approval.
   (a) Maximum application rate shall not exceed 0.5 #/acre active ingredient (12.5% of the maximum label rate and 50% of the cancellation use rate)
   (b) Applications of cyanazine within an atrazine prohibition area shall not exceed 0.1 #/acre
   (c) No application on sand, sandy loam or soils with <1% organic matter
   (d) Applications limited to non-crop (e.g., Pastures and uncropped fields) and corn sites
   (e) Plus the following landspreading requirements:
      1. Surface water setback - Minimum distance is 100 ft. for running water and 200 ft for lakes and ponds
      2. Well setback – Minimum distance is 100 ft.
      3. Landspreading must be by DATCP certified applicator
      4. Landspreading may not take place on frozen soils
      5. The applicator will provide advanced notice to DATCP prior to landspreading event
      6. Upon completion, landspread material must be incorporated into the soil

7. **Waste Management Requirements**. –Cyanazine is not listed as a hazardous waste or as a hazardous constituent in the NR 600, Wis. Adm. Code, rule series. Therefore, unless the material exhibits a hazardous characteristic, soil contaminated with cyanazine may be managed as a solid waste.

8. **Sign off.**

For DATCP_____ Date: 3-8-05
Kathy F. Pielsticker, Administrator
Agricultural Resource Management Division

For DNR_____ Date: 3/16/05
Allen K. Shea, Administrator
Air and Waste Management Division

9. **Attachments**
   (a) "Bladex 4L" Label

promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

[1] Registered trademark of Merck & Company.

[2] Registered trademark of Nippon Soda Company, Japan.

[3] Registered trademark of Drexel Chemical Co.

[4] Registered trademark of Bayer AG, Germany.

SL-616-1 9068 3/23/98

H-63723

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Summarized Supplemental Labels

The following is a list of summarized information contained in the supplemental labels we received for the preceding label (a copy of the supplemental label can be viewed and printed on the C&P Press web site www.greenbook.net):

Description: Benlate SP (Aerial Application to Pistachio in CA)
Registered States: CA

Description: Benlate SP (For Control of Cerposcora Leafspot on Sugarbeets)
Registered States: AK, AL, AR, AZ, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Description: Benlate SP (For Control of Scab in Almonds in CA)
Registered States: CA

Description: Benlate SP (For Control of Swiss Needle in Douglas Fir in OR & WA)
Registered States: OR, WA

Description: Benlate SP (For Control of White Mold on Radish)
Registered States: AK, AL, AR, AZ, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Description: Benlate SP (For Suppression of Anthracnose on Citrus)
Registered States: AK, AL, AR, AZ, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Description: Benlate SP (For Suppression of Scab in Wheat in MN, ND, & SD)
Registered States: MN, ND, SD

Description: Benlate SP (For Suppression of Scab in Wheat in WI, MI, & OH)
Registered States: MI, OH, WI

Description: Benlate SP (For the Control of Cercospora/Cercosporella Leaf Spots, Anthracnose & Powdery Mildew on Turnip Greens - IL)
Registered States: IL

Bladex® 4L

herbicide

FOR USE ON FIELD CORN, POPCORN, SWEET CORN, FIELD CORN GROWN FOR SEED, AND COTTON

RESTRICTED USE PESTICIDE

This product is a restricted use herbicide due to reproductive and ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for Cyanazine to reach ground and surface water.

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. This product may not be sold or distributed after September 30, 2002.

Liquid
Contains 4 lbs. active ingredient per gallon.

Active Ingredients	By Weight
Cyanazine 2-[[4-chloro-6-(ethylamino)-s-triazin-2-yl] amino]-2-methylpropionitrile	43%
Inert Ingredients	57%
TOTAL	100%

EPA Reg. No. 352-470

KEEP OUT OF REACH OF CHILDREN
WARNING AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF EYES, flush with plenty of water. Get medical attention if irritation persists.

IF SKIN, wash immediately with plenty of soap and water.

IF INHALED, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

For medical emergencies involving this product, call 1-800-441-3637.

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

WARNING! May be fatal if swallowed. Harmful if inhaled or absorbed through the skin. Causes temporary eye injury.

This product may be hazardous to your health. This product is classified "Restricted Use" because, at doses which caused serious maternal illness in laboratory animals, birth defects were present. Use of protective clothing and equipment and following the precautions below can reduce risk. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Do not get in eyes or on clothing.

Keep out of reach of domestic animals, particularly cattle. Consumption of this product, spray solutions, or water contaminated with product can result in serious illness or possible death of bovines.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

Long-sleeved shirt and long pants

Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or polyvinyl chloride or viton or neoprene rubber.

Chemical-resistant footwear plus socks

Protective eyewear

Chemical-resistant apron when cleaning equipment, mixing or loading.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning equipment or disposal of wastes. Cyanazine, the active ingredient in BLADEX has been detected in surface waters that receive run-off from treated areas. To minimize cyanazine run-off, follow the Best Management Practices outlined in the Directions For Use section of the label.

Cyanazine is a chemical which can move (seep or travel) through soil and can contaminate groundwater which may be used as drinking water. Cyanazine has been found in groundwater as a result of agricultural use. Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. Users are advised not to apply BLADEX where the water table (groundwater) is close to the surface and where the soils are very permeable (i.e., well drained soils such as loamy sands). Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in possession of the user at the time of pesticide application.

Do not apply this product in a way that contacts workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or polyvinyl chloride or viton or neoprene rubber.

Shoes plus socks.

Protective eyewear.

DuPont's BLADEX® 4L Herbicide is a liquid formulation that can be applied alone or in combination with other herbicides to control a wide variety of weeds on field corn, sweet corn, popcorn, field corn grown for seed, and cotton.

BEST MANAGEMENT PRACTICES FOR GROUND AND SURFACE WATER PROTECTION

Application Requirements

- Do not mix, load, or apply BLADEX within 50 ft of all wells, including abandoned wells, drainage wells, and sinkholes.

Do not mix or load BLADEX within 50 ft of intermittent streams and rivers, natural or impounded lakes, and reservoirs.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad; the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at least 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof or sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

Some states may have in effect additional requirements regarding well-head setbacks and operational area containment.

Cyanazine Rate Limits

One quart of BLADEX 4L contains 1.0 lb cyanazine active ingredient (a.i.). Rate limits for each year described below apply to cyanazine from all sources. Adhere to the rate recommendations in this label and observe the rate limits and other restrictions for the time period indicated.

1996:

- Do not apply more than 6.5 quarts BLADEX 4L per acre per year to any land.
- On highly erodible land, as defined by the Soil Conservation Service, if plant residue cover is less than 30%, do not apply more than 3.0 quarts of BLADEX 4L per acre per year.

1997:

- Do not apply more than 5.0 quarts of BLADEX 4L per acre per year.
- On highly erodible land, as defined by the Soil Conservation Service, if plant residue cover is less than 30%, do not apply more than 3.0 quarts of BLADEX 4L per acre per year.

1998:

- Do not apply more than 3.0 quarts of BLADEX 4L per acre per year.
- An enclosed cab is required when applying BLADEX 4L. An enclosed cab must have a nonporous barrier that totally surrounds the occupants and prevents contact with pesticides outside of the cab.

1999-2002:

- Do not apply more than 1.0 quarts of BLADEX 4L per acre per year to any crop land
- An enclosed cab is required when applying BLADEX 4L.
- This product may not be sold or distributed after September 30, 2002.
- This product may not be used after December 31, 2002.

When state/local requirements regarding the use of cyanazine (including lower maximum use rates and/or higher set-backs) differ from the label, the more restrictive/protective requirements apply

WEEDS CONTROLLED ON CORN

BLADEX effectively controls the following weeds on corn when used alone or in combination with other herbicides according to label directions:

Grasses

Annual bluegrass	Foxtail, giant
Annual fescues	Foxtail, green
Annual (Italian) ryegrass	Foxtail, yellow
Annual sedge	Goosegrass
Barnyardgrass*	Junglerice
Bullgrass	Stinkgrass (Indian lovegrass)
Crabgrass	Witchgrass
Fall panicum	

Broadleaves

Annual groundcherry	Mayweed
Annual morningglory	Nightshade (annual)
Black mustard	Pigweed*
Buffalobur	Pineappleweed
Buttercup (annual)	Plantain
Carpetweed	Poorjoe
Cocklebur†	Prickly sida (teaweed)
Common chickweed	Prostrate knotweed
Common groundsel	Prostrate spurge
Common mallow	Russian thistle
Common purslane	Shepherdspurse
Common ragweed	Smallflower galinsoga
Corn spurry	Smartweed (Pennsylvania)
Curly dock (seedling)	Sunflower† (wild, annual, common)
Fddleneck	Tarweed cuphea (gumweed)
Florida pusley (Florida purslane)	Velvetleaf*
Hedge mustard	Wild buckwheat
Ensonweed*	Wild mustard
Kochia	Wild radish
Ladysthumb	Wild turnip
Lambsquarters	

*Under conditions that delay germination of the seeds, such as low temperatures or lack of soil surface moisture, the effectiveness of BLADEX against these weeds may be impaired.

SEED

Apply BLADEX treatments just before, at, or after planting but before the crop has emerged. Do not remove treated soil from the seedrows prior to or during planting.

BLADEX may be applied early, prior to planting or in a split application, if pre-season weed control is desired. For split applications, do not exceed the total amount of BLADEX for the soil texture and organic matter shown in Table 1.

If BLADEX is applied early, more than 15 days before planting, a split application of BLADEX or some other herbicide treatment may be necessary at or after planting to provide additional length of weed control. Refer to the Conservation Tillage Preemergence Uses section of this label.

Rotary hoeing is recommended for preemergence applications that do not receive adequate rainfall or sprinkler irrigation to wet the top 2 in. of soil or depth of germinating weeds within about 10 days after application.

BLADEX alone or tank mix combinations should not be incorporated more than 3″ deep to keep from burying the herbicide. Single or two-pass incorporation with a tool such as a field cultivator operated at 5 to 7 mph is acceptable. A spike-toothed harrow, deep tillage disk, or rolling basket device is not recommended for incorporating BLADEX.

Use Rates for BLADEX Applied Alone

- Use Table 1 for field corn, popcorn, and field corn grown for seed.

Use Rates for BLADEX in Combination with Other Herbicides

BLADEX can be tank mixed with Atrazine, Lasso 4EC[1], Dual 8E[2] Frontier[3], Surpass[4], Harness Plus[5], Sutan+[6], and Eradicane 6.7E[6] herbicides. Refer to the manufacturers' labels for proper use rates, rotational guidelines, and all other precautions. Follow the label with the most restrictive requirements.

- Use Table 3 for BLADEX tank mix rates with Atrazine on field corn, popcorn, and field corn grown for seed in all states except Kentucky, Missouri, Tennessee, and Kansas east of Highway 99.
- Use Table 4 for BLADEX tank mix rates with Atrazine on field corn, popcorn, and field corn grown for seed in all of Kentucky, Missouri, Tennessee, and Kansas east of Highway 99.
- Use Table 5 for BLADEX tank mix rates with "Lasso", "Dual", "Frontier", "Surpass", "Harness Plus", "Sutan+", or "Eradicane 6.7E" on field corn and popcorn.
- Use Table 6 for BLADEX tank mix rates with Atrazine and "Lasso", "Dual", "Frontier", "Surpass", "Harness Plus", "Sutan+", or "Eradicane 6.7E" in field corn, popcorn, and field corn grown for seed.

BLADEX Plus "Eradicane 6.7E" or "Sutan+"

- Do not use BLADEX in tank mixes with "Eradicane 6.7E" or "Sutan+" on field corn grown for seed.
- Use 3.6 pints per acre of "Sutan+" or "Eradicane 6.7E". For loam soils with ≥5% organic matter or clay loams and clay soils with ≥4% organic matter, use 4.8 pints per acre.
- Apply tank mix combinations of BLADEX and "Sutan+" or "Eradicane 6.7E" before planting. Incorporate the mixture 2″ to 3″ deep immediately after application. Refer to the "Sutan+" and "Eradicane 6.7E" manufacturers' labels for appropriate incorporation methods. Do not incorporate the BLADEX deeper than 3″ or weed control may be reduced.
- As an alternative, BLADEX may be applied preemergence, as an overlay over previously incorporated "Sutan+" and "Eradicane 6.7E".
- Existing stands of quackgrass and purple and yellow nutsedge must be turned under and thoroughly chopped up prior to chemical treatments.
- In addition to the weeds controlled by BLADEX, this tank mix will control or suppress the following weeds: shattercane, quackgrass, yellow and purple nutsedge, sandbur, Texas panicum, and wild proso millet. For fields with moderate to heavy infestations of these weeds, refer to the "Sutan+" or "Eradicane 6.7E" labels for appropriate rates.

Use Rates for BLADEX on Sweet Corn

BLADEX may be applied preemergence or preplant incorporated for the control of annual grasses and broadleaf weeds in sweet corn.

- BLADEX may cause injury or stand loss on new or "supersweet" varieties of sweet corn. Consult with Agricultural Extension Agencies and sweet corn seed suppliers about the sensitivity of new varieties to potential injury.
- Apply BLADEX treatments just before, at, or after planting, but before crop has emerged.
- Use Table 1 for use rates for BLADEX applied alone preemergence on sweet corn.
- Use Tables 7, 8, and 9 for BLADEX tank mix rates with other herbicides on sweet corn.

CONSERVATION TILLAGE PREEMERGENCE USES ON CORN

FIELD CORN, POPCORN, SWEET CORN, AND FIELD CORN GROWN FOR SEED

(30 days prior to planting until emergence)

BLADEX may be used for early preplant or preemergence weed control for land going into the production of corn under conservation tillage (including no-till) programs. Complete any planned early spring tillage prior to application. Tillage after application may reduce the effectiveness of the herbicide treatment.

In corn planted in no-till stalk ground (corn, sorghum), stubble ground (soybean, small grains), and any minimum-till land, BLADEX, when used according to label directions, will

- kill most existing small weeds,
- suppress many emerged perennial weeds, and
- provide residual control of annual weeds.

A nitrogen solution or complete fertilizer solution may replace all or part of the water as a carrier. The spray gallonage and boom design must be adequate to give thorough, uniform coverage of the weed foliage. Follow the label requirements of all products used in tank mix combinations.

Use Rates

- Use Table 1 for field corn, popcorn, or field corn grown for seed with surface residue <30%.
- Use Table 2 for field corn, popcorn, or field corn grown for seed with residue >30%.
- Use Tables 7-9 for sweet corn.

Annual Grass and Broadleaf Weeds Up to 3"

- Use BLADEX alone and add 1-2 qt per acre of crop oil concentrate (COC) if weeds are emerged at the time of application.
- For best burndown results use a minimum of 20 gal per acre of liquid fertilizer as the carrier and replace COC with a nonionic surfactant.

Broadleaf Weeds Exceeding 3"

- If broadleaf weeds exceed 3 in. at application, add 2,4-D LV Ester and/or "Banvel" and non-ionic surfactant at recommended rates.
- Additional weeds controlled with 2,4-D are: wild buckwheat, dandelion, dock, giant ragweed, marestail, pennycress, prickly lettuce and tansy mustard.
- To control existing alfalfa, add 0.3 to 0.5 pint per acre of "Banvel" to the spray mixture of BLADEX plus 2,4-D. Apply before the alfalfa exceeds 6 in. in height.

Grass Weeds Exceeding 3"

- If grass weeds exceed 3 in. at application, add either Gramoxone Extra[10] or Roundup[11] to the tank at the recommended rates for these products.
- Add 1 to 2 pints of a non-ionic surfactant per 100 gal of spray.
- With "Gramoxone Extra," well established weeds over 6 in. tall will not be well controlled.
- Do not apply "Gramoxone Extra" in a suspension type liquid fertilizer containing clay.

Burn Down Under Dry Conditions for Control of Sod Grasses

For burndown of existing sod grasses such as orchardgrass, bromegrass, rye or timothy, or when conditions are very dry, add "Gramoxone Extra" to the tank mix at the recommended rate.

Perennial Grass Weeds

For improved control of perennial grasses such as johnsongrass or quackgrass, add "Roundup" at the recommended rate or follow with a postemergence application of DuPont's ACCENT® Herbicide.

Other Labeled Tank Mixes

BLADEX can be tank mixed with other labeled products according to the directions for the treatments explained in the Conventional Tillage section of this label.

Early preplant applications of BLADEX may be tank mixed with 2 pints per acre of Princep[12] 4L or 1.1 lb of Princep Caliber[13] 90. Apply 30 days or more prior to planting.

Sequential Treatments

If, due to weather conditions, corn is planted more than 30 days after application, a sequential herbicide treatment may be necessary to provide additional length of weed control. This may be a postemergence treatment with ACCENT, BLADEX 90DF, EXTRAZINE II, or some other herbicide treatment applied at or after planting.

USE RATE TABLES FOR CORN

BLADEX 4L ALONE, PREEMERGENCE

TABLE 1, FOR FIELD CORN, POPCORN, SWEET CORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates in Conventional Tillage with <30% Surface Residue

Soil Texture % OM =	BLADEX 4L (quarts/acre)*					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	1.3	1.5	2.3	2.8	3.3
Sandy loam	1.3	1.8	2.0	2.5	3.0	3.5
Loam, Silt loam, Silt	1.5	2.0	2.5	3.0	3.5	4.0
Sandy clay loam, Clay loam, Silty clay loam	2.0	2.5	3.0	3.5	4.0	4.5
Sandy clay, Silty clay, Clay	2.8	3.0	3.5	4.0	4.5	4.8

TABLE 2, FOR FIELD CORN, POPCORN, SWEET CORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates in Conservation or No-till Tillage with >30% Surface Residue

Soil Texture % OM =	BLADEX 4L (quarts/acre)*					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	1.6	1.9	2.9	3.5	4.1
Sandy loam	1.6	2.3	2.5	3.1	3.8	4.0
Loam, Silt loam, Silt	1.9	2.5	3.1	3.8	4.4	5.0
Sandy clay loam, Clay loam, Silty clay loam	2.7	3.1	3.8	4.4	5.0	5.6
Sandy clay, Silty clay, Clay	3.5	3.8	4.4	5.0	5.6	6.0

BLADEX 4L PLUS ATRAZINE 4L, PREEMERGENCE

TABLE 3, FOR FIELD CORN, POPCORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates: For Use in All States Except Kentucky, Missouri, Tennessee, and Kansas East of Highway 99

Soil Texture % OM =	BLADEX 4L (quarts/acre)* plus ATRAZINE 4L (quarts/acre)†					
	<1%	1%	2%	3%	4%	≥5%
Sandy loam	Do Not Use	0.8 + 0.5	1.0 + 0.5	1.5 + 0.5	1.8 + 0.8	2.3 + 1.0
Loam, Silt loam, Silt	0.8 + 0.5	1.0 + 0.5	1.5 + 0.5	2.0 + 0.8	2.3 + 1.0	2.8 + 1.3
Sandy clay loam, Clay loam, Silty clay loam 1.	1.5 + 0.5	2.0 + 0.8	2.3 + 1.0	2.8 + 1.2	3.3 + 1.3	3.5 + 1.3
Sandy clay, Silty clay, Clay	2.0 + 0.8	2.3 + 1.0	2.8 + 1.2	3.3 + 1.3	3.5 + 1.3	3.8 + 1.5

*IMPORTANT: maximum rate limits per acre per year vary by year of application. See Cyanazine Rate Limits section of this label. If rate cap is below that recommended in the rate table for a particular soil type and organic matter content, the maximum rate for that year can be applied but weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

†If 90% Atrazine is used, multiply the Atrazine rates shown in this table by 1.11 to equal the appropriate poundage of a 90% Atrazine product. If Atrazine 80W is used, multiply the Atrazine rates shown in this table by 1.25 to equal the appropriate poundage of Atrazine 80W.

TABLE 4, FOR FIELD CORN, POPCORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates: For Use Only in All Kentucky, Missouri, Tennessee, and Kansas East of Highway 99

Soil Texture % OM =	BLADEX 4L (quarts/acre)* plus ATRAZINE 4L (quarts/acre)†					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	0.8 + 0.5	1.0 + 0.5	1.5 + 0.6	1.8 + 0.8	2.3 + 1.0
Sandy loam	0.8 + 0.5	1.4 + 0.7	1.6 + 0.8	1.8 + 0.9	2.2 + 1.1	2.8 + 1.3
Loam, Silt loam, Silt	1.4 + 0.7	2.0 + 1.0	2.2 + 1.1	2.4 + 1.2	2.8 + 1.3	3.3 + 1.3
Sandy clay loam, Clay loam, Silty clay loam	1.6 + 0.8	2.2 + 1.1	2.4 + 1.2	2.8 + 1.3	3.3 + 1.3	3.5 + 1.4
Sandy clay, Silty clay, Clay	2.0 + 1.0	2.4 + 1.2	2.8 + 1.3	3.3 + 1.3	3.5 + 1.4	3.8 + 1.5

BLADEX 4L PLUS TANK MIX PARTNERS, PREEMERGENCE

TABLE 5, FOR FIELD CORN, POPCORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates in Tankmix Combinations§ with "Lasso", "Sutan+", "Eradicane 6.7E", "Dual 8E", "Frontier", "Surpass", or "Harness Plus" in Conventional or Conservation Tillage

Soil Texture % OM =	BLADEX 4L (quarts/acre)*					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	0.6‡	0.8	1.3	1.5	1.8	2.0
Sandy loam	0.8	1.3	1.5	1.8	2.0	2.3
Loam, Silt loam, Silt	1.3	1.5	1.8	2.0	2.3	2.5
Sandy clay loam, Clay loam, Silty clay loam	1.5	1.8	2.0	2.3	2.5	2.8
Sandy clay, Silty clay, Clay	1.8	2.0	2.3	2.5	2.8	3.0

TABLE 6, FOR FIELD CORN, POPCORN, AND FIELD CORN GROWN FOR SEED
Early Preplant or Preemergence Broadcast Rates in Tankmix Combinations§ with Atrazine 4L and "Lasso", "Sutan+", "Eradicane 6.7E", "Dual 8E", "Frontier", "Surpass", or "Harness Plus" in Conventional or Conservation Tillage

Soil Texture % OM =	BLADEX 4L (quarts/acre)* plus ATRAZINE 4L (quarts/acre)†					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	0.4 + 0.2‡	0.5 + 0.3	0.8 + 0.5	1.0 + 0.5	1.3 + 0.5	1.3 + 0.8
Sandy loam	0.5 + 0.3	0.8 + 0.5	1.0 + 0.5	1.3 + 0.5	1.3 + 0.8	1.5 + 0.8
Loam, Silt loam, Silt	0.8 + 0.5	1.0 + 0.5	1.3 + 0.5	1.3 + 0.8	1.5 + 0.8	1.8 + 0.8
Sandy clay loam, Clay loam, Silty clay loam	1.0 + 0.5	1.3 + 0.5	1.3 + 0.8	1.5 + 0.8	1.8 + 0.8	2.0 + 0.8
Sandy clay, Silty clay, Clay	1.3 + 0.5	1.3 + 0.8	1.5 + 0.8	1.8 + 0.8	2.0 + 0.8	2.0 + 1.0

*IMPORTANT: maximum rate limits per acre per year vary by year of application. See Cyanazi Rate Limits section of this label. If rate cap is below that recommended in the rate table for particular soil type and organic matter content, the maximum rate for that year can be applied b weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

†If 90% Atrazine is used, multiply the Atrazine rates shown in this table by 1.11 to equal t appropriate poundage of a 90% Atrazine product. If Atrazine 80W is used, multiply the Atraz rates shown in this table by 1.25 to equal the appropriate poundage of Atrazine 80W.

‡Do not use in the light sandy soils of the Atlantic Coastal Plain.

§Do not use BLADEX 90DF in tankmixes with "Eradicane 6.7E" and/or "Sutan+" on field c grown for seed.

BLADEX 4L ON SWEET CORN, PREEMERGENCE

TABLE 7, FOR SWEET CORN
Early Preplant or Preemergence Broadcast Rates in Tankmix Combinations with Atrazine 4L

Soil Texture % OM =	BLADEX 4L (quarts/acre)* plus ATRAZINE 4L (quarts/acre)†					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	0.8 + 0.4	1.1 + 0.4	1.3 + 0.7	1.5 + 0.9	2.2 + 1.1
Sandy loam	Do Not Use	1.1 + 0.4	1.3 + 0.7	1.5 + 0.9	2.0 + 1.1	2.8 + 1.3
Loam, Silt loam, Silt	Do Not Use	1.3 + 0.7	1.5 + 0.9	2.0 + 1.1	2.5 + 1.3	3.2 + 1.3
Sandy clay loam, Clay loam, Silty clay loam	Do Not Use	1.5 + 0.9	1.8 + 1.1	2.5 + 1.3	3.2 + 1.3	3.4 + 1.6
Sandy clay, Silty clay, Clay	Do Not Use	1.8 + 1.1	2.8 + 1.3	3.2 + 1.3	3.4 + 1.6	3.6 + 1.8

TABLE 8, FOR SWEET CORN
Early Preplant or Preemergence Broadcast Rates in Tankmix Combinations with "Lasso", "Sutan+", "Eradicane 6.7E", or "Dual 8E"

Soil Texture % OM =	BLADEX 4L (quarts/acre)*					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	0.8‡	1.2	1.4	1.6	2.0
Sandy loam	Do Not Use	1.2	1.4	1.6	2.0	2.2
Loam, Silt loam, Silt	Do Not Use	1.4	1.6	2.0	2.2	2.6
Sandy clay loam, Clay loam, Silty clay loam	Do Not Use	1.8	2.0	2.2	2.6	2.8
Sandy clay, Silty clay, Clay	Do Not Use	2.0	2.2	2.6	2.8	3.0

TABLE 9, FOR SWEET CORN
Early Preplant or Preemergence Broadcast Rates in Tankmix Combinations with Atrazine 4L and "Lasso", "Sutan+", "Eradicane 6.7E", or "Dual 8E"

Soil Texture % OM =	BLADEX 4L (quarts/acre)* plus ATRAZINE 4L (quarts/acre)†‡					
	<1%	1%	2%	3%	4%	≥5%
Sand, Loamy sand	Do Not Use	0.6 + 0.2	0.9 + 0.4	1.0 + 0.5	1.0 + 0.6	1.4 + 0.6
Sandy loam	Do Not Use	0.8 + 0.4	1.0 + 0.5	1.1 + 0.6	1.4 + 0.6	1.6 + 0.6
Loam, Silt loam, Silt	Do Not Use	1.0 + 0.5	1.2 + 0.6	1.4 + 0.6	1.6 + 0.6	1.8 + 0.9
Sandy clay loam, Clay loam, Silty clay loam	Do Not Use	1.2 + 0.6	1.4 + 0.6	1.6 + 0.6	1.8 + 0.9	2.0 + 0.9
Sandy clay, Silty clay, Clay	Do Not Use	1.4 + 0.6	1.6 + 0.9	1.8 + 0.9	2.0 + 0.9	2.0 + 1.1

*IMPORTANT: maximum rate limits per acre per year vary by year of application. See Cyanazine Rate Limits section of this label. If rate cap is below that recommended in the rate table for a particular soil type and organic matter content, the maximum rate for that year can be applied but weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

†If 90% Atrazine is used, multiply the Atrazine rates shown in this table by 1.11 to equal the appropriate poundage of a 90% Atrazine product. If Atrazine 80W is used, multiply the Atrazine rates shown in this table by 1.25 to equal the appropriate poundage of Atrazine 80W.

‡Do not use in the light sandy soils of the Atlantic Coastal Plain.

COTTON

IDLE SEASON OR EARLY PREPLANT USES IN COTTON FOR USE ONLY IN CALIFORNIA

BLADEX may be used for burndown of small existing annual weeds and residual control of weeds during the winter and early spring season prior to planting cotton. Complete any planned tillage prior to application. Apply herbicide treatment before weeds germinate or before weed seedlings are more than 3" tall. Tillage after application may reduce the effectiveness of the herbicide treatment.

Apply BLADEX at least 30 days prior to planting. Apply the proper rate for the soil texture, organic matter, and time interval between application and planting, as shown in Table 10. Where existing weeds are present, add COC, surfactant, or emulsible vegetable oil at its recommended rate to aid in the burndown of small weeds.

Where existing weeds are greater than 3" in height, when very dry conditions exist or where volunteer grains are a major problem, tankmix BLADEX with 1 to 2 pints per acre of "Gramoxone Extra". Well-established weeds 6" or taller may not be well controlled.

Apply BLADEX plus "Gramoxone Extra" in at least 20 gal per acre of carrier by ground sprayer. (The volume of carrier and the application equipment must be adequate to give a uniform application.) Add nonionic surfactant at 1 to 2 qt per 100 gal of diluted spray (or other suitable surfactant at recommended rates) where "Gramoxone Extra" is used. COC or emulsible vegetable oil are not needed where "Gramoxone Extra" is used. Do not apply "Gramoxone Extra" combinations in suspension-type fertilizer.

BLADEX can also be tank mixed with Treflan[14] or Prowl[15] and incorporated for fall-listed cotton beds instead of surface-applied as described above.

Weeds Controlled

Grasses

Annual bluegrass	Volunteer small grains (suppression)
Annual ryegrass	Wild oat*
Barnyardgrass*	Yellow foxtail
Bristly foxtail	
Rabbitsfoot grass	

Broadleaves

Annual henbit	London rocket
Black nightshade	Marestail
Burclover	Miners lettuce
Cheeseweed*	Pineapple weed
Chickweed	Prickly lettuce
Fiddleneck	Shepherdspurse
Groundsel	Sowthistle
Knotweed	Wild mustard
Lambsquarters	Wild radish

*Under soil moisture conditions favoring deep germination, these species may not be completel controlled.

PREPLANT USES IN COTTON FOR USE ONLY IN ARIZONA

BLADEX in tank mix combination with "Prowl" or a trifluralin herbicide product may b applied to land to be planted in cotton. Apply on the flat, incorporate and list. Irrigatio may be applied preplant to beds or cotton may be planted in dry beds and irrigated up.

Carefully match the BLADEX rate with the soil texture as shown in Table 11. If in doub about the soil texture, a composite sample of the soil should be tested for the averag texture class. Do not use on fields where soil texture varies from coarse to fine.

While cotton exhibits tolerance to BLADEX, application rates in excess of label recom mendations for a soil texture class can cause chlorosis and stunting in the crop and ma result in stand reduction. Cool, wet weather conditions during seedling stage of cotto can also result in temporary yellowing, stunting, or stand reduction. These effects will b more pronounced in the presence of cotton seedling diseases. Avoid "irrigating back" until a stand of seedling cotton has been established. Do not use sprinkler irrigatio during seedling stage of cotton on fields treated preplant with BLADEX.

Application Directions

Use Table 11 for use rates of BLADEX applied with "Prowl" or a trifluralin product The correct amount of BLADEX must be uniformly suspended in the spray tank befor adding "Prowl" or a trifluralin herbicide product. Sufficient jet or mechanical agitation t keep the spray mixture uniformly suspended must be provided while filling and applying

Apply broadcast using equipment calibrated to give a uniform application at the correc dosage. Use a minimum of 20 gal of water per acre for ground application. Do not appl by air. Incorporate as soon as possible.

Refer to the "Prowl" or the trifluralin product label for the application-to-incorporatio interval and description of incorporation equipment and methods. Refer to the "Appli cation Information" section of this label for tank mix compatibility testing procedures.

Weeds Controlled

Barnyardgrass	Woolly morningglory*
Junglerice	Wright groundcherry
Palmer amaranth	

*Heavy infestations of this species may not be completely controlled.

CONSERVATION TILLAGE/FALLOW EARLY PREPLANT
(All cotton producing states except AZ & CA)

BLADEX may be used for burndown of small existing annual weeds and residual contro of weeds during the winter and early spring season prior to planting cotton. Complete an planned tillage prior to application. Apply herbicide treatment before weeds germinate o before weed seedlings are more than 3 inches tall. Tillage after application may reduce the effectiveness of the herbicide treatment.

For rates of 3 pts or over, apply BLADEX at least 30 days prior to planting. For the 1 pt rate, apply at least seven days prior to planting. Apply the proper rate for the soil texture, organic matter and time interval between application and planting as indicated in Table 12. Where existing weeds are present, add crop oil concentrate or surfactant a recommended rates.

For application with ground sprayers, use at least 20 gal/acre of carrier. For aerial application, refer to Supplemental Labeling BLADEX 4L Herbicide Aerial Application via Closed Loading Systems (H-13127). For aerial application, apply BLADEX 4L in a minimum of 3 gal. spray volume per acre. In all cases, application equipment and carrier volume must be adequate to give uniform application.

Weeds Controlled

Grasses

Annual bluegrass	Yellow foxtail
Annual ryegrass	

Broadleaves

Annual henbit (purpletop)	Lambsquarters
Black nightshade	Marestail
Burclover	Shepherdspurse
Chickweed	Wild mustard
Cutleaf eveningprimrose	Wild radish

BLADEX 4L Herbicide plus "Gramoxone" Extra

BLADEX plus "Gramoxone" Extra is recommended for early preplant/postemergence application to control annual broadleaf and grass weeds.

BLADEX plus "Gramoxone" Extra tank mix may be used for burndown of existing annual weeds and residual control of weeds during early spring prior to planting conservation tillage cotton. Apply with crop oil concentrate at 1.0% V/V or surfactant at 0.25-0.5% V/V. See Table 12 for BLADEX rates and timings. Refer to "Gramoxone" Extra label for rates and timings.

Weeds Controlled

Grasses

Annual bluegrass	Volunteer wheat
Annual ryegrass	Yellow foxtail

Broadleaves

Annual henbit (purpletop)	Marestail
Black nightshade	Shepherd's-purse
Chickweed	Wild mustard
Cutleaf eveningprimrose	Wild radish
Lambsquarters	

PREEMERGENCE USES IN COTTON

FOR USE IN ALABAMA, ARKANSAS, GEORGIA, LOUISIANA, MISSISSIPPI, MISSOURI AND TENNESSEE

BLADEX Alone

BLADEX is a selective preemergence herbicide for early season weed control in cotton. Supplemental practices (such as BLADEX applied directed postemergence) may be necessary to control late season weeds.

Carefully match the BLADEX rate (Table 13) with the soil texture. Do not use BLADEX on fields where the soil texture changes from coarse to fine. Avoid overlapping the spray pattern or overdosing the field with BLADEX. Application rates above those recommended for the soil texture can result in a yellowing or stunting of the cotton.

While cotton exhibits tolerance to BLADEX, adverse growing conditions such as excessive rains, standing water, or cold weather may result in stand reduction.

BLADEX Plus Zorial Rapid 80

BLADEX may be used in a tank mix combination with Zorial Rapid 80[16] on cotton. Apply BLADEX plus "Zorial Rapid 80" at the proper rate for the soil texture shown in Table 13. The soil must contain at least 1.0% organic matter. Seed placement should be ½" to ¾" from the soil surface. Plant only cotton within six months after the last application of "Zorial Rapid 80"; other crops may be injured by residual herbicide in the soil.

Weeds Controlled

Annual morningglory	Prickly sida (Teaweed)
Cocklebur	Spurge

DIRECTED POSTEMERGENCE AND LAYBY USES IN COTTON

FOR USE IN ALL COTTON-GROWING STATES

BLADEX may be applied alone and in tank mix combinations as a directed postemergence or layby treatment to cotton. These applications may be either a preemergence or postemergence treatment to weeds in all cotton growing states.

Apply BLADEX before weeds are more than 2" tall. For a directed postemergence treatment, apply BLADEX after the cotton is at least 6" tall. For layby treatment, apply BLADEX after the cotton is at least 12" tall.

Direct the spray mixture toward the soil around the base of the cotton plants. Direct contact of the spray mixture with the cotton leaves will injure the foliage. The use of leaf lifters or shields on application equipment is recommended to avoid spraying the cotton foliage.

BLADEX may be applied as a directed postemergence and/or layby treatment following a preemergence application of BLADEX. Apply no more than two directed postemergence applications plus one preemergence application (three applications total) to the same crop in any one year. If BLADEX is not used preemergence, apply no more than three directed postemergence applications, including layby treatment, to the same crop in any one year. (In California, apply no more than two directed postemergence applications, including layby treatment.)

When applied as a layby treatment before weeds emerge, the effectiveness of BLADEX depends on rainfall or irrigation to move the herbicide into the soil. The degree of preemergence control from a layby treatment will be reduced if soil moisture and temperature conditions cause deep germination of weed seed. When irrigation water is used to activate the herbicide, every row must be watered; for skip row cotton, all treated soil must be irrigated.

BLADEX Applied Alone

For a directed postemergence treatment, apply BLADEX at the rate shown in Table 14. For layby treatment, apply BLADEX at the rates for the soil texture indicated in Table 15. Add a nonionic agricultural surfactant suitable for use on growing cotton at the rate of 2 qt per 100 gal of spray mixture (or as directed by the manufacturer).

BLADEX Plus MSMA

Apply a tank mix combination of BLADEX plus MSMA and a surfactant after the cotton is 6" tall, but before it reaches the bloom stage. Apply no more than two applications of this mixture before the first bloom stage. Tank mix BLADEX plus MSMA at the rates indicated in Table 16. Add a nonionic surfactant at the rate of 2 qt per 100 gal of spray mixture (or as directed by the manufacturer).

Weeds Controlled

Annual morningglory	Palmer amaranth
Bristly starbur	Pigweed (Redroot and Spiny)
Cocklebur	Prickly sida (Teaweed)
Crotalaria	Sicklepod
Jimsonweed	Spurge
Lambsquarters	Tropic croton
Nightshade (annual)	Wright groundcherry

PRECAUTIONS FOR COTTON

- Failure to wait the recommended time interval between application and planting may result in crop injury.
- At least 1" of rainfall or an equivalent irrigation that waters the surface of the soil after application must precede planting.
- The use of this treatment on calcareous or caliche soil outcroppings may result in crop injury.
- Do not graze or feed foliage from treated areas to livestock.
- Do not apply BLADEX to cotton land in irrigation water.
- Do not apply within 54 days of harvest.

USE RATE TABLES FOR COTTON

BLADEX 4L ALONE, IDLE SEASON OR EARLY PREPLANT—CALIFORNIA ONLY

TABLE 10, FOR COTTON

Soil Texture % OM =	BLADEX 4L (quarts/acre)*† Days Prior to Planting					
	30 Days		60 Days		90 Days	
	Under 2%	Over 2%	Under 2%	Over 2%	Under 2%	Over 2%
Sand, Loamy sand	1.5	2	2.5	3	3	3.5
All Other Soils	2	2.5	3	3.5	3.5	4

*For the time intervals between those listed in this table, adjust the rates proportionately.

†**IMPORTANT:** maximum rate limits per acre per year vary by year of application. See Cyanazine Rate Limits section of this label. If rate cap is below that recommended in the rate table for a particular soil type and organic matter content, the maximum rate for that year can be applied but weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

**The soil must contain at least 1% organic matter.

††Do not use on coarse soils (sands and loamy sands).

BLADEX 4L PLUS PROWL OR TRIFLURALIN, PREPLANT—ARIZONA ONLY

TABLE 11, FOR COTTON

Soil Texture††	BLADEX 4L† (quarts/acre)	+ "Prowl" 4EC (qts/A)	"Prowl" 3.3EC (qts/A)	or Trifluralin 5EC (qts/A)	Trifluralin 4EC (qts/A)
Sand, Loamy sand (<0.5% OM)	Do Not Use	Do Not Use	Do Not Use	Do Not Use	Do Not Use
Sandy loam, Loam (>0.5% OM)	1-1.5	0.5	0.6	0.32	0.4
Silt loam, Silt, Sandy clay loam	1.5-2	0.75	0.9	0.4-0.5	0.5-0.6
Clay loam, Silty clay loam, Clay	2-2.5	1	1.2	0.5	0.6

"BLADEX" 4L FOR CONSERVATION TILLAGE/FALLOW—EARLY PREPLANT

TABLE 12, FOR COTTON

Soil Texture**	BLADEX 4L (quarts/acre)† Days Prior to Planting*				
	7 Days Organic Matter	30 Days to 60 Days Organic Matter		More than 60 Days Organic Matter	
	Over 1%	Under 2%	Over 2%	Under 2%	Over 2%
Loamy Sands	—	1.5	2	2.5	3
Med. to Heavy	0.5	2	2.5	3	3.5

BLADEX 4L ALONE AND PLUS "ZORIAL RAPID 80", PREEMERGENCE

TABLE 13, FOR COTTON

For Use in Alabama, Arkansas, Georgia, Louisiana, Mississippi, Missouri, and Tennessee

Soil Texture**	BLADEX 4L† Alone (quarts/acre)	BLADEX 4L† (qts/A)	+ "Zorial Rapid 80" (lb/A)
Sandy loam††	0.5	0.5	0.8
Silt and Silt loam	0.6	0.6	1.3
Loam, Clay loam, Sandy clay loam, Sandy clay	0.9	0.9	1.3
Silty clay loam, Silty clay, Clay	1.2	1.2	1.6

*For the time intervals between those listed in this table, adjust the rates proportionately.

†**IMPORTANT:** maximum rate limits per acre per year vary by year of application. See Cyanazine Rate Limits section of this label. If rate cap is below that recommended in the rate table for a particular soil type and organic matter content, the maximum rate for that year can be applied but weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

**The soil must contain at least 1% organic matter.

††Do not use on coarse soils (sands and loamy sands).

BLADEX 4L ALONE, DIRECTED POSTEMERGENCE AND LAYBY

TABLE 14, FOR COTTON

Directed Postemergence Rates		BLADEX 4L (quarts/acre)† Banded 38" Row	
Height of Cotton	Broadcast	12" Band	19" Band
6" or more	0.6-1 qts/A	0.2-0.3 qts/A	0.3-0.5 qts/A

Use the maximum rate when dry or arid conditions exist.

TABLE 15, FOR COTTON

Layby Rates		
Height of Cotton	Soil Texture	BLADEX 4L (quarts/acre)†
12″ or more	Sandy loam, Silt, Silt loam	0.8 qts/A
	Loam, Clay loam, Sandy clay loam, Sandy clay	1.2 qts/A
	Silty clay loam, Silty clay, Clay	1.6 qts/A

BLADEX 4L PLUS MSMA, DIRECTED POSTEMERGENCE

TABLE 16, FOR COTTON

Product (quarts/acre)	Broadcast	Banded 38″ Row	
		12″ Band	19″ Band
BLADEX 4L† + MSMA (4 lb/gal) or MSMA (6.6 lb/gal)	0.6-1 qts/A + 2.0 qts/A or 1.2 qts/A	0.2-0.33 qts/A + 0.65 qts/A or 0.4 qts/A	0.3-0.5 qts/A + 1.0 qts/A or 0.6 qts/A

*For the time intervals between those listed in this table, adjust the rates proportionately.

†**IMPORTANT:** maximum rate limits per acre per year vary by year of application. See Cyanazine Rate Limits section of this label. If rate cap is below that recommended in the rate table for a particular soil type and organic matter content, the maximum rate for that year can be applied but weed control may be inadequate. **This product may not be used after Dec. 31, 2002.**

**The soil must contain at least 1% organic matter.

††Do not use on coarse soils (sands and loamy sands).

WEATHER EFFECTS AND MODE OF ACTION

As a preemergence herbicide, BLADEX is active mainly through the roots. Its effect on weeds is dependent on adequate rainfall to move the herbicide into the root zone. The soil must be thoroughly wet throughout the zone where weed seeds germinate. (The soil should be too wet to cultivate.)

Under conditions that delay weed germination—such as low temperatures and lack of soil surface moisture—or when germination is extended over a long period, the effectiveness of the herbicide may be impaired. Rotary hoeing, shallow cultivation, or a postemergence herbicide treatment may be useful under these circumstances. Follow these guidelines:

- Rotary hoeing or shallow cultivation is recommended if there has not been adequate rainfall or sprinkler irrigation within 10 days after application of BLADEX, and if the herbicide was not incorporated at the time of treatment.
- If the crop is cultivated, tillage should be shallow to minimize diluting the herbicide in the soil.
- To enhance weed control in areas of less than 25″ of rainfall or where long dry periods are common, these treatments may require shallow incorporation with a tool such as a field cultivator operated at 5 to 7 mph. Incorporation should not be more than 3″ deep to avoid burying the herbicide. Do not use a spike-toothed harrow, deep tillage disk, or rolling basket device to incorporate BLADEX.

Heavy rainfall between planting and crop emergence may cause excessive concentrations of herbicide in the seed furrow, resulting in possible crop injury or stand loss. To prevent rainfall from pooling, level deep planter marks or seed furrows before application.

Rainfastness

BLADEX Herbicide is active through both shoot and root uptake, therefore rainfastness is not as critical as with most postemergence herbicides. However, best results are obtained on emerged weeds when there is an interval of at least 4 hours between application and rainfall.

APPLICATION INFORMATION

This product may not be mixed/loaded or used within 50 ft of all wells including abandoned wells, drainage wells and sink holes.

Application Equipment

Nozzles

Use nozzles that provide accurate and uniform coverage. Ensure that the nozzles are the same size and are spaced uniformly. Calibrate the sprayer before use and check it frequently during use.

Pump

Use a pump with capacity to:

a. Maintain 35 to 40 psi at the nozzles.

b. Provide sufficient agitation in tank to keep mixture in suspension.

c. Provide a minimum of 20% bypass at all times.

In addition, use centrifugal pumps that provide sufficient shear action to disperse and mix this product. The pump should circulate at least 10 gal per min for every 100 gal in the tank through the jets of a correctly positioned sparger tube or jet agitator.

Nozzle Screens

To prevent the nozzles from clogging, place 10- to 16-mesh nozzle screens on the suction side of the pump. Do not place a screen in the recirculation line. Use a 40- to 50-mesh screen between the pump and boom. Check your equipment manufacturer's literature for specific recommendations.

General Mixing and Spraying Directions

The following general mixing instructions are recommended:

1. Unless otherwise specified, use at least 10 gal of water per acre for soil applications and at least 15 gal of water per acre for foliar applications.
   Note: Use sufficient carrier to ensure uniform application. Follow the label requirements of all products used in tank mix combinations.
2. A nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence or preplant application on corn. For best burndown, use a minimum of 20 gal per acre of liquid fertilizer as the carrier. Do not apply fertilizer mixtures after the crop emerges, since this may cause crop injury.
3. Always check the tank mix compatibility of BLADEX with liquid fertilizer carriers or other formulations. A simple but generally reliable TMC evaluation procedure is explained in the Tank Mix Compatibility Evaluation Procedure section of these mixing instructions.
4. Start with thoroughly clean equipment. (See labels of the previous compounds used for cleaning instructions.)
5. Fill the tank at least ½ full with carrier. Start and maintain consistent agitation through all mixing and spraying procedures. Make sure the agitation system is working properly and creates a rippling or rolling action on the liquid surface.
6. Add the recommended amount of BLADEX 4L to the tank with agitation.
7. Fill the tank to 75% capacity with carrier. Filling bypass lines should be kept below the liquid surface. Increase tank agitation, as necessary, to maintain the rippling or rolling action on the liquid surface.
8. If desired, add the appropriate emulsible crop oil, crop oil concentrate, or other tank mix formulations. Slurry these additional ingredients before adding them to the tank, if the compatibility test shows it to be necessary.
9. Finish filling the tank, maintaining sufficient agitation at all times to ensure surface action. In both spray tanks and nurse tanks, ensure that the BLADEX is completely dispersed and in uniform suspension before applying it.
10. Tank mixtures should always be applied immediately after preparation. If, for any reason, this is not possible, agitate the mixture sufficiently to remix all products, and check it for complete resuspension before application.
11. When tank mixing with other formulations, empty the tank as completely as possible before refilling it to prevent buildup of oil or EC residue. Always maintain agitation so that the mixture does not separate. If an oil or EC film begins to build up, drain and clean the tank with a strong detergent solution or an appropriate solvent.
12. If any emulsible crop oil, crop oil concentrate, or other emulsible formulation has been used either alone or in tank mix combinations with other pesticide formulations, clean the sprayer thoroughly by flushing it with a detergent solution at the end of each work day. This ensures a clean sprayer and continued trouble-free operation.

Tank Mix Compatibility Evaluation Procedure

1. Add 1 pint of carrier liquid to each of two 1-qt jars. Mark the first jar "with" and the other "without."
2. Add ¼ tsp of a suitable compatibility agent to the jar marked "with," cap the jar, and shake it gently for 5 to 10 seconds to mix (¼ tsp per 1 pint of carrier = 2 pints per 100 gal of carrier).
3. Add the appropriate amount of herbicide to both jars, cap each jar, and shake them gently for 5 to 10 seconds.

Note: If problems are encountered in mixing wettable powder or dry flowable formulations into a liquid fertilizer, slurry these formulations in water before adding them to the liquid fertilizer.

The following chart shows the amount of BLADEX to use for the jar test, depending on the intended use rate (gal of liquid carrier per 1 qt of BLADEX).

Jar Test for BLADEX Compatibility

Gallons of liquid carrier per acre.	Add this many teaspoons of BLADEX 4L per pint of liquid carrier for the jar test.
4.0	6.0
7.5	3.2
15.0	1.6
20.0	1.2
25.0	1.0
30.0	0.8

When the intended use rate varies—that is, when the amount of BLADEX added to each gallon of liquid carrier is less than or greater than 1 qt—adjust the jar test proportionately. If the intended field use rate is 3 qt (rather than 1 qt) of BLADEX in 15 gal of carrier per acre, add 4.8 tsp (rather than 1.6 tsp) of BLADEX to the quart jars containing 1 pint of carrier (3 qt of BLADEX in 15 gal of carrier per acre = 4.8 tsp of BLADEX in 1 pint of carrier).

4. Let each jar stand one-half hour. If the mixture separates, agglomerates, or precipitates, shake the jar again for 10 to 15 seconds, and note whether any of the following occur:
   a. Separated phases do not remix uniformly.
   b. Lumps do not disperse.
   c. Precipitate does not resuspend readily.
   d. Precipitate sticks tenaciously to the glass.
5. If the mixture does not exhibit any of these problems in either jar, the herbicide can, in most cases, be safely used in that carrier without a compatibility agent.
6. If problem 4.a or 4.b occurs in the jar marked "without" but does not occur in the jar marked "with," the compatibility agent should be used.
7. If problem 4.a or 4.b is seen in both jars, then the herbicides and carrier are incompatible and should not be used in the same spray tank. Alternatively, a different tank mix compatibility agent can be evaluated.
8. If problem 4.c or 4.d occurs in the jar marked "without" but does not occur in the jar marked "with," the compatibility agent should be used unless constant, thorough agitation can be maintained and immediate clean-out of the spray system is performed.
9. If problem 4.c or 4.d is seen in the jar marked "with," the user proceeds with mixing and application at his own risk should the agitation in the system be insufficient or curtailed.
10. When the components of a mixture are determined compatible by this test, they should be mixed for application according to the General Mixing and Spraying section of this label.
    If a compatibility test indicates that components of a proposed mix are compatible, the applicator is still responsible for following all mixing directions prescribed on the labels of the herbicides or pesticides involved.
11. The following compatibility agents, noted by the various tank mix combinations, may improve compatibility in liquid.

Tank Mix Combination	Compatibility Agents
BLADEX/"Lasso" (liquid fertilizer grade)	Probably not needed in 28-0-0, 10-34-0. Compex may help in others.
BLADEX/"Sutan+" or "Eradicane 6.7E"	Probably not needed in 28-0-0. Incompatible in 10-34-0. Unite, Spray-Mate, Kem-Link may help in others.
BLADEX/"Dual 8E"	Probably not needed in 28-0-0. Unite, Spray-Mate, Ivory Liquid may help in others.

FERTILIZER IMPREGNATION, APPLICATION, AND CLEANOUT

BLADEX may be used to coat or impregnate dry granular fertilizer for early preplant, preemergence, or preplant incorporated weed control in field corn. All recommendations, cautions, and special precautions on this label must be followed, in addition to any state regulations for blending, impregnating, and labeling dry bulk fertilizer.

General Blending Directions

Dry bulk fertilizers may be coated or impregnated with BLADEX using tower blenders, rotary drum blenders, or blending augurs or conveyors. Observe the following precautions when blending BLADEX with dry bulk fertilizers:

- Do not impregnate BLADEX—or tank mixes containing BLADEX—in or on fertilizers containing ammonium nitrate, potassium nitrate, or sodium nitrate.
- Do not use BLADEX on straight limestone, which cannot absorb the fertilizer; however, fertilizer blends containing limestone can be impregnated using BLADEX alone.
- Use 200 to 450 lb per acre of dry fertilizer.
- Use equipment that uniformly distributes the herbicide throughout each batch of impregnated fertilizer. Nonuniform impregnation can cause crop injury or unsatisfactory performance.

Impregnating Fertilizer with BLADEX Alone

1. Add BLADEX 4L when at least ½ the total fertilizer volume required is in the mixer. A minimum of 200 lbs per acre of an approved fertilizer should be used.
2. BLADEX 4L can be moved from the chemical holding tank to the mixer tank by using an air system or a liquid pump with the hose at least 1 inch in diameter.
3. Position the spray nozzles to achieve uniform coverage with the BLADEX on the dry fertilizer without spraying the walls of the mixer.
4. Flush spray lines with water and spray into the dry fertilizer.
5. Add remaining fertilizer, plus drying agents when necessary, and blend thoroughly for at least 3 minutes.
6. Add 2 to 5% of a suitable drying agent to ensure a herbicide/fertilizer mixture that will spread through air spreaders. The need for a drying agent is determined by the wetness of the fertilizer batch. Wetness can change with humidity, nitrogen content, fertilizer rates, and herbicide rates.

Impregnating Fertilizer with BLADEX in Tank Mixes with Other Dry Herbicides

1. While the fertilizer is blending, add the BLADEX first and the tank mix partner last.
2. Add any necessary drying agent to ensure a spreadable herbicide/fertilizer mixture and blend thoroughly for at least three minutes.
3. Follow the other appropriate use instructions found in Section A for use with BLADEX mixtures.

Application of Impregnated Fertilizer

Fertilizer that is impregnated or coated with BLADEX must be applied uniformly. Crop injury and/or poor weed control may result if impregnated fertilizer is not uniformly applied. To ensure uniform application:

- Calibrate the fertilizer applicator accurately.
- Do not apply the fertilizer mixture while turning at the ends of the fields; this may result in excessive application rates causing crop injury.
- Do not double-apply the fertilizer across the ends or sides of the field.
- Apply impregnated fertilizer in one pass using air-flow or augur-metered application equipment. If other equipment is used, apply ½ the recommended rate and overlap each pass by 50%, splitting the middle of each pass to obtain the best distribution pattern.

Apply the fertilizer immediately after impregnation. Impregnated fertilizer may become lumpy and difficult to spread if it is stored.

Equipment Cleanout

Equipment used to impregnate or apply fertilizer impregnated with BLADEX alone or combinations with other herbicides must be cleaned out if the next batch of material is to be applied to a crop for which BLADEX or a combination herbicide is not registered. To clean out impregnating equipment, run at least 1,000 lb of unimpregnated fertilizer through the equipment before using it to make another application.

ROTATIONAL CROPS

Use these guidelines to determine which rotational crops can be planted safely following use of BLADEX:

- If the crop stand is lost due to adverse weather, insects, etc., the field can be replanted to corn or sorghum.
- If the field is replanted to sorghum, allow at least a 30-day interval between treatment and planting. The sorghum plants may be injured if the full preemergence rate is used and adverse conditions exist for sorghum growth.
- Any rotational crop may be planted the fall or spring following treatment with BLADEX.
- When BLADEX is tankmixed with other herbicides, refer to the manufacturers' label and use the most restrictive crop rotation interval.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets (>150-200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See **Wind, Temperature and Humidity,** and **Temperature Inversions** sections of this label.

Controlling Droplet Size—General Techniques

- **Volume**—Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure**—Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type**—Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

Boom Height

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Wind

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

PRECAUTIONS

Use BLADEX only in field corn, popcorn, sweet corn, field corn grown for seed, and cotton.

BLADEX is not effective when used preemergence on peat or muck soils.

Do not apply this product through any type of irrigation system.

Do not apply this product with aerial application equipment.

In fields where triazine-resistant biotypes of weeds have been identified, BLADEX should be used in combination with or in sequence with other registered nontriazine herbicides. (Triazine-resistant biotypes of kochia and pigweed have been identified in some fields in the Western Great Plains, and triazine-resistant biotypes of pigweed and lambsquarters have been identified in some fields in various states.) Consult with appropriate state agricultural extension service representatives for specific recommendations.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food or feed by storage or disposal. Do not use or store around the home environment. Avoid contact with water.In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, State or local procedures.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label only when used in accordance with the directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

[1] "Banvel" is a registered trademark of Sandoz Crop Protection Corp.
[2] "Marksman" is a registered trademark of Sandoz Crop Protection Corp.
[3] "Lasso" is a registered trademark of Monsanto Agri. Co.
[4] "Dual" is a registered trademark of CIBA-Geigy Corp.
[5] "Frontier" is a registered trademark of Sandoz.
[6] "Surpass" is a registered trademark of Zeneca, Inc.
[7] "Harness Plus" is a registered trademark of Monsanto.
[8] "Sutan+" is a registered trademark of Zeneca, Inc.

ATTACHMENT C.3
DATCP and DNR Compound Specific Agreement on Landspreading Pesticide Contaminated Soil for: Dinoseb

Note this agreement only applies to the application of soil contaminated with Dinoseb. It does not apply to any other compound or to the use of product Dinoseb.

1. Pesticide name**. – Dinoseb**

2. **Narrative discussion.** Dinoseb (Premerge, Dinitro and other brand names) was a nonselective herbicide/desiccant used since 1948 primarily by Wisconsin vegetable producers, most particularly for killing potato vines in advance of potato harvest. Rapid degradation occurs through microbial action, photo-decomposition and volatilization. Potato vine killing applications were most commonly by aerial application and groundwater contamination has been found at some mixing/loading locations, although no groundwater contamination was found through monitoring in use settings.

3. Pre-Cancellation Label Conditions:
   (a) Application rates: 0.75#/acre to 12#/acre, depending upon crop and timing
   (b) Wisconsin crops: Potato, orchard, mint, small grains, soybean, corn, others
   (c) Environmental Restrictions: No label restrictions for environmental concerns existed prior to cancellation, but groundwater vulnerability was also generating concern at the time of cancellation.

4. **Cancellation Notes:** Dinoseb was voluntarily cancelled in 1988, following studies that demonstrated pesticide handlers (particularly women involved in technical grade production or mixing and loading application equipment) were being exposed at levels that might cause reproductive problems. There was a limited provision for use of existing stocks on cane berries in Oregon that ceased at the end of 1989. There is no provision for use of existing stock.

5. **General criteria under which DATCP may grant landspreading authorization without site-specific DNR review.** Application of soil contaminated with Dinoseb must follow ATCP 35.03 and DATCP's landspreading guidance in *Landspreading Instructions*, including completion of:
   (a) DATCP form ARM.ACP198 (rev.11/00), *Landspreading Agreement Form*, which provides specific information on the landspreading site, the product credit, and the landowner.
   (b) DATCP Form ARM.ACM.268 (11/00), *Land Use Agreement form*, a form that must be signed by the landowner which provides information on tillage and costs, land access fees, landowner agreement, and the responsible person.
   (c) DATCP form ARM.ACP 199 (rev.1/02), *Landspreading Post-Application Report*, that is completed after landspreading which provides general information on the application of the soil or water, landspreading site information, and the landspreading permit holder.
   (d) Prior to the issuance of the written landspreading agreement, DATCP staff will conduct an onsite field inspection to:
      1. Verify site information on the landspreading agreement form such as soil type ,
      2. Review site for topographic features such as sink holes, ground slope, etc.,
      3. Evidence of high groundwater, wetlands and adjacent surface waters
      4. Ability for the site to meet set back requirements

6. **Specific criteria under which DATCP may grant landspreading authorization without site-specific DNR review.** [*Proposals that cannot meet these conditions will require written site-specific DATCP & DNR concurrence*]: In addition to the general criteria outlined in section 5., above, the following compound specific criteria must also be met and must be incorporated into DATCP's written landspreading approval.
   (a) Maximum concentration of dinoseb in excavated material is 15.6 ppm based on the direct contact RCL calculated using DNR guidance. In this case, the contaminated material is not regulated as a listed hazardous waste if landspread in compliance with this Agreement..
   (b) Maximum application rate shall not exceed 0.5 #/acre active ingredient (4 to 67 % of pre-cancellation label rates)
   (c) No application to soils with <1% organic matter
   (d) Applications limited to non-crop (e.g., Pastures and uncropped fields) or crops sites with no harvest within 90 days
   (e) Applications must occur during May through August (to maximize degradation rate)
   (f) Plus the following landspreading requirements:
      1. Surface water setback - Minimum distance is 100 ft. for running water and 200 ft for lakes and ponds
      2. Well setback – Minimum distance is 100 ft.
      3. Landspreading must be by DATCP certified applicator
      4. Landspreading may not take place on frozen soils
      5. The applicator will provide advance notice to DATCP prior to landspreading event
      6. Breakdown of Dinoseb is more efficient under sunlight exposure. Incorporation is not mandatory.

7. **Waste Management Requirements**. –
   Dinoseb is listed in Table IV (P020) of ch. NR 605, Wis. Adm. Code as an acute hazardous commercial chemical product. Consequently, any contaminated soil or water would be considered a hazardous waste except as allowed for under the DNR's "contained out" provision. In that circumstance, the material shall also be evaluated to determine if it exhibits a hazardous characteristic. If the material is "contained out" and does not exhibit a hazardous characteristic, then the soil contaminated with Dinoseb may be managed as a solid waste.

8. **Sign off.**

For DATCP_____ Date: 3-8-05
Kathy F. Pielsticker, Administrator
Agricultural Resource Management Division

For DNR_____ Date: 3/16/05
Allen K. Shea, Administrator
Air and Waste Management Division

9. **Attachments**
   "Uniroyal Dinoseb –5X" Label

Blank Page for page 1 of Dinoseb label

UNIROYAL DINOSEB-5X

An oil soluble, emulsifiable Dinitro concentrate for controlling most annual weeds and grasses; also used as a harvesting aid for potatoes and seed crops of forage, legumes and soybeans.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS
DANGER

May be fatal if swallowed or absorbed through the skin. Do not get in eyes, on skin or clothing. Wear protective clothing. Avoid breathing spray mist. Do not take internally. Do not wear contaminated clothing or shoes. Keep away from farm animals and pets.

ENVIRONMENTAL HAZARDS
This product is toxic to fish and wildlife. Do not apply directly to any body of water. Birds and other wildlife in treated areas may be killed. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes.

PHYSICAL OR CHEMICAL HAZARDS
Keep away from heat and open flame.

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL
Do not contaminate water, food or feed by storage or disposal.

STORAGE: Do not store at temperatures below 20°F. If stored for extended periods below 20°F, bring the contents of the container up to 32°F and agitate by rolling.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

UNIROYAL

COMPOSITION
Active Ingredients: (% by weight)

Dinoseb (2-sec-butyl-4,6-dinitrophenol)	54.4%
Inert Ingredients:	45.6%
Total:	100.0%

Contains 5 pounds of 2-sec-butyl-4,6-dinitrophenol per gallon.

KEEP OUT OF REACH OF CHILDREN
DANGER
Not for Use or Storage in or Around the Home
MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH SKIN.
Do Not Get in Eyes, on Skin, on Clothing - Avoid breathing Spray Drift or Vapors
Do Not Take Internally - Do Not Wear Contaminated Clothing or Shoes
Keep Away From Heat and Open Flame

PELIGRO

POISON

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

STATEMENT OF PRACTICAL TREATMENT

SYMPTOMS OF POISONING: Excessive Fatigue, Sweating, Thirst and Fever. If symptoms of poisoning develop from any type of exposure SEND FOR A PHYSICIAN.

FIRST AID: Have patient lie quiet in coolest spot available. If feverish, cool with cold compresses or by immersion in cool water.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or blunt object. Do not induce vomiting or give anything by mouth to an unconscious person.

IF SPLASHED IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

IF SPILLED ON SKIN: Immediately remove contaminated clothing, INCLUDING SHOES, and wash skin with soap and plenty of water. If symptoms of poisoning develop, send for a physician and treat as in FIRST AID, above. Discard contaminated clothing and shoes, or clean them thoroughly before reuse.

NOTE TO ATTENDING PHYSICIAN: Active Ingredient is a metabolic stimulant. Treat symptomatically. Do not administer atropine, aspirin, or other antipyretics to control fever.

SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENT.

Uniroyal Chemical Company, Inc.
Middlebury, CT 06749

EPA REG. NO. 400-140
EPA EST. NO.

8-29-83

Lot. No.

NET WEIGHT:

REENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.
Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written or oral warnings must include the following information:

"DANGER" Area to be treated with dinoseb on (date of application). Do not enter without appropriate protective clothing until sprays have dried. If accidently exposed, consult the Statement of Practical Treatment portion of the pesticide label for first aid recommendations.

WORKER SAFETY

Avoid accidents: Follow these pesticide safety rules when handling this product.
Wear chemical workers goggles or face shield, impermeable gloves and apron while pouring and transferring the concentrated product and at other times when contact with concentrate or spray is likely. Wear a long sleeved shirt and long legged pants or coveralls, and shoes and socks while mixing concentrate and while spraying. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES! REMOVE contaminated clothing immediately and wash thoroughly before reuse. WASH SPLASHES from skin and eyes immediately. To avoid breathing fumes or spray mist, wear a pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health.

GENERAL INFORMATION

UNIROYAL DINOSEB-5 when used with the proper amount of oil and water, will control many of the common herbaceous weeds and grasses. Use enough spray to wet all weed growth THOROUGHLY, as it acts by contact only. The lower dosages of oil and weed killer given below will be satisfactory for control of small seedling annual grasses such as *crabgrass, foxtail and barnyard (water) grass* and of small seedling annual weeds such as *pigweed, mustard, lambsquarters and sorrel*. Coarse grasses such as *chickweed, mayweed, mallow, pineapple weed, sweet fennel and wild carrot* will require higher dosages, particularly when mature and hard to kill. Grass control requires use of the higher amounts of oil, which creeps down the stems to kill the crowns and prevent re-sprouting. NOTE: Contact weed killers kill annuals, but perennials must be re-treated as new growth develops. Re-treat perennials only in non-crop areas specified below except for use on grapes, bush fruits and hops as directed below. Control will be best in warm weather.

MIXING INSTRUCTIONS

FOR OIL-WATER SPRAYS, add approximately ¾ of water needed for the batch to the sprayer tank. In a separate container, thoroughly pre-mix the proper amount of UNIROYAL DINOSEB-5 and oil. With vigorous agitation, add this pre-mix to the water. Add the remaining water. Agitation must be maintained during mixing and application to keep the spray uniformly mixed.
FOR OIL SPRAYS, drain all water from sprayer tank, lines and pump. Add a small amount of oil to the tank, circulate through the pump system, then completely drain the system and discard the liquid. This is to remove any water remaining in the sprayer. Add desired amount of oil to the tank. With agitation, add the proper amount of UNIROYAL DINOSEB-5. Moderate agitation will maintain a uniform spray mix. NOTE: Small amounts of water in UNIROYAL DINOSEB-5 - oil sprays may result in extremely thick gel-like emulsions, which are difficult to apply. This problem can be avoided by carefully following the mixing instructions outlined.

DIRECTIONS FOR USE

GENERAL WEED CONTROL

USE ON NON-CROP AREAS SUCH AS: Airfields, Walks, Fence Lines, Roadsides, Driveways, Dry Yards, Railroads, Waste Places, and around Industrial Establishments, Pole Yards and Oil Tank Areas.
Use 2 to 6 pints of UNIROYAL DINOSEB-5 in 5 to 30 gallons of oil made up to 100 gallons with water. Spray weed growth thoroughly.

CONTACT PRE-PLANT OR PRE-EMERGENCE WEED CONTROL

UNIROYAL DINOSEB-5 may be used to kill tiny weeds that emerge before certain crops. When practical, forming the land several days before seeding will result in more weeds being up at time of spraying. For use on land prior to planting the following large seeded crops or for use on the already planted crops: beans, soybeans, corn, cucurbits, potatoes, and gladiolus, spray at least one day before first emergence of the crop using 2-4 pints of UNIROYAL DINOSEB-5 per acre. Mix this amount with 2-5 gallons of herbicidal oil and 30 gallons of water and apply as a fine spray to insure wetting of the weeds. For season long weed control other herbicides will also be needed.

STALE-SEEDBEDS (PREVIOUSLY TILLED FIELDS)

Preplant or preemergence control of emerged weeds in beans, soybeans, potatoes, corn, and gladiolus: UNIROYAL DINOSEB-5 may be used to control small annual broadleaf weeds and annual grasses that have emerged on stale seedbeds (previously tilled fields) prior to planting beans, soybeans, potatoes, gladiolus, or corn. For aerial application use 2 to 4 pints of UNIROYAL DINOSEB-5 in 3 to 5 gallons of diesel oil or herbicidal oil per acre. With ground equipment use 2 to 4 pints of UNIROYAL DINOSEB-5 plus 4 to 8 gallons of diesel or herbicidal oil in 20 to 30 gallons of water per acre. Apply after weeds have emerged. Plant the crops just before or soon after spraying. Only annual weeds that are up a time of spraying will be killed. For season-long weed control other herbicides will be needed. NOTE: Any crop plants that are up at time of spraying may be seriously injured or killed.

SOYBEANS PLANTED IN SMALL GRAIN STUBBLE

Preplant or preemergence control of emerged weeds in soybeans planted with minimum or no tillage in small grain stubble: In areas where planting of soybeans directly in small grain stubble with minimum or no tillage is practiced, UNIROYAL DINOSEB-5 can be used to burn down existing vegetation before or just after planting. For aerial application use 2 to 4 pints of UNIROYAL DINOSEB-5 in 2 to 5 gallons of diesel oil or herbicidal oil per acre. With ground equipment use 2 to 4 pints of UNIROYAL DINOSEB-5 plus 2 to 5 gallons of diesel oil or herbicidal oil in 20 to 30 gallons of water per acre. Only annual weeds that are up at time of spraying will be killed. For season-long weed control other herbicides will be needed also. NOTE: Any crop plants that are up at time of spraying may be seriously injured or killed.

GRAPES AND BUSH FRUITS

Apply spray containing UNIROYAL DINOSEB-5 when weeds are growing well but before they are 6 inches high. ON GRAPES: Application can be made up to 3 to 4 weeks after bloom. For use in the spring before bloom or in the fall after harvest, use 2 to 4 pints of UNIROYAL DINOSEB-5 in 10 to 20 gallons of oil made up to 100 gallons with water. For treating during bloom and up to 3 to 4 weeks after bloom, use no more than 2 pints of UNIROYAL DINOSEB-5 per 100 gallons of spray. Use up to 150 gallons per acre to give good spray coverage. Apply only as directed spray to the weeds and soil in such a way as to avoid contacting grape foliage, blossoms or fruiting clusters. It is often desirable to limit spray application to a 1-2 foot band directly under the grape trellis where weed control problem is severe and soil cannot be easily cultivated. For such band treatments, the gallonage per acre should be reduced proportionately. Repeat if needed, but make no more than 3 - 4 applications in a single season. NOTE: Use only on plantings 2 years or older. Do not apply within 30 days before harvest.

ON BUSH FRUITS: Such as blackberries, currants, gooseberries, and raspberries, use 2 to 4 pints of UNIROYAL DINOSEB-5 in 10 to 20 gallons of oil, made up to 100 gallons with water. Apply at the rate of 125 to 150 gallons of spray per acre in the fall after harvest or in the spring before bloom. Use directed spray and do not treat young canes desired for permanent plants. Make one or two repeat applications as needed. NOTE: Use only on plantings 2 years old and older. Do not apply within 30 days before harvest.

ALFALFA

Apply to established stands during the dormant season or after grazing in winter to control winter annual weeds or apply immediately after the first cutting but before regrowth starts to control dodder and summer annual weeds. For aerial application, use 3-6 pints of UNIROYAL DINOSEB-5 in 5-20 gallons of diesel oil or herbicidal oil per acre. For ground equipment use 3-6 pints of UNIROYAL DINOSEB-5 in 10-50 gallons of diesel or herbicidal oil and make up to 100 gallons with water. Spray the mixture to thoroughly wet all weed foliage using approximately 100 gallons per acre. The higher dosage and large amounts of oil are needed where grassy weeds are the major problem. NOTE: Do not graze or feed forage from treated area within 6 weeks after application.

ALFALFA, TREFOIL, CLOVER, PEAS AND SOYBEANS GROWN FOR SEED
(PREHARVEST SPRAYING TO FACILITATE HARVEST.)

Apply 3 to 6 days before harvest. For airplane application use 2 to 3 pints of UNIROYAL DINOSEB-5 in 5-10 gallons of diesel or herbicidal oil per acre. For ground application, use 2 to 3 pints of UNIROYAL DINOSEB-5 per acre. This may be mixed with 8 to 15 gallons of oil for low volume sprays for a minimum of 20 gallons finished spray per acre, or with 5 to 15 gallons of oil plus 25 to 40 gallons of water for high volume sprays. The high rates and volumes are suggested for use during cool, cloudy weather and where there is heavy foliage growth. NOTE: Do not allow seed or forage from treated areas to be used for food or feed purposes. Do not graze new growth in treated areas within 6 weeks after application.

POTATO VINES
(TOP KILL FOR HARVEST AID)

Spray 10-20 days before harvest. The concentration of the spray, and the amount to use per acre are determined by variety and vigor of the vines, degree of kill desired and weather conditions at the time of application. Use the higher rates during cool, cloudy weather or where foliage growth is especially heavy. For low volume air application, use 2 to 3 pints of UNIROYAL DINOSEB-5 in 5 to 10 gallons of diesel fuel oil per acre or 2 to 3 pints of UNIROYAL DINOSEB-5 in 1 to 2 gallons of an emulsifiable crop oil cleared for use on growing crops plus enough water to make 10 gallons of finished solution per acre. For low volume ground application, apply 2 to 4 pints with oil in a minimum of 20 gallons finished spray per acre. For medium volume sprays, use 2 to 4 pints of UNIROYAL DINOSEB-5 per acre in 5 gallons of fuel oil and 25 to 40 gallons of water, depending on density of vine growth applying by either air or ground equipment. Adjustment of boom and nozzles to give coverage of all parts of vines is essential. With heavy vine growth a split application is usually more effective than a single application. Use ½ the suggested rate and repeat the application 5-7 days later again using the ½ dosage. NOTE: Browning of the vascular ring of potatoes sometimes occurs when vines are killed rapidly either by chemically, mechanically, or by weather. Do not spray exposed tubers or graze treated areas. 1 quart per acre of agricultural surfactant cleared for application to growing crops plus water can be substituted for herbicidal oil.

GROUND COVER (DIRECTED SPRAY)

For citrus, date, olive, and nut groves including almonds, filberts, pecans, and walnuts; deciduous fruit orchards including apples, apricots, cherries, peaches, nectarines, figs, pears, plums, and prunes; ditch banks along drainage canals, mix 1-8 quarts UNIROYAL DINOSEB-5 in 2-20 gallons of diesel or any herbicidal oil and enough water to make 100 gallons of spray. Apply as coarse spray and thoroughly cover all weed foliage. Do not apply more than 100 gallons of spray. Avoid getting any of the spray on the fruits. Destroy any such fruit accidently sprayed. NOTE: Avoid spraying the base of young trees as girdling may occur. Do not allow livestock to graze on treated ground cover. Do not contaminte irrigation or domestic water. Make three to four applications per year as needed. Do not apply within 30 days of harvest.

HOPS: (For control of the basil spike phase of downy mildew). Control is obtained by killing diseased basal parts of bines to prevent further infection. Use 1 quart of UNIROYAL DINOSEB-5 with 5 gallons of fuel or diesel oil in enough water to make 100 gallons of spray. Provide continuous agitation when mixing and until spraying is finished. Make the first application to the ground and the basal two feet of the hop bines when they have reached eight feet or more in height. Use at the rate of 50 gallons per acre. Repeat as necessary, but use no more than four applications per growing season. When the plants have reached ¾ of the distance to the top of trellis, the basal 4 feet of the bines should be sprayed. The gallonage required for the defoliation of the basal four feet of the bines will need to be increased proportionately. These treatments will materially aid in the control of weeds. USE PRECAUTION: Do not spray entire bines. Do not apply to young replants in mature replants or to plants in "baby" yards. Do not apply within 14 days of harvest.

IMPORTANT NOTICE — Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

Attachment D
DNR's "Contained Out" Provision for Soil or Water.

This provision is only for contaminated soil or water determined to be waste and does not apply to contaminated media that are considered "products". This is adapted from the DNR's Remediation and Redevelopment guidance entitled "Guidance for Hazardous Waste Remediation – DRAFT- Pub number RR-705 - 11/21/2002".

A. Soil or groundwater containing a listed waste

Contaminated soil or groundwater is itself not hazardous waste but may require management as a hazardous waste if it contains listed hazardous waste. EPA guidance indicates that media containing hazardous constituents from listed hazardous waste above health based levels is considered to contain hazardous waste. For purposes of this MOU, soil or water contaminated with a listed hazardous waste will no longer be considered to contain a listed hazardous waste if any of the following criteria are met.

1. Soil

Contaminated soil containing listed hazardous waste remains hazardous until one of the following two criteria are met.

- If the ch. NR 720 table values or site specific Residual Contaminant Levels (RCLs) are met then the soil can obtain a "contained out" determination and be managed in accordance with the provisions in ch. NR 718.
- A "contained out" determination can be made when the constituents of concern are below site specific, direct contact (i.e. ingestion / inhalation) health based levels that are calculated using the general provisions in s. NR 720.19(5). If a contained out determination has been made, the contaminated soil can be managed in an approved solid waste landfill.

However, it is not necessary to calculate/determine a cumulative excess cancer risk or a cumulative hazard index value when making "contained-out" determinations, if disposal will occur in an approved solid waste landfill. As required by EPA guidance, if a generator or RP wishes to pursue a "contained-out" determination for contaminated media, Department approval of the calculated levels is necessary.

DNR Remediation and Redevelopment guidance "Determining Residual Contaminant Levels Using the EPA Soil Screening Level Web Site - PUB-RR-682. January 11, 2002" may be used to determine RCL's.

2. Groundwater

Contaminated water containing a listed waste remains hazardous until the ch. NR 140 Enforcement Standard (ES) is met.

B. Soil or Water Exhibiting a Hazardous Characteristic

Contaminated soil or water that exhibits a hazardous characteristic upon generation also requires management as a hazardous waste. In these cases the media remains subject to hazardous waste rules until the characteristic is no longer present. Treated media may remain subject to Land Disposal Restrictions even if they no longer have a hazardous characteristic.

Attachment E

Landspreading of Soil Containing Residual Levels of Persistent Chlorinated Pesticide Compounds Resulting from Product Use on the Land.

The following table lists persistent chlorinated pesticide compounds that may be commonly found in soils at remediation sites. Columns B and C list the maximum allowable concentration of each compound in contaminated soils and the maximum allowable rate at which these contaminated soils may be landspread under a DATCP permit without DNR concurrence, under Section V(D)2. of the DATCP - DNR MOU. Landspreading of soils containing higher levels of contamination, or at higher application rates, is only allowed if jointly approved by DATCP and DNR. DATCP and DNR have agreed on these maximum allowable soil concentrations and maximum allowable landspreading rates based on the historic single use application rates listed in Column A for the specific compounds.

Table Values for Persistent Chlorinated Compounds*			
	A	**B**	**C**
	Historic single use application rates	Maximum allowable concentration in soil to be landspread (the historic label rate [with a 10 ppm maximum])	Maximum allowable application rate without joint agency approval (5% of historic label rate)
Pesticide:	Pounds per acre:	Parts per million:	Pounds per acre:
Aldrin	0.5 – 5	2.5	0.25
Chlordane	1-10	5	0.5
DDT	5-7.5	3.75	0.375
Dieldrin	0.5 – 5	2.5	0.25
Endrin	0.125 - 1	0.5	0.05
Heptachlor	0.25 – 4	2	0.2
Methoxychlor	0.25 – 0.5	0.25	0.025
2,4,5,-T	1 – 12	6	0.6

*Additional compounds may be added to this list as agreed to between DATCP and DNR.