
**EPA
HQ/Regional
Review Team Meeting
On Generic
State Management Plan
Adequacy**

July 19-20, 1993
Chicago, Illinois

MEETING FINDINGS



U.S. Environmental Protection Agency

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"State" denotes the 50 States, Puerto Rico, the U.S. Virgin Islands, the District of Columbia, Guam, America Samoa and other Pacific Island Territories of the United States, as well as Indian Lands under Tribal jurisdiction.

I. INTRODUCTION

In October 1991, EPA released the "Pesticides and Ground Water Strategy" which described a new approach to preventing risks to human health and the environment posed by pesticide contamination of the ground water resource. Under this approach, certain pesticides that EPA determines will leach into ground water, will be permitted to remain registered only when used under EPA-approved Pesticide-Specific State Management Plan (SMP). Pesticide-Specific SMPs will prevent contamination by placing restrictions on a pesticide's use in geographic areas that contain vulnerable and/or valuable ground water. Over the next year, EPA will be issuing a proposed regulation under FIFRA that designates certain chemicals requiring SMPs.

In the meantime, EPA has been encouraging States to develop voluntary Generic SMPs prior to identification of specific pesticides of concern to facilitate the development and approval of Pesticide-Specific SMPs. Serving as a "blueprint" for all future Pesticide-Specific SMPs, Generic SMPs will need to address the same SMP components as Pesticide-Specific SMPs, however with less detail. The Pesticides State Management Plan Guidance for Ground Water Protection contains more information about the required components of SMPs. Currently, the majority of States and some territories and tribes are developing Generic SMPs. *Approximately 20 States have submitted draft Generic SMPs to the EPA Regional Offices for initial comment.*

A. HQ/Regional Review Team Meeting Concept

A Headquarters/Regional Review Team Meeting was held at EPA Region V on July 19-20, 1993. The purpose of the meeting was to bring together a cross-program team of senior managers to share experiences and perspectives in reviewing draft plans, come to a common understanding of EPA's definition of an "adequate" Generic SMP, and to resolve issues regarding plan adequacy.. At the meeting, members reviewed and compared plan approaches, identified good plan ideas and weaknesses that would prevent Regional concurrence, and resolved policy issues regarding SMP adequacy.

The Review Team concept was conceived at the EPA joint Water and Pesticides Division Director's Meeting in Des Moines, Iowa, 1991. The issue was raised of how Regional SMP reviews will ensure 1) national consistency in ground water protection without restricting State and Regional flexibility and 2) all States are treated in a equitable manner in the review process.

Specifically, the overall goals of the meeting were to:

- Facilitate the development and approval of consistently high quality Generic SMPs;
- Develop a common understanding of adequacy regarding Generic SMPs;
- Evaluate the effectiveness of SMP guidance documents;
- Identify and resolve unforeseen policy issues regarding the adequacy of Generic SMPs; and
- Promote information transfer among Regions and States.

B. HQ/Regional Review Team Process

To ensure that the Review Team meeting in Chicago would achieve the above goals, before the meeting, Team members and their staffs developed "observations" on the adequacy of 10 draft plans submitted to the Regions. The following is a description of the process to select, review, and evaluate the adequacy of those draft plans **prior to the meeting**:

Headquarters chose 10 draft Generic SMPs to be reviewed at the meeting based on Regional recommendations of the most complete plans. To ensure that the majority of Regions could participate with and get feedback from the Team, Headquarters chose at least one plan from each Region that has received plans.

To facilitate the review of the plans, 6-10 page synopses were developed for each of the plans. The purpose of the synopses was to easily present the different plan's ground water protection approaches to Team members. However, full Generic SMPs were also provided for a more detailed review, if necessary. The synopses focused on the conceptual approaches of the SMPs' protection program (e.g., basis for assessment and planning, monitoring, prevention, and response components) **and not on all aspects of the SMPs**. The administrative aspects selected for review (e.g., roles, responsibilities, coordination mechanisms; public awareness and participation; information dissemination; and legal authority) were thought to be critical for the early stages of plan development and implementation.

Also prior to the team meeting, members were divided into five "Small Groups" of three members, each for the purpose of developing observations about the adequacy for three (3) assigned Generic SMPs. In making these group assignments the following criteria were used: 1) mixture of Headquarters, Regional, and pesticide

and water offices management; 2) geographic distribution of State plans; and 3) some overlapping of plans between groups. After reviewing the synopses, via conference call, "Small Group" members and their staff discussed their comments on the plans and developed group observations on adequacy. These observations addressed the following:

- Highlights and strengths of the Generic SMP;
- Perceived weaknesses of the plan;
- Factors the "Small Group" considered in evaluating the plan; and
- Identification of policy issues resulting from the review, including inadequacies of the SMP guidance documents.

As with the plan synopses, the "Small Group" observations focussed on the conceptual approaches of the Generic SMP's protection program. The "Small Groups" considered whether the approach would provide an adequate level of protection to meet the Pesticides and Ground Water Goal, assuming the State has adequate resources, authority, and coordination mechanisms to fully implement the approach. **The "Small Groups" did not make recommendations on concurrence or a judgment on the specific Generic SMPs;** rather, they considered the approaches presented in the Generic SMPs as examples.

This process culminated in the two-day Team meeting in Chicago, in which the 15-member Team presented the above observations on adequacy of each plan, identified good plan strategies, as well as weaknesses that would prevent Regional concurrence on the plan, and resolved policy issues regarding SMP adequacy. This document summarizes the discussion findings of the Chicago meeting.

II. FINDINGS OF REVIEW TEAM MEETING

A. Weaknesses Preventing Concurrence on a Generic SMP

During the meeting, the Team discussed the level of adequacy required for the Protection Components (Goal, Basis for Assessment and Planning, Monitoring, Prevention, and Response) and, to some extent, the listed Administrative Components (Roles and Responsibilities, Legal Authority, Public Awareness and Participation). Rather than define the elements of an "adequate" Generic SMP, the Team developed omissions and weaknesses that would prevent concurrence on a Generic SMP. The "Meeting Discussion" section of this document provides additional detail on how the Team arrived at the weaknesses.

Before concurring on a Generic SMP, a Region must ensure that the plan does not contain the following weaknesses:

Goal Component:

- In the goal component, no discussion of protection of ground water connected to surface water ecosystems.

Basis for Assessment and Planning Component:

- Does not describe in sufficient detail the process that will be used to set priorities for monitoring and protection activities. Process does not address use and value of the resource, or the methodology for determining vulnerability, use, and value, or uses and relationships of modelling and environmental data. (Consideration of use and value does not preclude statewide protection of ground water to the highest level.) State does not provide the State's definition of vulnerability.

Monitoring Component:

- No discussion of criteria/design for locating wells (e.g., basic protocol, rough number of wells).
- Sampling only at existing wells if spatial distribution is inappropriate (i.e., not focused in medium and high vulnerability areas or not located near enough to usage areas to be able to effectively evaluate prevention or response measures.)
- Not stating how the monitoring plan relates to Generic SMP's goals and objectives.

Prevention Component:

- Failure to discuss prevention measures (e.g., education, BMPs (Best Management Practices), outreach, and other voluntary measures) that will be implemented in the absence of detects. Some level of detail is needed.

Response Component:

- Failure to set triggers for response, to list potential response actions, and to discuss the rationale for triggers and associated response actions, including timeliness of response actions.
- Failure to indicate clearly which agencies will respond, what actions will be taken, and who is in charge for the various activities.
- Failure to state what action will be taken when a detection of a pesticide is found. (For a Pesticide-Specific plan, the State will need to take appropriate action in some way to every detection of a pesticide.)

Roles, Responsibilities, Coordination Mechanisms Component:

- No discussion of mechanisms for coordination of key agencies, description of the roles various agencies play, and official concurrences of the key agencies responsible for implementing the SMP.

Public Awareness and Participation Component:

- No public participation. Must include effected parties, such as water users (consumers), pesticide users, public water suppliers, and others.
- No discussion of how a State will notify public of detections in drinking water.

Information Dissemination Component:

- No discussion of how a State will educate and get information to the pesticide user.

Legal Authority Component:

- Insufficient legal authority or plans (with projected milestones) to obtain the legal authority to carry out the provisions of the plan.

B. Other Key Policy Decisions

In discussing the level of adequacy required for specific SMP components, a number of policy issues were raised and resolved. The following are some of the key policy decisions made at the meeting. Again, for more explanation about these and other policy decisions made, refer to the "Meeting Discussion" section of this document.

Basis for Assessment and Planning Component:

Level of Detail Required for Generic SMP

States may be able to defer full development of the Basis for Assessment and Planning component and other components to the Pesticide-Specific SMP, if progress is being made on component development. However, if a State defers these efforts to the Pesticide-Specific SMP, they are at risk of losing the pesticide because there will be little time to fully develop the plan's components after the EPA rule requiring Pesticide-Specific SMPs. If a State defers to the Pesticide-Specific SMP, the Region must clearly communicate the Agency's expected level of detail for a Pesticide-Specific SMP.

Ground Water Supporting Surface Water Ecosystems

Because the ability to identify ground water discharge to surface water is limited by resources and the current state of knowledge, EPA will concur on Generic SMPs that do not address ground water supporting surface water ecosystems in the basis for assessment and planning, monitoring, prevention, and response components. However, States that are aware that a large percentage of surface water is discharged from ground water are strongly encouraged to attempt to take this fact into account in protection activities. Future approval of Pesticide-Specific SMPs may depend on addressing ground water supporting surface water ecosystems.

Sub-County Level Vulnerability Assessments

Because of limited resources, sub-county level vulnerability assessments may not be required for every county in the State. States should prioritize efforts by performing sub-county level assessments first in areas where detections have been found and where ground water is thought to be vulnerable.

Consideration of the Benefits of SMP Pesticides

States do not have to consider the benefits of SMP pesticides in designing their SMPs. In determining which pesticides require SMPs, EPA will consider the risks and benefits of pesticides on a national level. SMPs will be geared to achieve a performance standard (e.g., Maximum Contaminant Level) set in the SMP regulation. Plans should ensure that a current or reasonably expected source of drinking water is not contaminated above this performance standard, even if the value of an agricultural activity in an area is high. States do have latitude, however, in determining what areas are used for current and reasonably expected sources of drinking water and the use and value of ground water.

Monitoring Component:

Trade-Offs Between Assessment and Monitoring

For directing a response program, an extensive and well-placed state-wide monitoring program may compensate for the fact that a State has limited vulnerability assessment information. However, the monitoring program would not compensate for limited vulnerability assessment information when that information is to be used to direct pre-detection prevention activities. At the same time, if a State has a limited monitoring program, it may need to define vulnerability at a higher resolution.

Prevention/Response Components:

Commitment in Generic SMP to Future Action

In Generic SMPs, States will need to commit to the future approaches and actions to be taken for pesticides to be identified by EPA's SMP regulation. Regions should not assume actions performed in the past by a State will continue to be implemented for SMP pesticides, without a commitment in the SMP.

Public Awareness and Participation Component:

Previous Public Participation

The degree to which public participation is required for the Generic and Pesticide-Specific SMPs depends on the public participation process the State has already been through with other ground water rules or laws. States that have already received public input on pesticide-specific rules or ground water laws that duplicate some aspects of the SMP may not have to duplicate those public participation efforts on those aspects of the SMP.

Information Dissemination Component:

Use of FIFRA Section 24 (c)

EPA will accept the use of FIFRA §24(c) to impose regulatory measures to protect ground water from States that choose to use this mechanism, but will not encourage its use by other States because of the following limitations: 1) §24(c) registrations must be renewed every five years and must be agreed upon by all product registrants. (therefore, they may tend to be "clumsier" than State rulemaking), and 2) §24(c) actions do not include public participation, and therefore States choosing this approach, will need to ensure adequate public notice and comment of the restrictions. If a State chooses this approach, the Generic SMP should describe how it will use this mechanism; in the Pesticide-Specific SMP, a State may need to provide additional detail.

Resources Component:

Lack of Resources

The lack of resources to implement the activities described in the Generic SMP would not prevent concurrence on a Generic SMP. However, this **would** prevent approval of a Pesticide-Specific SMP. The measures described in the Pesticide-Specific SMP must translate into activities implemented to adequately protect ground water from pesticides.

C. Examples of Good State Approaches

The Team noted many "good" approaches and ideas for developing the SMP components, including the following examples:

Basis for Assessment and Planning Component

- Hawaii's Assessment of its Ground Water Resources

Hawaii has developed a system to assess the contamination potential of pesticides in the State. The system uses pesticide chemical properties, soils data, and climatic data which are incorporated into a GIS. The State has also developed a ground water classification system which is based on factors such as hydrology, geology, aquifer use, vulnerability to contamination, and other factors. This classification will be used to designate areas in need of protection and regulation.

- Georgia's Description of the History of Data Collection and GIS

State maps will be developed using GIS technology. Databases are available to describe soils, slope, and geology. This system, using ARC/INFO software on a PRIME minicomputer, is capable of targeting and integrating a wide variety of environmental data bases.

- Minnesota's Assessment of High Risk Areas

Vulnerability will be assessed and pesticides managed on a sub-county level. The State will treat the entire county as vulnerable if 75% or more of the area is designated as high risk. Management will occur at the township level in counties mapped as having a 50-75% high risk designation and at the soil type level for counties with less than 50% High Risk. Mapping or monitoring may result in Special BMP Promotion Areas. The State's geologic sensitivity approach was developed with the participation of many State groups.

Monitoring Component

- Wisconsin's Existing Monitoring Program

Monitoring is targeted to most of the susceptible areas with known or past pesticide use. Various monitoring projects serve to 1) identify problems, 2) characterize and track existing problems, and 3) evaluate the success of protection measures.

- Iowa Trend Monitoring Program

Iowa has a trend monitoring program with the potential to serve a number of purposes for SMP implementation. Further, it appears that Iowa has done extensive monitoring in the past, the results of which can be very useful to support SMP activities. In addition, a pesticide ground water monitoring database is being developed, which could prove to be a valuable tool for prioritizing and evaluating SMP activities.

- Minnesota's "Common Detection" Status

If Minnesota finds multiple detections, in multiple wells, in multiple years, the State will develop BMPs for the areas, establish Special BMP Promotion Areas, establish Pesticide Management Zones, or cancel the product. If users do not comply with voluntary measures, a regulation makes the above voluntary actions mandatory.

Prevention Component

- Maine's Description of Voluntary Prevention Measures

The description of voluntary prevention measures includes adequate detail about how these measures will be implemented and the organizations that are responsible for carrying them out. Voluntary prevention measures addressed include the ground water certification and training course, outreach efforts (newsletters, talks to civic and grower groups, media), classroom education, brochures and publications, use of Cooperative Extension Weed and Pest Control Guides, and other technical assistance.

- Arizona's Early Involvement of the Registrant/Prevention Approach

If a pesticide detected is a known carcinogen, mutagen, teratogen or is toxic to humans at the concentration detected and its presence is the result of normal agricultural use, the State will proceed to cancel the State registration. If the pesticide does not have the above risks, the registrant is notified and must demonstrate in a formal hearing that the presence of the pesticide does not pose a threat.

- Wisconsin's Prevention/Response Approach:

Regulatory measures that are applied to an area where detections have been found are also applied to areas where there are similar geology, soils, and pesticide use. The following are the steps involved in doing this:

- (1) A protection boundary is drawn from pesticide detections;
- (2) Sub-county soils and hydrogeologic information is collected and used to extend delineated protection boundaries beyond where empirical data exists; and
- (3) Areas with similar soils, pesticide usage, etc. in the State as those areas where detections were found will receive similar regulatory restrictions.

- Hawaii's Prevention and Response Plan

An important aspect of the Hawaii plan is its emphasis on prevention of ground water contamination. The plan stresses education of pesticide users, and a system of preventative measures that target pesticides before they appear in Hawaii's ground water. A comprehensive set of triggers is established for the initiation or increase in preventative measures and regulatory options. The State evaluates a pesticide before it appears in ground water, when it is initially detected, and again if it reaches 20% of the MCL (Maximum Contaminant Level) or health advisory. If mandatory measures that are imposed do not stop the increase in contamination, State cancellation procedures will be initiated.

- Maine's Flow Chart of Prevention/Response Measures:

A flow chart (Table 1) clearly shows the graduated measures in response to increasing levels of contamination.

Information Dissemination Component

- Maine's Ground Water Certification and Training Course:

Pesticides applicators who wish to use products requiring a Pesticide-Specific SMP would have to attend a certification and training course in ground water. This course would ensure that users understand the requirements of the State's SMP(s). In addition, the State would require two additional hours of recertification training over the duration of the certification period to provide assurances that applicators remain up-to-date on ground water issues.

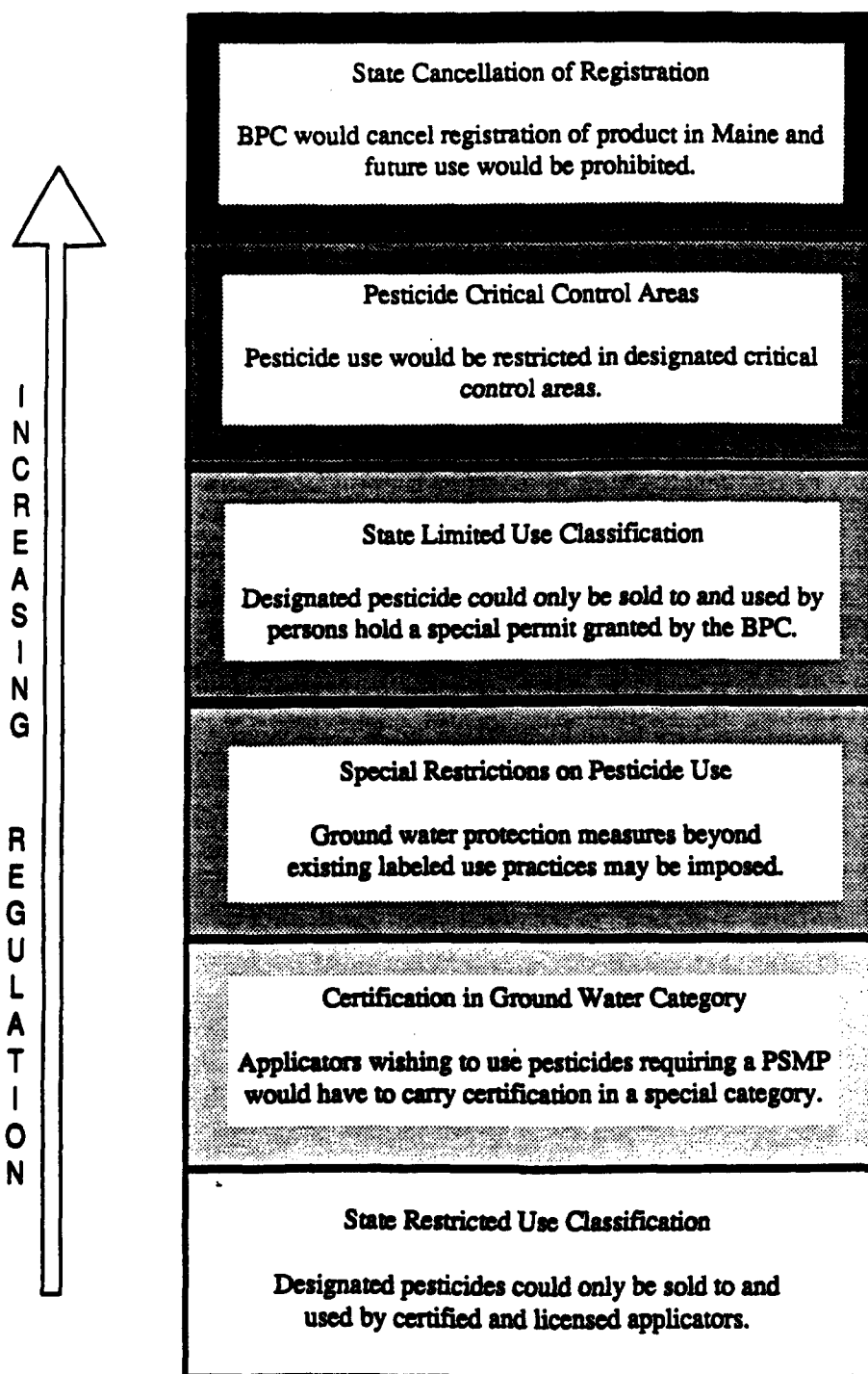
- Texas' Vehicles for Information Dissemination

Texas has many vehicles in place that may be used for disseminating information about specific measures in a Pesticide-Specific SMP. These communication vehicles include local Soil and Water Conservation Districts, Underground Water Districts, Agricultural Extension Agents, Certification and Training programs, and seminars and training on ground water protection.

TABLE 1

MAINE GENERIC SMP

Prevention Strategies: Pesticide Control Measures



III. FURTHER DISCUSSION OF WEAKNESSES AND KEY POLICY DECISIONS

The focus of the Team discussion was determining the level of adequacy required for the Protection Components (Goal, Basis for Assessment and Planning, Monitoring, Prevention, and Response) and, to some extent, the listed Administrative Components (Roles and Responsibilities, Legal Authority, Public Awareness and Participation). Rather than define the elements of an "adequate" Generic SMP, the Team came up with specific weaknesses that would prevent concurrence on a Generic SMP. The weaknesses, Team discussions that led to identifying these weaknesses, and a discussion of related policy issues are presented for each component.

Goal Component

A. Weakness and Team Discussion

The Team identified the following omission or weakness in the Goal component that would prevent concurrence a Generic SMP:

- In the goal component, no discussion of protection of ground water connected to surface water ecosystems.

The Team believed that the goal of an SMP should include protection of ground water supporting surface water ecosystems, since these waters are included in EPA's ground water protection goal and will need to be addressed in the future. However, because the ability to identify this water is currently limited by resources and the current state of knowledge, the members thought that EPA should not require protection of ground water supporting surface water ecosystems to be addressed in other components (e.g., Basis for Assessment and Planning, Monitoring, Prevention/Response) of a Generic plan. The Team recognized that ground water goals are driven by priorities, and that it is reasonable that the first priority should be the protection of human health, i.e., current and potential sources of drinking water. (This issue is discussed further in the Monitoring Section, "Addressing Ground Water Supporting Surface Water Ecosystems.")

Basis for Assessment and Planning Component

A. Weaknesses and Team Discussion

The Team identified the following omissions or weaknesses in the Basis for Assessment and Planning component that would prevent plan concurrence:

- Does not describe in sufficient detail the process that will be used to set priorities for monitoring and protection activities. Process does not address use and value of the resource, or the methodology for determining vulnerability, or uses and relationships of modelling and environmental data. (Consideration of use and value does not preclude statewide protection of ground water to the highest level.) State does not provide the State's definition of vulnerability.

Although several plans the Team reviewed gave descriptions of excellent assessment activities performed in the State, some of the plans did not present an overall methodology to be used for vulnerability assessments. Team members felt that a description of the methodology was important to set a basis for how the State will assess vulnerability for any given pesticide EPA identifies by regulation in the future. This methodology would serve as a blueprint to guide current and future assessment activities. In describing this methodology, States should discuss how various vulnerability factors (e.g. soil type, recharge areas, areas where detections have been found) were used to define the priority setting process (i.e., what weight is placed on each one). In a sense, States will be providing their own State definition for what is considered "vulnerable" in the State. Also, it was noted that in the Generic SMP, States should, in general terms, identify where and in what cases certain assessment activities will be conducted. The State does not have to have a map delineating levels of vulnerability, however.

For completed assessments in the Pesticide-Specific SMPs, the Region will need to check that "vulnerable" geographic areas are defined so that the State will take action where ground water is both vulnerable and valuable and that the State is using credible tools.

The Team stated that this component should also address how the State is considering ground water use and value to incorporate the differential protection approach. However, this consideration should not preclude statewide protection of ground water to the highest level (i.e, the determination that all ground is high use and value.)

B. Key Policy Decisions

Sub-County Level Assessments

The Team agreed that because of limited State resources, sub-county level vulnerability assessments may not be required for every county in the State. States should continue to make progress and prioritize efforts by performing sub-county level assessments first in areas where detections have been found and where ground water is thought to be vulnerable. At the same time, if a given county's ground water is thought not to be vulnerable, this county should be last on the State's priority list for performing sub-county level assessments. It was noted that county-level DRASTIC scoring, by itself, would not be sufficient, based on the above discussion and on the results of the National Pesticide Survey. EPA, will however, accept use of sub-county level DRASTIC information.

NPURG

One draft Generic plan reviewed reported that the State is using the soil/pesticide leaching model, NURG, to perform its vulnerability assessment. EPA representatives at the meeting were not fully knowledgeable about this model and its scientific defensibility. It was noted, however, that relying solely on this model for a State's assessment may not be acceptable because it does not also incorporate hydrogeological factors.

Consideration of Benefits of the SMP Pesticide

While the use, value, and vulnerability of ground water must be accounted for in selecting and placing pesticide measures, States do not have to consider the benefits of SMP pesticides in designing SMPs. In determining which pesticides require SMPs, EPA will consider the risks and benefits of pesticides on a national level. SMPs will be geared to achieve a performance standard (e.g. Maximum Contaminant Level) set in the SMP regulation. Plans should ensure that a current or reasonably expected source of drinking water is not contaminated above this performance standard, even if the value of an agricultural activity in an area is high. States do have latitude, however, in determining what areas are used for current and reasonably expected sources of drinking water and the use and value of ground water.

Level of Detail Required

After discussion, the Team decided that States may be able to defer full development of the Basis for Assessment and Planning component and other components to the Pesticide-Specific SMP, if progress is being made on component development. However, if a State defers these efforts to the Pesticide-Specific SMP, they are at risk of losing the pesticide because there will be little time to fully develop the plan's components after the EPA rule requiring Pesticide-Specific SMPs. Therefore, EPA still encourages States to fully develop the components in order to facilitate the development and approval of Pesticide-Specific SMPs.

It was noted that a Generic SMP should establish a foundation for a Pesticide-Specific SMP. After EPA's final rule specifying pesticides is issued, a State will have a limited timeframe (perhaps a year) to complete an assessment. Therefore, the Team agreed that it is desirable for States to have as much specificity as possible in the Generic SMP. This will make approval of Pesticide-Specific SMPs easier and faster. When the specific pesticides are provided in the proposed rule, the State would only need to collect and factor into its assessment pesticide usage information. (In fact, some States, such as Texas, are currently planning to factor into their assessments usage information for specific pesticides.)

However, although the Team did not at first anticipate concurrence of a Generic SMP that did not have fully developed components, after further discussion, it was decided that Generic concurrence would be possible when States have demonstrated progress on component development. In other words, States may be able provide the details in the Generic SMP now, or choose to defer full development of these components to the Pesticide-Specific SMP. In this regard, the Generic SMP could be viewed as a planning tool and a starting place in which to build. If a State takes this approach, the Region should clearly communicate in written correspondence to a State the expected level of detail for a Pesticide-Specific SMP.

Another issue raised during the discussion was how EPA will ensure that States have credible programs and not just a paper document. It was suggested that the Regions should tie their evaluations of States' efforts into the State grants process. When EPA Regions are reviewing how grant monies were spent by the States, the Regions should assess progress of component development (e.g., sub-county data collection for the vulnerability assessment).

Addressing Ground Water Supporting Surface Water Ecosystems

Because the ability to identify ground water discharge to surface water is limited by resources and the current state of knowledge, EPA will concur on Generic SMPs that do not address ground water supporting surface water ecosystems in the basis for assessment and planning, monitoring, prevention, and response components. However, States that are aware that a large percentage of surface water is discharged from ground water are strongly encouraged to attempt to take this fact into account in protection activities. Future approval of Pesticide-Specific SMPs may depend on addressing ground water supporting surface water ecosystems.

It was noted that many States did not address, in the monitoring and assessment components, ground water supporting surface water ecosystems. The question was raised whether this was an omission preventing Generic plan concurrence.

Several team members noted that ground water and surface water connections are significant in some regions of the country. For example, ground water discharge provides an average of 40 percent of the streamflow in surface water bodies across the country. In areas in New England that number may be as high as 80 percent.

However, the Team recognized that the ability to identify areas of ground water discharge to surface water is limited by resources and the current state of knowledge. In fact, EPA's Office of Ground Water and Drinking Water is presently in the early stages of developing a Technical Assistance Document on this topic. Thus, the Team concluded that, although it should be a future target, Regions should still concur on plans where the States' monitoring and assessment components do not address ground water supporting surface water ecosystems.

The goal of the Generic and Pesticide-Specific SMP, however, should continue to include these waters because this is included in EPA's ground water protection goal and should be a future goal. It was, therefore, recognized that the goal of the plan is driven by priorities, and that it is reasonable that the first priority should be protection of human health (current and potential sources of drinking water). As the state of knowledge improves, States can address, or further address these areas in assessment, monitoring, prevention/response activities, in concert with Comprehensive State Ground Water Protection Programs. In addition, it should be noted that future approval of Pesticide-Specific SMPs may depend on addressing ground water that supports surface water ecosystems.

Monitoring Component

A. Weaknesses and Team Discussion

The Team identified the following omissions or weaknesses in the Monitoring component that would prevent concurrence on the Generic SMP:

- No discussion of criteria/design for locating wells (e.g., basic protocol, rough number of wells).
- Sampling only at existing wells if spatial distribution is inappropriate (i.e., not focused in medium or high vulnerability areas) or response mechanisms are not going to be effectively evaluated based on the types of wells monitored.
- Not stating how the monitoring plan relates to the Generic SMP's goals and objectives.

The Team believed that, in much the same way a description of the "methodology" is needed in the previously discussed Basis for Assessment component, a discussion of the "criteria/design" for locating wells (both existing and new) is needed in the Monitoring component. This discussion in a Generic SMP is important to develop a framework for State monitoring for any given pesticide EPA identifies by regulation in the future. The Team also believed a State should provide a rough number of wells envisioned for the monitoring program so that the Regional office can get a sense of the size of the monitoring effort.

The Team emphasized that the review of Generic SMPs should ensure that States include "ground water monitoring" as defined in the SMP Guidance. The Guidance defines this as, "the set of activities that provide chemical, physical, geological, biological, and other environmental data needed by environmental managers/decision-makers to assist in developing and implementing ground water protection policies and programs."

B. Key Policy Decisions

Trade-Offs between Assessment and Monitoring Components

It was suggested that, in determining plan adequacy, the assessment and monitoring programs should be evaluated together. An extensive and well-designed statewide monitoring program may compensate for the fact that a State has limited vulnerability assessment information in directing response programs. In other words, a State may be able to depend on a good, well-placed monitoring system more. Haphazard well locations to be sampled infrequently would not be acceptable for Generic SMP concurrence.

While a good monitoring program may be able to direct response activities, it can not, however, compensate for limited vulnerability assessment information when that information is to be used to direct pre-detection prevention activities. Even a considerable monitoring effort does not replace a State's prevention program. At the same time, if a State has a limited monitoring program, the State may need to define vulnerability at a higher resolution.

Trade-Offs between Assessment/Monitoring and Prevention/Response Components

If a State wishes, it may invoke more conservative or protective measures in lieu of gathering a more precise resolution of assessment or monitoring data; it was unclear to the Team, however, if States would choose to do take this approach.

Level of Detail in Monitoring Component

Regarding the level of detail required for the Monitoring Component, the Team felt that the State should describe how it will determine the location of specific wells (i.e., based on depth to ground water, soil types, pesticide usage); however, the State does not have to provide maps and specific locations for monitoring.

Monitoring to Reflect "Basis for Assessment and Planning" Priorities

The Team commented that the design of monitoring efforts should reflect the goal and the priorities and assessment described in the "Basis for Assessment and Planning" component. Critical areas should be the first priority for monitoring. A suggestion was made by one member that if States are knowledgeable about ground

water flow directions, they may want to place wells downgradient from pesticide usage areas as well as upgradient from surface water.

Measures of Success

In addition, the Team discussed the need for States to establish success measures. The Team agreed that a significant measure of success will be in the context of the level of pesticides detected in ground water over time -- detections at the MCL will signify failure of the prevention program.

Prevention Component

A. Weaknesses and Team Discussion

For the Prevention component, the Team presented the following weakness or omission that would prevent plan concurrence:

- Failure to discuss prevention measures (e.g., education, BMPs, outreach, and other voluntary measures) that will be implemented in the absence of detects. Some level of detail is needed.

The Team reinforced the principle that States need to take preventive action in the absence of detections. The actions may include voluntary measures such as education, outreach, voluntary BMP's, but do not have to include mandatory prevention measures.

The Team believed that the State must be specific about **how** it is using voluntary prevention programs, such as Integrated Pest Management (IPM), BMPs, or educational programs, not just give "lip service" to these approaches. In the Generic SMP, the State will need to state and describe the "tools in the toolbox." In the Pesticide-Specific SMP, the State will need to describe more exactly which of these tools it will use. Also, although EPA will encourage States to begin implementing prevention activities, this will not be required in the Generic SMP.

B. Key Policy Decisions

Prevention Philosophy

The Team reviewed the Pesticides and Ground Water Strategy's prevention and response philosophy and how this related to the Generic SMP. The Generic SMP should set up a framework to prevent pesticides from ever reaching the MCL. In the Pesticide-Specific plan, allowing degradation of ground water quality up to the health limit will be inconsistent with the EPA's strategy. Therefore, prevention and response measures must be taken early on, beginning with efforts in the absence of detections and when the pesticide is first detected, to prevent levels from reaching the MCL.

Response Component

A. Weaknesses and Team Discussion

The Team identified the following weaknesses or omissions for the Response component that would prevent plan concurrence:

- Failure to set triggers for response, to list potential response actions, and to discuss the rationale for the triggers and associated response actions, including timeliness of response actions.
- Failure to indicate clearly what agencies will do what for response activities, who is in charge and responsible for the various activities.
- Failure to evaluate and take appropriate action in some way to every detection of a pesticide.

Given that many States did not address the various triggers (e.g., percentages of the MCL) at which action will be taken in Generic SMPs, two questions were raised by the Team:

- * Must Generic SMPs establish triggers for response actions? and
- * Should the State or EPA determine the appropriate triggers?

The Team agreed that States should identify and define triggers and actions for responding to pesticide detections. EPA will not dictate to States the specific triggers

or response actions. States should also describe the factors that will be considered to select the actions that will be implemented in response to the triggers and the time needed to develop and implement the specific actions. Also, finding detections of pesticides in ground water should trigger some action to diagnose the cause and determine whether further management approaches are needed.

Team members believed that describing the roles and responsibilities for the response component was particularly important. States will need to clearly identify "who's doing what" with regard to carrying out each of the response actions.

B. Key Policy Decisions

Applying Measures to Areas with Similar Factors

A number of State plans described how detections in one area would trigger a response not only in that area but in other areas of the State with like hydrogeology, even if monitoring detects are not present in these other areas. The Team believed this approach to be much more preventative than only responding on a site or area-specific basis to detections of pesticides. The State of Wisconsin uses the following step-by-step approach:

- (1) A protection boundary is drawn from pesticide detections;
- (2) Sub-county soils and hydrogeologic information is collected and used to extend delineated protection boundaries beyond where empirical data exists; and
- (3) *Areas with similar soils, pesticide usage, etc. in the State as those areas where detections were found will receive similar regulatory restrictions.*

Commitment in Generic SMP to Future Action

The following question was raised, "Can a Region assume that what has been done in the past will continue to be done for other pesticides or must there be a commitment to future action? The Team agreed that States must commit in the Generic plan to future approaches and actions that will be taken for pesticides to be identified by EPA regulation in the future.

Roles, Responsibilities, and Coordination Mechanisms Component

A. Weaknesses and Team Discussion

The Team identified the following weaknesses or omissions for the Roles and Responsibility Component that would prevent plan concurrence:

- No discussion of mechanisms for coordination, description of the roles various agencies play, and official concurrences of the key agencies responsible for implementing the SMP.

The question was raised whether Generic SMPs should describe in detail how specific agency activities are coordinated such that responsible positions are identified and written commitments made? The Team believed that Generic SMPs should generally indicate what role various agencies have in the assessment, monitoring, prevention/response, and information dissemination; however, specific individuals do not have to be named. For both Generic and Pesticide-Specific SMPs, official concurrences are required from the heads of agencies that have roles in implementing the SMP. This addresses the potential problem of one agency committing another agency to action without the latter agency's knowledge.

The following additional question was asked, "Are Memorandums of Agreement (MOUs) required or will committees and task forces suffice?" Team members felt that the decision of how to coordinate most effectively should be left up to the States. However, States must describe what coordination mechanisms they are using in their Generic plans.

Public Awareness and Participation Component

A. Weaknesses and Team Discussion

For the Public Awareness and Participation component, the Team identified the following weaknesses or omissions that would prevent plan concurrence:

- No public participation. Must include affected parties, such as water users (consumers), pesticide users, public water suppliers, and others.
- No discussion of how State will notify public of detections in drinking water.

Public participation in the process of SMP development was viewed as important component of the Generic SMP. The Team stressed that the "public" must include involvement by affected parties -- water users (consumers), pesticide users, public water suppliers, environmentalists, etc. Generic plans should also state how the State will ensure public participation for Pesticide-Specific SMPs. The Maine plan is an good example of participation by many affected parties -- the State used a committee with broad representation to develop the plan. Several other state plans, however, did not meet this requirement.

B. Key Policy Decisions

Previous Public Participation

The Team agreed that "adequate" public participation depends on the process the State has already been through. It was noted that the public has already participated in the development of Wisconsin's Generic plan approach by providing formal public comments and holding advisory committee meetings on Wisconsin's atrazine rule. In addition, Minnesota had significant public participation in the approach of its Generic SMP by providing an opportunity for public comment on Minnesota's Ground Water Protection Act which sets up the process for development of their Generic SMP.

Holding public meetings and providing an opportunity for notice and comment is not required for Generic SMPs, since the plan is still very conceptual, but is encouraged. Some States did have these kinds of public participation in developing their Generic plans.

Notifying Well Owners of Detections in Ground Water

The question was raised whether States must notify private well owners/neighbors when contamination occurs below health based reference levels. The Team agreed that States should address how they will notify both the public of detections of pesticides in drinking water and well owners of *any level* of detection.

Public Participation in Pesticide-Specific SMPs

It was noted that public participation will be especially important for Pesticide-Specific SMPs. Regions will need to be informed of how States considered and incorporated comments. Further, for Pesticide-Specific SMPs, States also may need to show proof of public participation to ensure the SMP is legally defensible.

Information Dissemination Component

A. Weaknesses and Team Discussion

The Team identified the following omissions or weaknesses in the Information Dissemination component that would prevent plan concurrence:

- No discussion of how a State will educate and get information to the pesticide user.

Members felt strongly that information dissemination must be addressed in Generic SMPs and that communication vehicles can be planned now before Pesticide-Specific plans are required. Communication to pesticide users and industry groups will be critical to ensuring compliance with the provisions in the Pesticide-Specific plan and program success.

B. Key Policy Decisions

FIFRA Section 24(c) and Section 18 as Mechanisms to Implement Plan

The question arose as to whether §24(c) could be used to implement SMP requirements. In the Arizona plan, detections of a pesticide in ground water may lead to a requirement that the registrant appear before the State with proposed label changes to mitigate the risk of contamination. If the State agrees to the changes, they would be instituted via §24(c).

EPA will accept the use of FIFRA §24(c) to impose regulatory measures to protect ground water from States that choose to use this mechanism, but will not encourage its use by other States because of the following limitations: 1) §24(c)'s must be renewed every five years and must be agreed upon by all product registrants; therefore, it may tend to be "clumsier" than State rulemaking), and 2) §24(c) actions do not include public participation, and therefore States choosing this approach, will need to ensure adequate public notice and comment of the restrictions. If a State chooses this approach, the Generic SMP should describe how it will use this mechanism; in the Pesticide-Specific SMP, a State may need to provide additional detail.

This is an appropriate use of the §24(c) mechanism. Although §24(c) has been used traditionally to register "additional uses," changes in a pesticide's registration requirements to protect ground water taken in the context of an SMP can be effected using §24(c). EPA must be careful to ensure that States understand exactly how to employ the §24(c) mechanism. States must understand that their §24(c) "special local need" is on a sounder legal footing if they first ban the use of the federally-registered pesticide in the State, thereby establishing the basis for a finding of "special local need."

In addition, the group also noted that FIFRA §18 is not an acceptable way to allow use of an SMP pesticide if that pesticide has been prohibited because the State does not have an approved Pesticide-Specific SMP; however, in this situation, this statutory provision could potentially be a way to allow use of an alternative pesticide to the SMP pesticide.

State Information Notices

In discussing information dissemination, the Team noted that if States go through the proper procedure, they can negotiate changes in the federal label with the registrant but can not impose additional or different label requirements than those required under FIFRA or attach information sheets to the label themselves. If States

do not seek label changes through the registrant, they can restrict pesticide use in the State under the authority of §24(a) and use non-label or labeling vehicles (e.g., bulletin notices, information cards) in communicating to the pesticide user.

Legal Authority Component

A. Weaknesses and Team Discussion

The Team identified the following omissions or weaknesses in the Legal Authority component that would prevent plan concurrence:

- Insufficient legal authority or plans (with projected milestones) to obtain the legal authority to carry out the provisions of the plan.

States should certify in the Generic SMP that they have the legal authority, or demonstrate that they have the ability, or provide specific plans and projected milestones to obtain the legal authority. Examples of authorities needed are the authority to set up prevention programs in the absence of detections, respond to pesticide contamination below the MCL, and monitor private wells. At the meeting, there was some discussion about whether EPA should require the Attorney General to certify that the plan is enforceable, but the Team decided against this.

The question was raised, "Is State rulemaking the only response to finding contamination?" It was noted that this was not the only response -- Provided they have the legal authority, States can also issue orders to cease the immediate use of a pesticide, but, depending on their State authorities, may have to show significant impacts to do this.

Resources Component

Lack of Resources/Tribes

Lack of resources is not a weakness preventing plan concurrence for a Generic SMP, although it can be for a Pesticide-Specific SMP. In fact, because of the lack of

resources, some States may choose not to develop a Pesticide-Specific SMP, thus allowing the pesticide to be prohibited in the State. The protection measures described in the Pesticide-Specific SMPs must translate into a protection of ground water.

It was noted that many tribes have very limited resources to develop and implement an acceptable Pesticide-Specific SMP. Tribes may adopt more restrictive prevention measures to make up for the lack of assessment and monitoring data due to resource constraints. Region 9 is working with Tribes to protect ground water using Section 319 and Section 106 grant monies and is assisting the Arizona Inter-Tribal Council in developing a "model" plan that hopefully will assist other tribes.

IV. NEXT STEPS

Similar Review Team Process Recommended for Draft Pesticide-Specific SMPs

The Team concluded that the Review meeting was very productive and that a similar process should be used to review draft Pesticide-Specific SMPs. Regions felt strongly that we should review draft, instead of final plans. The reason for this is that Regions will not have the time to implement this process when they are under a tight timeframe for approving or disapproving final Pesticide-Specific SMPs.

The Team outlined the timeframe for SMP Rulemaking and when the Review Team process could be implemented in the schedule. As shown below, the Review Team process would occur after the Proposed SMP Rule identifying chemicals for Pesticide-Specific SMPs. The Team would review plans that States submit voluntarily before they are required to do so under Final SMP Rule. In order to do this, the Regions will need to encourage States to develop and submit draft Pesticide-Specific SMPs early on. States may begin developing plans in response to the Proposed rule and may submit draft Pesticide-Specific SMPs to Regions beginning as early as 1995.

Proposed SMP Rule

January 1994

****** Implement Review Team process here *******

Final SMP Rule

January 1995

Submit Pesticide SMPs to EPA

January 1996

Approval/Disapproval

July 1996

Effective Date

September 1996

Options to Ensure National Consistency of Generic SMPs

It was noted that, after the meeting, SMP issues would inevitably arise in the review of Generic SMPs that were not addressed by the Team and would need to be resolved. To deal with these issues, EPA Headquarters, Region 10, and other Regions will explore setting up a process that would involve cross-fertilization of information between Regions and pesticides and ground water programs. Options could include a staff workshop in 1994 or a series of staff conference calls to deal with issues that arise.

ATTACHMENT A-1

EPA HEADQUARTERS/REGIONAL REVIEW TEAM MEETING ON GENERIC STATE MANAGEMENT PLANS

July 19-20, 1993
Chicago, Illinois

Agenda

MEETING GOAL: To develop a common understanding of an "adequate" Generic SMP and how Regions can review SMP's in a way that ensures:

- Protection of currently used and reasonably expected sources of drinking water and ground water that supports surface water ecosystems, without jeopardizing state flexibility to tailor measures to local conditions and
- Equitable treatment of states in the review process so that EPA is not more lenient or strict in some areas of the country.

DAY ONE: MONDAY, JULY 19, 1993

- 8:00 - 8:30 Meet and Greet Members of Review Team (coffee and donuts provided).
- 8:30 - 8:40 Region 5 Gives Welcome
- 8:40 - 9:00 Co-Chairs Give Welcome and Review Meeting Goals and Agenda
- 9:00 - 12:30 Small Groups Make 10-Minute Presentations on Protection Components of Assigned SMP's (Goal, Basis for Assessment and Planning, Monitoring, Prevention, and Response). Presentations are to:
- Briefly Summarize Protection Components of each plan, especially unique features
 - Make "Observations" on Strengths, Weaknesses of Protection Components
 - State Policy Issues

DAY ONE: (Continued)

12:30 - 1:45 Lunch

**1:45 - 2:45 Meet in Break Out Groups to Define Issues and Discuss
Required Level of Adequacy for Protection Components.
(Separate groups to "focus" on Basis for Assessment and
Planning, Monitoring, and Prevention/Response)**

**2:45 - 5:00 Break Out Groups Present Findings. Team Develops Consensus
on Summarizing Lessons Learned about Determining Adequacy
for the Protection Components:**

- (1) Goal**
- (2) Basis for Assessment and Planning**
- (3) Monitoring**
- (4) Prevention**
- (5) Response**

DAY TWO: TUESDAY, JULY 20, 1993

8:30 - 9:00 Review Progress Made in Day One and Agenda for Day Two.

9:00 - 11:00 Discuss Policy Issues Raised on Previous Day

**11:00 - 12:00 Small Groups Make 10-minute Presentations on Administrative
Components of Assigned Plans (Coordination Mechanisms,
Legal Authority, Public Participation, Information Dissemination).
Presentations are to:**

- Briefly Summarize Administrative Components of each
plan, especially unique features**
- Make "Observations" on Strengths, Weaknesses of
Administrative Components**
- State Policy Issues**

DAY TWO: (Continued)

12:00 - 1:15 Lunch

1:15 - 2:00 Continuation of Small Group Presentations on Administrative Components of Assigned Plans

2:00 - 3:30 Define Issues, Discuss Required Level of Adequacy, and Develop Consensus on Summarizing Lessons Learned about the Administrative Components:

- (1) Coordination Mechanisms**
- (2) Legal Authority**
- (3) Public Participation**
- (4) Information Dissemination.**

3:30 - 4:30 Address Next Steps:

- Identify Any Remaining Issues Related to Protection and Administrative Components and Decide How to Address them.**
- Address Long Term Questions:**
 - * Is there a future role for the Review Team?**
 - * How can we continue to address issues of consistency in Regional reviews over the next few years?**
 - * How can Headquarters best assist Regions in reviewing and approving plans, and advancing the national goals of the program?**

ATTACHMENT A-2

LIST OF TEAM MEMBERS

Anne Barton

Leo Alderman

Jim Burke

Jim Dunn

David Fierra

Steve Johnson

Carl Kohnert

Jim McCormick

Stan Meiburg

Paul Molinari

Connie Musgrove

Bill Patton

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