7. Facility Contact Person

Provide the name of a person at the facility who can be contacted about facility operations. This would be the person the Department would call if we were arranging a site visit.

8. Telephone Number

Give the phone number where the contact person may be reached during normal business hours.

9. Nature of Business

Provide a brief description of the activity conducted at the facility.

B. APPLICANT INFORMATION

1. Name of Applicant

Who is applying for this permit? If a company or corporation, state that name.

2. Applicant Mailing Address

Give address where correspondence concerning the application may be directed to the applicant. Include Street name, city, State and Zip Code. If you wish this correspondence to be sent directly to your consultant or engineer include that address as well.

3. Telephone Number of Applicant

Please be sure to include Area Code. Telephone number of the engineer or consultant firm may also be included in this section.

C. OWNER INFORMATION

1. Name of Owner

If different from the applicant, provide the name of the owner of the facility. There is no need to complete this part if the persons are the same.

2. Owner Mailing Address

Give the Street, City, State, Zip Code where the owner may be contacted.

3. Telephone Number of Owner

Give the telephone number of the facility owner.

4. Land Owner

Give the name of the person, agency or company which owns the land on which the facility is located if different than the facility owner.

5. Land Owner Address

Give the Steet, city, State and Zip Code of the land owner if different from that of the facility owner.

D. OPERATOR INFORMATION

This section pertains to the entity responsible for managing the facility operation, not necessarily individual persons. If the operator is a different person than the owner of the facility, provide the information requested in items 1 through 3. Examples of separate owner and operator are a lessee of the land or buildings on which the facility is

located, or a person under contract specifically to conduct the day to day business of the facility. A direct employee of the owner probably would not be considered a separate operator.

1. Operator Name

2. Operator Address

3. Telephone Number

E. EXISTING ENVIRONMENTAL PERMITS

List the numbers and the entity of issue of any other existing environmental permits that have been issued to the applicant. Some of the standard permits we commonly deal with are listed. Space is provided for other permits not mentioned. Please describe them.

F. REQUIRED ATTACHMENTS

1. Location Map

All permit applications must include two copies of a location map, preferably on a 7.5 minute U.S.G.S. topographic map or 15 minute map where the 7.5 minute map in unavailable. Other maps may be used, but require

approval by the Department. The map should clearly indicate all of the following:

- the facility site boundary
- an area of at least 3 miles around the boundary
- location of all wells within 1/2 mile of the facility boundary
- land ownership or use of properties adjacent to the site

2. Site Plan

In addition to the location map, two copies of a site plan must be submitted. The site plan should be drawn to an appropriate scale to show necessary details and should include:

- property lines
- buildings and structures
- locations of water wells, boring or sampling points

- locations of discharge sites (ponds, leachlines, dry wells, other injection wells, landfills, etc.). Each discharge location should be assigned a numeric identifier starting with 001 and proceeding consecutively. If the facility is known by a descriptive name include it as well. These identifiers will be used again in characterizing of discharge (see item 4, this section) and can be in the permit for monitoring requirements.

- topography

- Any other pertinent information

3. <u>Facility Design Plans</u>

Attach two copies of design drawings showing proposed or as-built construction details of pollution control systems. Engineered drawings are preferable, but all design plans should be either drawn to scale or indicate dimensions and should be accurate and legible. The design drawings should give both plan and cross-sectional views of elements of the system. For instance, a surface impoundment should have liner, subgrade, side slopes, anchor devices for liner, leachate collection system and dimensions detailed.

Similar details are required for drainage diversion features. Calculations used to determine the appropriate sizing should accompany the designs.

4. <u>Characterization of Discharge</u>

If yours is a property with a history of discharge or waste disposal, attach or include in the space provided a summary of the past discharge practices that you are aware of either personally or through employee interviews. Contact with the previous owner/operator of the facility may be necessary to fulfill this requirement. Your description should be specific for each discharging facility on site, i.e. what sort of materials were deposited in each pond, septic tank, landfill cell? If applying for a new facility permit, supply a similar discussion of anticipated discharges.

In addition to the discussion of discharge practices, the application must include a characterization of the discharges.

a.) Now list the chemical, biological and physical properties of the described discharges. This should include chemical analyses or projected chemical composition based on manufacturer's

data, bench or pilot scale testing or data from similar operations.

Every discharge should be evaluated for the following constituents at a minimum. Metals should be as total metals, although some applicants may also want to include analyses for dissolved metals. this would be important for discharges containing large amount of solids.

Arsenic	Fluoride
Barium	Calcium
Cadmium	Magnesium
Chromium	Sodium
Lead	Chloride
Mercury	Sulfate
Nitrogen (Total)	Alkalinity
Selenium	TDS
Silver	pH

In addition to the above, the following should be included in the discharge characterization if they

are used in processing, or would otherwise likely be present:

Endrin

Lindane

Methoxychlor

Toxaphene

Gross alpha particle activity (including radium-226 but excluding radon and uranium)

Combined Radium-226 and Radium-228

Tritium

Strontium-90

Those compounds detected by EPA Methods 601 & 602

Any hazardous substance as defined in A.R.S. 49-201.16 (See Appendix C)

Which of the specific constituents or groups of constituents from this last list to be characterized can be determined as a result of consultation with DEQ or the pre-application meeting.

Facilities which will be discharging wastes of animal or human origin must characterize the

biological components of the discharge. This could include:

Total coliform

Fecal coliform

Viruses

Parasites

Physical properties of the discharge which should be characterized may include:

Percent solids by volume

Moisture content

Temperature

Odor

b.) List the rates at which a discharge has or will occur. This may be given in appropriate units such as gpm, gpd, or tons per day.

Also provide the duration and frequency of the discharge. This can be expressed as continuous, intermittent, eg. once per day for 10 minutes, seasonal, (November thru April).

c.) Finally, list the location of each discharging facility, and be sure to reference these on the site plan. Locations must be given in latitude and longitude coordinates (see Appendix B for methods of determining latitude and longitude). For large facilities such as tailings ponds or evaporation ponds give the coordinates for the center of the facility.

5. Demonstration of BADCT

Attach a description of pollutant control methodologies for the facility and a discussion of why they meet the BADCT requirement.

The Department has developed guidance documents for determining BADCT for the following classes of facilities:

1. landfills
2. mines
3. municipal WWTP
4. on-site wastewater disposal systems
5. industrial WWTP

If your application is for one of these classes of facilities you should follow the guidelines in these documents for developing your BADCT demonstration. Format your demonstration consistent with the Table of Contents of the applicable document. These documents may be obtained from the ADEQ library (257-6959).

If you have a facility not covered by these documents you will need to discuss each control mechanism and the degree of discharge reduction it can provide. General discussions of the concept of BADCT given in the guidance documents may still be useful in making a determination.

Try to present your demonstration along the lines of the following discussion.

Include a description of the BADCT to be employed in the facility. Describe technology processes or operating methods employed to meet requirements of A.R.S. 49-243.B. Attaching a process flow diagram if appropriate. Include in your documentation a discussion of alternative discharge control measures, the technical and economic advantages and disadvantages of each alternative and the justification for selection or rejection of each alternative. Include an evaluation of each alternative discharge control technology in relation to discharge

reduction achievable, site specific hydrologic and geologic characteristics, environmental impacts and water conservation or water augmentation. Address economic impacts relative to industry-wide alternatives. Address factors that are relevant such as A.R.S. 49-243.B.1. a through h for existing facilities.

6. Demonstration of Compliance with Standards

Each application must include a demonstration that the facility's discharge will not cause Aquifer Water Quality Standards to be violated at the point of compliance. The amount of information needed to support this demonstration will vary depending on the design of the facility, characteristics of discharge from the facility, and ambient groundwater quality at the facility. For example, if a facility is designed with double liners and a leak detection system, such that no discharge will occur, the design itself could satisfy the demonstration. In such a situation, the point of compliance will be designated, but it will not be necessary to monitor at that point. However, the direction of groundwater flow and groundwater quality data would still be needed. The following sections discuss what standards are applicable to the demonstration and the statutory requirements for locating the point of compliance.

Applicable Standards

The Aquifer Water Quality Standards given in A.R.S. 49-223 and A.A.C. R18-11-402 and 403 are applicable to the permit process. These standards include the 29 parameters with Maximum Contaminant Levels (MCL's) set by the Administrator of the Environmental Protection Agency (EPA) and narrative standards related to human health and uses (Appendix A). As future MCL's are adopted by EPA, they will be incorporated into the Aquifer Water Quality Standards.

Point of Compliance

Propose the locations of the point of compliance for your facility. The point of compliance is defined by A.R.S. 49-244 as a vertical plane downgradient of the facility that extends through the uppermost aquifers underlying the facility. The location of the point of compliance will be determined on a case by case basis for each facility. The method of determination will differ depending on whether the discharge is a Hazardous Substance (see Appendix C) or a Non-hazardous Substance. Monitoring at the point of compliance will be in the aquifer. It may be necessary to have several monitoring locations (wells) within the plane defined as the point of compliance to adequately assure the standards are being met. See the "Monitoring Plan Considerations" section

for information on proposing monitoring at the point of compliance.

Point of Compliance for Hazardous Substances

For facilities which discharge a pollutant which is a hazardous substance as defined by A.R.S. 49-201.16., A.R.S. 244.1. requires that the point of compliance for that pollutant be the limit of the pollutant management area (the area on which pollutants are or will be placed). However, if the applicant can demonstrate it would be technically impractical to monitor at the boundary of the pollutant management area or that an alternative point of compliance would be substantially less costly, an alternate point of compliance may be approved. (A.R.S. 49-244.1.) An alternate point of compliance shall never be located further downgradient than:

1. The property boundary.

2. Any point of existing or reasonably foreseeable future drinking water source.

3. 750 feet from the pollutant management area.

Point of Compliance for Non-Hazardous Substances

For facilities which discharge non-hazardous substances the only requirement for the location of the point of compliance is that it ensure protection of all current and reasonable future uses of the aquifer. Therefore, the point of compliance can never be further from the facility than the location of the nearest present or future use. In most cases this requirement results in a compliance point at the property boundary because wells might be developed on adjacent properties for future uses.

Determination of Uses

Since the final determination of the compliance point is dependent on location of uses of the aquifer, in proposing a point of compliance, the applicant should consider all present uses in the area and any information useful in predicting where and if future uses might develop. Such information might include:

1. Land ownership and use.

2. Sources and availability of water in the area. Including well location map and table indicating uses of wells and construction details.

3. Zoning or other existing or proposed land use plans.

7. <u>Demonstration of Technical Capability</u>

By law the Department needs to be assured the applicant is technically capable of operating the facility according to the conditions of the permit. The areas concerning the facility where technical ability or capability are most important are design, construction and operation, including installation or maintenance of discharge control measures or complying with monitoring requirements. If a different person (person may be a company) is responsible for each of these areas, you should state the name of the persons relative to their responsibilities, and supply any of the following in support of their technical capabilities to perform the stated function:

- Any pertinent licenses or certifications held by the person
- Any professional training relevant to the design, construction, or operation of the facility.

- Any work experience relevant to the design, construction, or operation of the facility.

Although the last item is fairly open ended, the Department will review other information submitted to meet this requirement.

8. Demonstration of Financial Capability

An applicant is also required to demonstrate its financial capability to comply with the permit terms and conditions. Any financial information submitted under this requirement will be held confidential.

You should direct your financial demonstration toward the ability to construct, operate, close, and assure proper post-closure care of the facility.

a.) First, estimate the total cost of each of the following aspects of the facility.

- Construction; Present a realistic estimate of these costs based on the proposed BADCT.

- Operation;

- Closure; The requirements for closure are listed in A.A.C. R18-9-116.C.

- Post-closure care; If the nature of your facility will dictate conducting post-closure monitoring, maintenance or inspections, the cost of performing these must be estimated.

b.) The chief financial officer of the applicant must supply a statement that the applicant is financially capable of meeting the costs outlined in a.) above. The statement must be particular of the financial arrangements for meeting the closure and post-closure measures. If the applicant is a state or federal agency, county, city, town or other local governmental entity, this statement is adequate for this demonstration. If not, please continue.

c.) In support of the statement of the financial officer, the applicant must submit one of the following:

- A copy of the most recent of the applicant's 10K form as required by the Federal Securities and Exchange Act of 1984 as amended.

- A report that contains all of the following information:

  + A description of the applicant's status as a corporation, partnership, or other legal entity.
  + A description of the person's business.
  + An indication of the person's net worth, including a description of major assets and liabilities.
  + A brief description of any judgement exceeding $100,000 rendered against the person during the five years preceding the date of the application.
  + A brief description of any bankruptcy or insolvency proceedings instituted by the person during the five years preceding the date of the application.
  + If the applicant is a corporation, the names of its executive officers and their dates of birth.

- Evidence of a bond, insurance, or a trust fund assuring that the applicant will be financially capable of meeting the closure and post-closure requirements of the permit.

8. Past Performance

Another part of Director's determination that the applicant is capable of fully carrying out the terms and conditions of the permit, he must consider the applicant's past performance in the arena of environmental protection.

Provide a brief description of any action for the enforcement of federal or state law, rule or regulation, or any county, city or local government ordinance relating to the protection of the environment, instituted against the applicant during the five years preceding the date of application.

9. Evidence of Zoning

Include evidence that the discharging facility complies with applicable municipal or county zoning ordinances and regulations.

IV. SUPPLEMENTAL INFORMATION REQUESTED BY THE DIRECTOR

This chapter describes how to gather and present additional information which the Director may request to determine if a permit can be issued for a given facility. A.A.C. R18-9-108.C. provides the scope of the information the Director may need to consider. Much of this information can be described as hydrologic or geologic in nature. However, because of familiarity with your facility, you may be asked to propose items such as alert levels, discharge limitations and temporary closure measure which will be established as permit conditions.

We have attempted to describe under which conditions or for what types of facilities some of this information will likely be required. Remember, this is guidance. There are no absolute answers. If you are unsure of your specific situation, discussion with Department personnel is encouraged.

A. SITE HYDROGEOLOGY

The information presented in this section will be critical to the permit decision making process, therefore, special attention should be paid to presenting and discussing this element. Information to be supplied in this section may include, but is not limited to, the items discussed below:

1. Surficial Geology

This section should discuss:

- geomorphology (topography and drainage) if the site will be altered to change the topography or redirect drainage, plans showing these changes should be presented

  This information will be required for all lined facilities (surface impoundments and landfills) since protecting the facility from run on will be important for proper sizing of impoundments and prevention of leachate formation in landfills. Also for these types of facility sites estimations of volumes of surface water flow will be needed (see section on Surface Water hydrology)
- site soil descriptions (type, horizontal and vertical distribution, characteristics such as infiltration rates,

organic content, and mineral content). This type of information will be required where compacted soil liners are proposed or where the soil or vadose zone is being relied on for pollutant removal.

2. <u>Subsurface Geology</u>

- cross sections;

  Include well logs used to construct the cross sections. Cross sections may be required where there are multiple geologic units present near the facility, where multiple aquifer systems exist beneath the facility or where wells from which data are presented, are completed at largely different depths. An example of an instance that would require geologic cross sections would be an application for a mining operation.

- thickness and water bearing characteristics of each geologic unit. Identify and characterize aquifers and geologic units of limited permeability. Include information on composition, grain size, prosity, permeability, and specific capacity.

3. <u>Surface Water Hydrology</u>

This section should include:

- the location of any perennial or ephemeral surface water bodies (these can be included on the location or site plan maps if appropriate)

- the distance of discharge areas from surface water bodies

  if there are perennial surface water bodies in the area of the discharge, the application should address the discharge's effect on the surface water quality relative to the water quality standards for the water body(s)

- flow characteristics of streams (when giving flow rates, give location, method and date of measurement, the annual mean flow, and period of record.)

- the location of the 100 year flood plain (this may be shown on the location map or site plan where the scale is appropriate)

- include calculations showing that design of any diversion or containment structures are adequate to handle anticipated surface water flows.

4. <u>Groundwater Hydrology</u>

This section should provide a good regional and site-specific discussion of groundwater and its relationship to the geology of the site, and, at a minimum, provide the following:

- Depth to groundwater

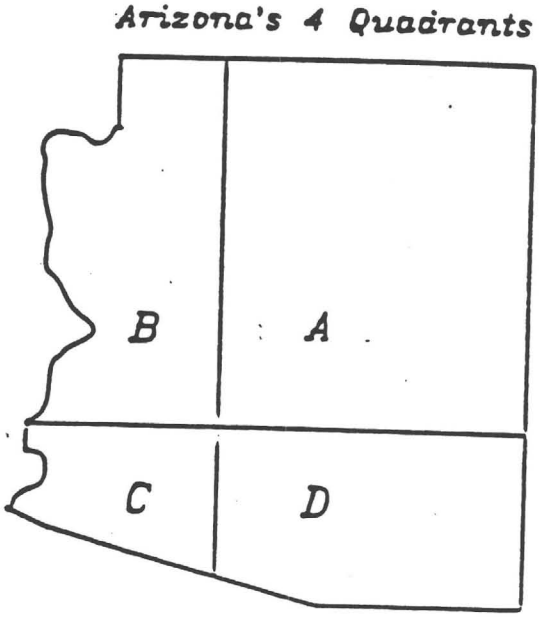
Give location of wells measured, date of measurement, location of measuring point and its height relative to land surface, time since well pumped prior to measurement, and any known construction data on the well, such as total depth and perforated intervals. Indicate if any wells are pumping in the vicinity at time of the measurement. This information should be given in tabular form. When giving well locations, use the Bureau of Land Management system of land subdivision (Figure 2). If drillers logs are available, copies should be included

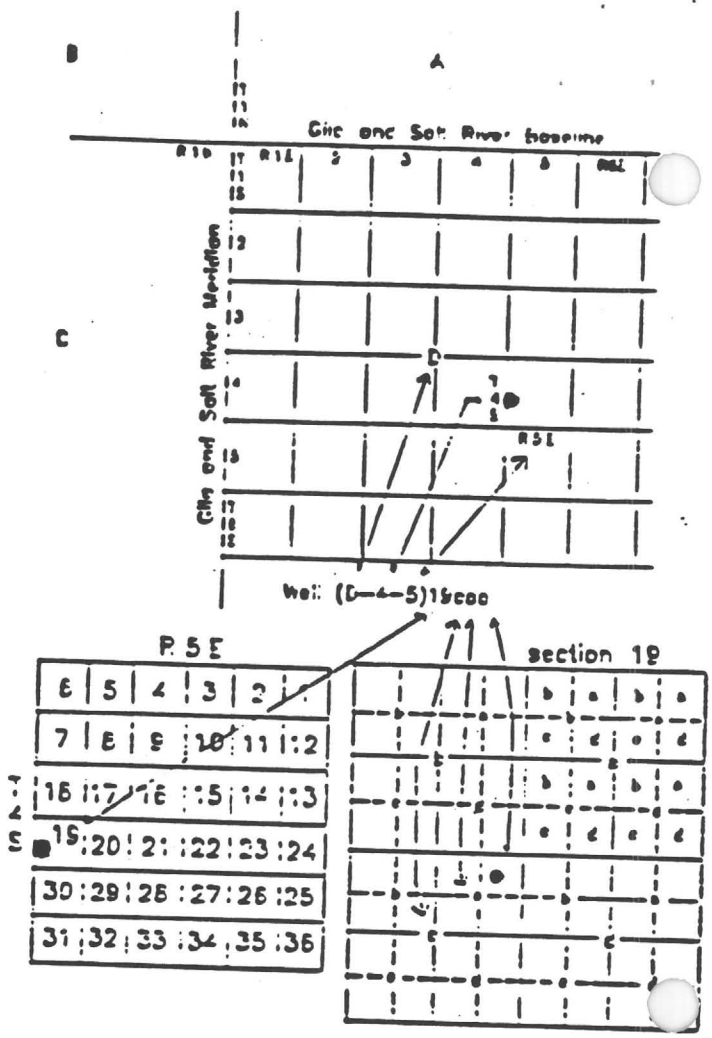
Water level elevation contour map (with data points plotted)

- A discussion of groundwater flow conditions - including flow rates, volumes and direction (seasonal changes in flow direction due to surface water recharge or groundwater pumpage should be described). Trends in water levels with time should be discussed and relevant hydrographs and equipotential maps should be included. All applications must identify the direction of groundwater flow in order to determine the point of compliance

- groundwater quality

Document ambient groundwater quality using sample data from wells. The specific parameters for which ambient groundwater quality must be characterized, will depend on the characteristics of the discharge.





The well numbers used by the Geological Survey in Arizona are in accordance with the Bureau of Land Management's system of land subdivision. The land survey in Arizona is based on the Gila and Salt River meridian and base line, which divide the State into four quadrants. These quadrants are designated counterclockwise by the capital letters A, B, C, and D. All land north and east of the point of origin is in A quadrant, that north and west in B quadrant, that south and west in C quadrant, and that south and east in D quadrant. The first digit of a well number indicates the township, the second the range, and the third the section in which the well is situated. The lowercase letters a, b, c, and d after the section number indicate the well location within the section. The first letter denotes a particular 160-acre tract, the second the 40-acre tract, and the third the 10-acre tract. These letters also are assigned in a counterclockwise direction, beginning in the northeast quarter. If the location is known within the 10-acre tract, three lowercase letters are shown in the well number. In the example shown, well number (D-4-5)19cad designates the well as being in the NE quarter of the NE quarter of the SW quarter, section 19, township 4 south, range 5 east. Where more than one well is within a 10-acre tract, consecutive numbers beginning with 1 are added as suffixes.

reference: Water Resources Data Arizona Water Year 1985
U.S. Geological Survey Water-Data Report AZ-85-1
White, N.D. and Garrett, W.B.

Figure 2 - WELL NUMBERING SYSTEM IN ARIZONA

5. Discharge Impact Area Assessment

The concept of Discharge Impact Area (DIA) is a key component of the Aquifer Protection Permit Program. The applicant may be directed by the department to supply information regarding hydrogeologic conditions, uses of groundwater, and existing water quality in the facility's DIA. The Department will evaluate the proposed project's effects with the DIA and may set permit conditions such as Alert Levels that are designed to regulate water quality impacts within that area. Facilities which may be required to perform discharge impact assessments include any facilities with large volumed discharges, such as WWTPs, recharge projects and injection wells.

Statutory Definitions

A.R.S. 49-201 contains two definitions that present the Discharge Impact Area in very broad terms:

1) Discharge Impact Area: "the potential areal extent of pollutant migration, as projected on the land surface, as a result of a discharge from a facility."

2) Pollutant: "fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances." Collectively, these definitions imply that establishing the DIA for a facility requires consideration of the most mobile constituents likely to be transported within the aquifer as a result of project operation.

The constituents to be considered are not limited to those regulated by numeric Aquifer Water Quality Standards, but include virtually any kind of fluid, solid, etc. DEQ expects the applicant to make the best effort to select and evaluate the most mobile and/or most concentrated pollutants that might be caused to migrate. In some cases, water may be the most mobile "pollutant" and may be used to define the DIA.

Using the "potential" "extent" of "migration" does not tie the discharge impact area to any standard concentrations, but implies that if pollutant could migrate into an area in any concentration, that area is part of the DIA. For practical purposes, the edge of the DIA should be that point at which the pollutant, because of dilution, dispersion, adsorption, or degradation, reaches a level indistinguishable from ambient concentrations by standard test methods.

Establishing the DIA

To establish the DIA for a facility, the applicant should use some form of quantitative model to predict pollutant migration. Many different types of models are available and they all have their applications. In most cases the appropriate models for discharging facilities will be analytical or semianalytical. It is the applicant's responsibility to select and apply a model that best represents their site conditions and operating scenario.

The following data should be incorporated into the transport model:

- Geometry of the system including aquifer depth, saturated thickness, confining layers, and mixing zones.

- Groundwater flow parameters such as direction gradient, recharge zones, and pumping wells.

- Ambient pollutant concentrations.

- Pollutant concentrations in discharge and discharge rates. Pollutant characteristics such as dissolved or phase separating.

- Estimated or test values of dispersivity.

- Retardation factor or distribution coefficient for solutes that can be adsorbed and decay factors if applicable.

If appropriate data are not available, the applicant may be directed to perform on-site or laboratory testing to gather the information or may be allowed to use justifiable assumptions based on published ranges of material properties.

The timeframe for migration is left open-ended in the statutory definitions. Modeling pollutant migration, however, requires that a time period be specified. For short-lived projects the timeframe may be the project life, including a reasonable post-closure period. For long-term projects the applicant should present a DIA that represents steady state conditions for the discharge.

Because DIA is defined by pollutant migration that results from a discharge, the DIA may incorporate existing contaminant plumes that may be caused to migrate. Facilities that discharge high volumes of fluid and that will influence groundwater flow rates and directions should consider known pollutant plumes in developing their DIA. Causing plume migration will not be grounds for permit denial. However, permit conditions may be set to control the impact of a facility on existing groundwater contamination problems.

6. <u>Monitoring Plan Considerations</u>

An applicant for an APP may propose a monitoring plan for the facility. The specifics of each monitoring program should be tailored to each facility, characteristics of the discharge and the type or purpose of monitoring.

Types of Monitoring

Monitoring may be required at a facility to confirm that the predicted characterization of the discharge is correct, to assure that discharge mitigation devices are functioning properly, or to confirm that the discharge is not causing a violation of an aquifer water quality standard at the point of compliance. The type and location of monitoring will be different depending on which of these goals it is to achieve. There are three main types of monitoring:

- Discharge Monitoring

This activity determines the quality or quantity of the potential discharge before it is released into the discharging facility. Discharge monitoring may be required when a permit specifies a level of quality or limit of quantity for the discharge. The permit will specify a maximum disposal level (MDL) or limit when the application indicates it is necessary to either treat the discharge or limit discharge to meet aquifer water quality standards or BADCT. Discharge monitoring may also be required if there is a potential for unpermitted chemicals being discharged.

- Control Technology Monitoring

  This activity tests the unsaturated zone to determine if liners or other control mechanisms are functioning as designed. Alert levels are typically used here. Detection usually triggers a contingency action to repair or maintain the facility to prevent discharge.

- Groundwater Monitoring

  Groundwater monitoring may be required at a point of compliance to assure compliance with Aquifer Water Quality Standards or it may be required between the discharge location and the point of compliance in order to refine predictions on the facilities impact.

- Determining When Monitoring is Necessary

Factors to be considered in determining if monitoring will be required include:

- discharge quantity

- concentration of constituents of concern in the discharge

- applicable aquifer water quality standards for constituents of concern

- the level of uncertainty regarding the effect of the discharge on groundwater quality

- proximity of water supply wells

Components of a Monitoring Plan

In proposing a monitoring plan the applicant should specify the following:

- number, location, and construction features of monitoring points and justification

- monitoring instrumentation (description of equipment to be used and method of installation)

- constituents to be monitored

- method of sampling, field measurements, sampling protocols, volumes to be purged from wells, sample

preservations, transportation, chain of custody, method of analysis and QA/QC procedures

- frequency of sampling

- post-closure monitoring

- record keeping and reporting

It is the responsibility of the facility to submit a plan that will produce factual, legally valid data. If DEQ finds the submitted monitoring plan adequate it will be incorporated as a condition of the permit. The following sections give some general information and references which may be useful in preparing the components of the monitoring plan.

Location of Monitoring Points

Monitoring points for groundwater monitoring should be located such that they coincide with the compliance point or are not farther away from the discharge than the compliance point. (See definition of compliance point in chapter 2). There should be a sufficient number of monitor points to assure that standards are not violated or that control are functioning properly. All monitoring point locations must be given in latitude and longitude.

Constituents to be Monitored

In developing a monitoring program, the constituents to be monitored should be determined early through consultation with DEQ. In many cases this early consultation is important because the applicant will begin monitoring prior to the permit application in order to collect ambient data. The type of well construction and sampling equipment may vary greatly for different parameters (Scalf, et al. 1981; Barcelona et al. 1983; and Schalla and Oberlander, 1982).

The identification of which constituents to be monitored will be based upon a consideration of:

- existing concentration levels of major ions in groundwater (i.e. background concentrations)

- constituents known to be in the effluent and/or any expected degradation products of those constituents

- the subsurface mobility of each of the constituents in the discharge

- constituents in the discharge which have a potential to adversely affect the use of the groundwater

Good monitoring parameters will:

- have high concentrations in the discharge relative to background concentrations

- have high mobility in the subsurface and therefore, potential for migrating to groundwater and

- be of public and environmental health concern

Generally, any effluent constituent which may affect the use of the water supply should be monitored. However, if the constituent has a low mobility in the subsurface and, therefore, is not expected to appear at the monitoring location, a more conservative constituent (one with greater surface mobility) may be chosen as an indicator parameter. Once an increase in this indicator parameter is detected, complete constituent monitoring will begin. Background water quality must be determined for all constituents which may affect use even if an indicator parameter will be used.

The Department will make the final determination of the constituents to be monitored upon review of the facility's recommendations and rationale. These constituents will be listed in the groundwater permit along with provisions for reevaluating the monitoring constituents as data are generated and interpreted.

Monitoring Instrumentation

Unsaturated (Vadose) Zone Monitoring

If a facility is permitted as a non-discharge facility, vadose zone monitoring may be required to document that there is no fluid movement. Wilson (1981 and 1982) and Everett, et. al. (1983) present the various vadose zone monitoring techniques to assess fluid movement.

Saturated Zone Monitoring

A monitoring well is necessary for obtaining samples of groundwater for analysis. In designing a monitoring well, the necessary considerations include:

- well size (diameter)
- number, location and length of perforated intervals
- sealing
- casing material
- type, materials, and construction of samplers or pumps

- location of pump within the perforated interval

It is important that wells be located, constructed and sampled in such a way as to ensure the collection of samples that are representative of the groundwater. Table 3 summarizes the advantages and disadvantages of different well sizes, casing materials and samplers along with references for further information. All wells must be constructed in accordance with Arizona Department of Water Resources Well Regulations (A.C.R.R. Title 12, Chapter 15, Article 8). A variance of these minimum onstruction standards may be necessary to achieve proper monitoring configurations. Prior to drilling, a permit to drill must be obtained from the Operations Division of the Department of Water Resources. Any necessary variances must be requested when applying for the drilling permit.

TABLE 3: Summary of Monitoring Well Construction Materials and Sampling Devices

Method	Description	Advantages	Disadvantages	References
Monitoring Well Construction				
1. Well Diameter a. Two-inch wells	Used where transmissivity is low or unknown	1. Inexpensive 2. Sampling techniques would not cause loss of volatiles.	1. May be difficult to develop 2. Samples small area 3. Use limited to monitoring	Schalla and Oberlander (1983)
b. Four-inch wells	Used where well yields are low.	1. Most development techniques possible 2. Suitable for most situations 3. May be used to perform dynamic sampling.	1. May not have capacity for use as withdrawals well for clean-up activities.	
c. Six-inch wells	Used where transmissivity is high.	1. All development techniques possible 2. Samples large area 3. Usually has capacity for use as withdrawal well for clean-up activities.	1. Expensive 2. Large volume of contaminated water to dispose of.	
2. Casing Materials a. PVC	This plastic is excellent for use in inorganic monitoring There may be depth limitations due to relative weakness of material. Schedule 80 may be necessary for depths over 100 feet.	1. Lightweight 2. Resistant to acids and alkalies 3. Inexpensive 4. Readily available	1. Weak, less rigid than steel 2. May absorb or leach organic organic chemicals 3. May not bond well with cement seal.	Curran and Tomson (1983 Fetter (1983 Miller (1982 Barcelona, Gibb, and Miller (1983

TABLE 3: (continued)

Method	Description	Advantages	Disadvantages	References
b. Teflon	The expense of this material may make it somewhat impractical for some applications.	1. Lightweight 2. Inert	1. Expensive 2. Not readily available	
c. Mild Steel	This material is excellent for use in organic monitoring Should not be used in corrosive situations or where monitoring for metals.	1. Strong and rigid 2. Resistant to corrosion and oxidation 3. Readily available	1. Heavy 2. May leach metals 3. Not chemically resistant	
d. Stainless Steel	This material is excellent for all but acidic waters.	1. Strong and rigid 2. Resistant to corrosion and oxidation 3. Readily available	1. Heavy 2. May corrode and leach chromium in very acidic waters. 3. Expensive (the primary limitation)	
Groundwater Sampling Apparatus				
1. Bailers	In its simplest form, a bailer consists of a pipe closed at one end and open at the other. A cable is attached to the open end. To collect a sample, the bailer is lowered into a well below the water level. The filled container is then raised to the surface.	1. Can be constructed with materials compatible with parameter(s) of interest (see II.B.2) 2. Inexpensive enough that separate bailer may be dedicated to each well 3. No power required 4. Outgassing of volatile organics minimized.	1. Impractical to evacuate stagnant water in well 2. Transfer of sample to sample bottle may result result in aeration	Gibb, Schuller, and Griffin 1981 Schalf, McNabb, Dunlap Cosby, and Fryberger (1981) Nacht (1983) Sisk (1981)

TABLE 3: (continued)

Method	Description	Advantages	Disadvantages	References
2. Suction Lift Pumps	These pumps create a vacuum inside a tube extending below the water level.	1. Portable and inexpensive.	1. Sampling limited to groundwater depths less than about 20 feet (the practical maximum suction lift) 2. Can strip volatile organics from sample	
3. Portable	Two types of portable submersible pumps are available. The newest type has a small diameter (as low as 1"), is good to a depth of 160 ft., and may be suitable for organics The older portable submersible pumps have been used to depths of 300 ft., but require a 3-inch I.D. casing.	1. Portable. 2. Depending upon pump size, large pumping rates and sampling from deep wells is possible. 3. Can be used to prepump prior to sampling. 4. Expensive	1. Larger pumps may require use of larger service type type vehicle 2. With conventional construction materials, many not be suitable for organics. 3. May be difficult to prevent cross-contamination if pump is used for sampling more than one well.	
4. Air-lift	Air is applied to force water out of a discharge tube.	1. Portable or permanent. 2. Can be used to prepump prior to sampling.	1. Oxidation a problem 2. No suitable for pH sensitive parameters, such as metals. 3. Stripping of volatile compounds may occur 4. The primary limitation is the potential alteration of water quality. 5. Possibility of introducing contaminants through air.	

TABLE 3: (continued)

Method	Description	Advantages	Disadvantages	References
5. Gas-drive Samplers	Similar to air-lift samplers, but gas (usually nitrogen) used instead of air to minimize alteration of water quality.	1. Portable 2. Can be used in small diameter wells 3. Inexpensive 4. Can be constructed with inert materials.	1. Requires compressed gas 2. Possible depth limitation 3. Alteration of water quality may occur if gas if gas contacts water	Robin, Dytynyhyn, & Sweeney 1982
6. Gas-operated Bladder pump	These pumps contain a collapsible membrane. Water enters membrane until full; gas is then applied to annulus around membrane, forcing water upwards.	1. Can be constructed of inert materials 2. Gas does not contact water sample 3. Small diameter	1. Requires compressed gas 2. Low pumping rates 3. Expensive	
7. Gas-driven Piston pump	Gas enters and exhausts from chambers between two pistons. Water enters on suction stroke, and is expelled in pressure stroke.	1. Gas does not contact water sample 2. Can be used for deep water levels 3. Small diameter	1. Expensive 2. Low pumping rates 3. Requires compressed gas 4. Particulate matter may damage pump unless suction line filtered.	

The depth and perforated interval of a well should be such that samples are obtained from the portion of the aquifer that would show the earliest effect from the discharge. For most discharges this will be the upper portion of the uppermost aquifer at the site. Therefore, most monitor wells should be completed only 20 or 30 feet into the aquifer. Exceptions to this general guideline would be: 1) discharges which are injected into or below the aquifer, 2) wells in very low yield aquifers, and 3) wells in areas with large seasonal water level variations. Where fluctuations in water table occur, these should be documented with hydrographs. Perforated intervals may be extended below or above the water table in such instances. However, in order to collect a representative sample, pmp intakes should be set no more than 10 feet below the projected pumping water level.

Sampling Protocols

Water standing in a well or the gravel pack annulus is in contact with the atmosphere and well casing. Therefore, its chemistry may differ from formation water that has not been exposed to the atmosphere. Just as samples from unpurged wells are not representative, samples from overpurged wells may also not be representative. Similarly once a sample is removed from the aquifer it's chemistry may change in response to its new environment. Because of these factors, sampling protocols must be

designed to ensure that samples representative of the aquifer are collected and to ensure that the chemical properties of that sample are preserved until analysis. The following references discuss sampling protocols in more detail: Scalf, et. al., 1981; Gibb, et. al., 1981, Nacht, 1983. Field measurements, which should accompany laboratory analytical data, should include temperature, specific conductance or electrical conductivity (adjusted to 25°C) and pH.

All monitoring plans must include a discussion of sampling protocols to be followed. This would include:

- methods of determining time or amount of pumping prior to sampling

- methods of cleaning sampling equipment (unless dedicated pumping equipment is used)

- types of sampling containers

- sample collection, preservation and transport

- quality control procedures such as duplicate sampling, equipment blanks and travel blanks

- chain of custody

- analytical methodologies to be used

All analytical work must be performed by a laboratory which is licensed by the State of Arizona, for the monitored parameter or approved by DEQ. Appendix gives some guidelines on sampling protocols. More detailed information can be found in the Departments Quality Assurance Project Plan Manual.

Frequency of Monitoring

The applicant should specify in the monitoring plan the frequency of sampling at each monitoring point. Discharge monitoring will generally be the most frequent since discharge quality may vary rapidly. In most cases groundwater monitoring should be quarterly or less.

Post Closure Monitoring

The monitor plan should specify the length of time that each monitoring point will be sampled after closure and the frequency of the sampling. The length of the post-closure monitoring period will depend on:

1. the amount of discharge

2. expected travel times to the monitoring point

3. probability of discharges occurring after closure.

CONTINGENCY PLAN REQUIREMENT

A permittee must be prepared to take action to correct any of the following circumstances:

1) Violation of a permit condition

2) Violation of an Aquifer Water Quality Standard

3) Exceeding an alert level

4) An imminent and substantial endangement to the public health or the environment

You must provide the name and phone number of an emergency response coordinator who will be responsible for notifying the Department and implementing your contingency plan addressing conditions that represent an imminent and substantial endangerment to the public health or the environment.

(You) should identify equipment failures which could cause a release of toxic substances to the environment, flooding, unsanitary conditions or other events with immediate impacts. Once identified, develop a plan of action and specify necessary

equipment, and personnel to remedy the impacts of such events. The plans should contain sufficient detail that ADEQ is assured that the most timely response will be provided.

If you were required to develop a contingency plan for another program such as RCRA, it may be amended as necessary to meet the requirements of the APP program, and submitted to the Department for approval under this section.

For circumstances which do not represent an immindent and substantial endangement to the public health and environment the applicant must propose a contingency plan consistent with A.A.C. R18-9-114.D.

C. REMEDIAL ACTION PLAN

When Required

While corrective actions conducted under a contingency plan for a permitted facility as discussed above, are a type of remedial activity, A.R.S. 49-243.G. allows for incorporation of remedial actions into a permit for existing facilities which were in operation prior to August 13, 1986.

In developing a permit application, the applicant could be directed to evaluate the vadose zone of the aquifer water quality beneath the facility site. If this evaluation indicates that past discharge practices have released hazardous substances such that the aquifer is or may be affected, the applicant may be directed to develop a remedial action plan. The implementation of the approved plan will become a permit condition.

Components of Plan

1. Identify source or sources of the release:

- Using knowledge of current disposal practices (operating practices)

- Investigating records of previous owners or interviewing former employee

- By examining the pattern of contamination (trace back to source)

2. Outline procedures for removing, treating, containing or eliminating the source of the release

3. Evaluate the extent of the contamination by the appropriate means which may include:

- Soil gas sampling

- Soil borings

- Groundwater sampling

- Geophysical surveys

- Other methods approved by Department

Any remedial action should attempt to restore the aquifer to levels of the AWQS or other health based guidance levels. The Department will provide the applicant with these values. It is recognized that the final cleanup

levels required by permit will be based on the feasibility of achieving those levels by the chosen treatment/remedial technology.

4. The applicant should review various alternatives for remediation, and propose a specific alternative. In reviewing alternatives, applicant should consider the following factors for each alternative.

   a. Population, environmental and welfare concerns at risk

   b. Routes of exposure

   c. Amount, concentration, hazardous properties, environmental fate, such as the ability to bio-accumulate, persistence and probability of reaching the waters of the state, and the form of the substance present.

   d. Physical factors affecting human exposure such as hydrogeology, climate and the extent of previous and expected migration.

e. The extent to which the amount of water available for beneficial uses will be preserved by a particular type of remedial action.

f. The technical practicability and cost effectiveness of remedial actions applicable to a site.

g. Propose a monitoring plan to determine the effectiveness of the selected remedial action alternative. Depending on the method of cleanup, monitoring could be conducted in the aquifer, vadose zone or soil or at the discharge from a treatment system. Frequency of monitoring could vary from daily to one-time at completion of the project.

D. CLOSURE PLAN

Attach a proposed closure plan. The plan should give details for closing the various discharge activities when you plan to cease the facility's operation. The Department recognizes that closure plans may change during operation. Therefore, a final closure plan will also be required 90 days prior to cessation of operation (R18-9-116.C).

The purpose for the closure plan submitted with the application is to ensure the facility can control further discharges and will not cause a violation of an Aquifer Water Quality Standard to evaluate whether you are capable of meeting the costs of closure.

The closure plan should include:

- The expected lifetime of the facility.

- The approximate quantities and the chemical, biological, and physical characteristics of the materials to be removed from the facility.

- The destination of the materials to be removed from the facility and an indication that placement of the materials at that destination is approved.

- The approximate quantities and the chemical, biological, and physical characteristics of the materials that will remain at the facility.

- The methods to be used to treat any materials remaining at the facility.

- The methods to be used to control the discharge of pollutants from the facility.

- Any limitations on future land or water uses created as a result of the facility's operations or closure activities.

- The methods to be used to secure the facility.

- An estimate of the cost of closure.

- A schedule for implementation of the closure plan and the submission of a post-closure plan.

In addition, specify to what degree any of the above items would be implemented during periods of temporary cessation. The same overlying philosophy for permanent closure applies here, but on a shorter term basis.

If the closure plan indicates the possibility of continuing discharges, a proposed post-closure plan is required.

The nature of some facilities will always necessitate post-closure plans. These included landfills, mine tailing ponds.

The proposal for post-closure should include:

- The duration of post-closure care.

- The monitoring procedures to be implemented by the permittee, including monitoring frequency, type, and location.

- A description of the operating and maintenance procedures to be implemented for maintaining aquifer quality protection devices, such as liners, treatment systems, pump-back systems, and monitoring wells.

- A schedule and description of physical inspections to be conducted at the facility following closure.

- An estimate of the cost of post-closure maintenance and monitoring.

- A description of limitations on future land or water uses, or both, at the facility site as a result of facility operations.

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APPENDIX A. AQUIFER WATER QUALITY STANDARDS

I. Narrative aquifer water quality standards (A.C.C. R18-11-405)

A. A discharge shall not cause a pollutant to be present in an aquifer classified for a drinking water protected use in a concentration which endangers human health.

B. A discharge shall not cause or contribute to a violation of a surface water quality standard established for a navigable water of the State.

C. A discharge shall not cause a pollutant to be present in an aquifer which impairs existing or reasonably foreseeable uses of water in an aquifer.

II. Numeric Aquifer Water Quality Standards (A.C.C. R18-11-406)

A. Aquifer Water Quality Standards for Inorganic Chemicals

Pollutant	(mg/l)
Arsenic	0.05
Barium	1

Cadmium	0.010
Chromium	0.05
Lead	0.05
Mercury	0.002
Nitrate (as N)	10
Selenium	0.01
Silver	0.05
Fluoride	4.0

B. Aquifer Water Quality Standards for Organic Chemicals

Pollutant	(mg/l)
Endrin	0.0002
Lindane	0.004

Methoxychlor	0.1
Toxaphene	0.005
2,4,-Dichlorophenoxyacetic Acid	0.1
2,4,5-Trichlorophenoxypropionic Acid	0.01
Total Trihalomethanes	0.10
Benzene	0.005

Pollutant	(mg/l)
Vinyl Chloride	0.002
Carbon Tetrachloride	0.005
1,2-Dichloroethane	0.005
Trichloroethylene	0.005
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.20

Para-Dichlorobenzene	0.075

C. Aquifer Water Quality Standards for Radionuclides

1. The maximum concentration for gross alpha particle activity, including radium-226 but excluding radon and uranium, shall not exceed 15 pCi/1.

2. The maximum concentration for combined Radium-226 and Radium-228 shall not exceed 5 pCi/1.

3. The average annual concentration of beta particle and photon radioactivity from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year.

4. Except for the radiouclides listed in this subsection, the concentration of man-made radionuclides causing 4 millirem total body or organ dose equivalents shall be calculated on the basis of a 2 liter per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," National Bureau of Standards Handbook 69,

National Bureau of Commerce, as amended August, 1963 (and no future editions), incorporated herein by reference and on file with the Office of the Secretary of State and with the Department. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 millirem/year. The following average annual concentrations are assumed to produce a total body or organ dose of 4 millirem/year:

Radionuclide	Critical Organ	pCi/l
Tritium	Total Body	20,000
Strontium-90	Bone Marrow	8

D. Aquifer Water Quality Standards for Microbiological Pollutants

1. When the membrane filter technique is used to test aquifer water quality, the number of coliform bacteria shall not exceed any one of the following:
   a. One per 100 milliliters as the arithmetic mean of all samples examined in a month.

b. Four per 100 milliliters in more than one sample when fewer than twenty samples are examined in a month.

c. Four per 100 milliliters in more than five percent of the samples when twenty or more samples are examined in a month.

2. When the multiple tube fermentation technique and 10 milliliter standard portions are used to test the aquifer water quality, coliform bacteria shall not be present in any one of the following:

a. More than ten percent of the tubes in all the samples examined in any one month.

b. Three or more tubes in more than one sample when less than twenty samples are examined in a month.

c. Three or more tubes in more than five percent of the samples when twenty or more samples are examined in a month.

3. When the multiple tube fermentation technique and 100 milliliter standard portions are used to test the aquifer water quality, coliform bacteria shall not be present in any one of the following:

a. More than sixty percent of the tubes in all samples examined in any one month.

b. Five tubes in more than one sample when fewer than five samples are examined in a month.

c. Five tubes in more than twenty percent of the samples when five or more samples are examined in a month.

E. Aquifer Water Quality Standards for Turbidity

1. One nephelometric turbidity unit as determined by a monthly average except that five or fewer nephelometric turbidity units may be allowed if it can be determined that the higher turbidity does not interfere with disinfection, prevent maintenance of effective disinfectant agents in water supply distribution systems, or interfere with microbiological determinations.

2. Five nephelometric turbidity units based on an average of two consecutive days.

APPENDIX B

Single Coordinate Latitude/Longitude Interpretation.

In order to locate a unique point on the earth's surface a system of locating is needed. The system must describe a position in both a north/south and east/west direction that is not duplicated anywhere else on earth. Latitude and longitude supplies the information needed to locate that unique point.

Latitude is used to determine the location north or south of the equator along lines called parallels. The equator is designated 0° latitude and the north and south poles are 90°N and 90°S respectively. The distance between degrees of latitude is constant anywhere on the earth. The measurements are written as degrees ($^{\circ}$), minutes (') and seconds ("). There are 60 seconds per minute and 60 minutes per degree. A typical latitude would look like the following: $33^{\circ}12'45"$ (read as thirty three degrees twelve minutes and forty five seconds). Arizona lies between 31 and 37° north latitude.

Longitude is used to determine the location east or west of the prime meridian, which runs through Greenwich, England and is considered zero longitude, and the International Dateline is the 180th meridian. All meridians converge at the poles, and so the distance between degrees varies depending on the latitude. Therefore, unlike degrees latitude, distance between degrees of longitude vary with location. The closer the point of interest is to the north or south pole the shorter the map distance will be between degrees. The nomenclature is written the same as latitude. A typical longitude would be written like the following: $111^{\circ}30'25"$ (read as one hundred eleven degrees thirty minutes and twenty five seconds. Arizona lies between 109 and 115° west longitude.

Useful tools for locating the latitude and longitude (lat/long) of a single coordinate are a 7.5 minute USGS topographic map (also called a quadrangle map) and a specially created projection grid designed for use with these maps (included as Figures 3 and 4). The grid is designed to compensate for changes in the distance between degrees longitude with location. A typical USGS topographic map has a name located in the upper right and lower left corners. The name is generally from a prominent town or feature located within the map boundaries. Figure 1 shows a close up of the right upper corner of a topographic map and indicates the location of the name, latitude, and longitude. Longitude is found along the top and bottom edges of the map and latitude is on the right and left edges. Tic marks in the form of a "plus" (+) are located on the map at 2'30" (2 1/2 minute) intervals (Figure 1) for use in locating the lat/long with Figures 3 and 4.

To determine the lat/long of a single coordinate you will need to purchase or use the correct 7.5 min topographic map which includes your point of interest. These maps can be found at various map stores in Arizona.

The following description refers to Figures 3 and 4. Figure 3 will be used to determine longitude and Figure 4 will be used for latitude.

1. Locate the point of interest on the map (a dot or x at the site will do). Figure 2b indicates the relative distance of plus or minus one second therefore it is in your best interests to be as accurate as possible. The use of site plans, landmarks, street maps, etc. to locate your point of interest is recommended.

2. Note the latitude and longitude written in the lower right corner of the map. If your facility is located more than 2'30" from that corner you can find the latitude and longitude written at 2'30" intervals along the edges of the map. These intervals do not include the degrees, only minutes or minutes and seconds. The degrees (from the right lower corner) are added to the minutes and seconds. Make a note of the measurements closest to your point of interest. Also note the degrees of latitude for use in step #5.

3. If your point of interest is further than 2'30" from the edge use the small tic marks located at 2'30" intervals on the map (see Figure 1). Draw lines connecting the tic marks that surround your point of interest to make a square. Then proceed to the next step.

<u>To Determine Longitude:</u>

4. On the top edge of a separate sheet of paper make a mark. Lay the paper on the map so that the mark you made lies on, either the right edge of the map or on the right edge of the square you drew between tic marks, (whichever applies) and the top edge of the paper crosses your facility east to west. Mark the spot where your facility is located on the edge of the paper.

5. Lift the paper and lay it on Figure 3 so that your first mark is on the zero line of figure 3 and the number along the right side corresponds to the degrees latitude found at the lower right corner of the map.

6. Take the longitude you wrote down in step 2 and add the minutes and seconds from step 5 to get your longitude. Arizona's longitude ranges from about 109 to almost 115 degrees, west.

<u>To Determine Latitude:</u>

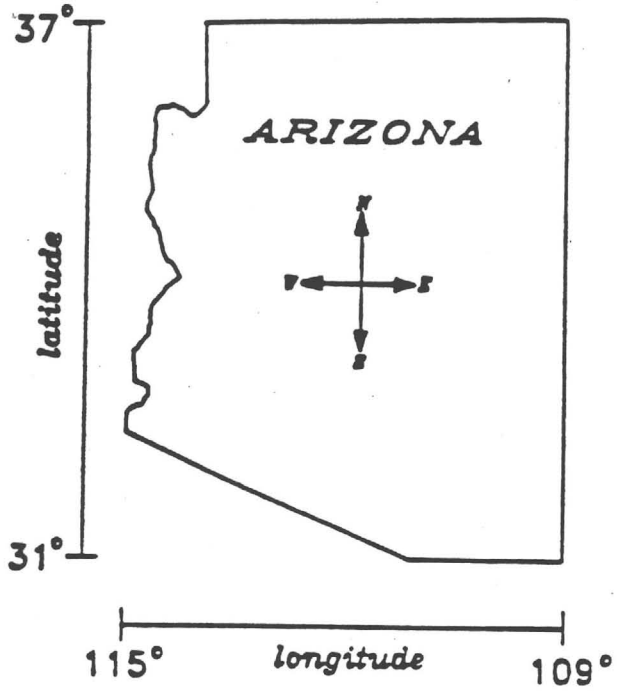
7. On the top edge of new clean sheet of paper make a mark. Lay the paper on the map so that the mark you made lies on, either the bottom edge of the map or on the bottom line of the square you drew between tic marks, (whichever applies) and the top edge of the paper crosses your facility north to south. Mark the spot where your facility is located on the top edge of the paper

8. Lift the paper and lay it on Figure 4 so that your first mark is on the zero point of the scale. Count the number of minutes and second between the two marks.

9. Take the latitude you wrote down in step 2 and add the minutes and seconds from step 8. Arizona's latitude ranges from 31 to 37 degrees , north.

Figure 2

2a.



LONGITUDE (x)

1 degree = 305,572 ft = 57.873 miles
1 minute = 5093 ft = 0.965 miles
1 second = 85 ft = 0.016 mile

1 mile = 0.02 degree
1 mile = 1.04 minute
1 mile = 62.20 seconds

LATITUDE (y)

1 degree = 364,120 ft = 68.962 miles
1 minute = 6,069 ft = 1.149 miles
1 second = 101 ft = 0.019 mile

1 mile = 0.01 degree
1 mile = 0.87 minute
1 mile = 52.20 seconds

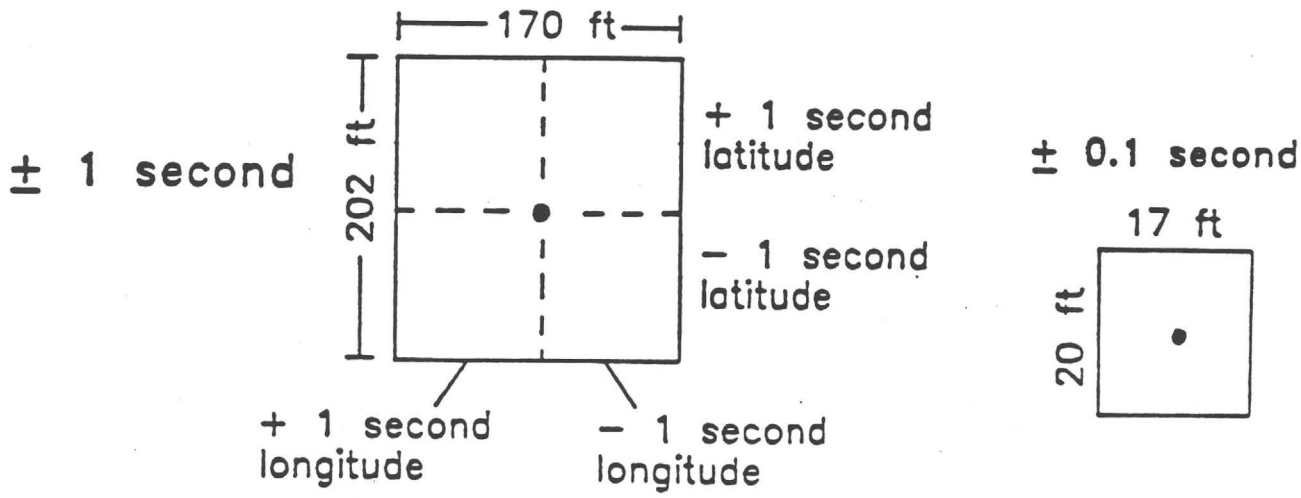
FORMAT:

LONGITUDE: ddd mm ss.s LATITUDE: dd mm ss.s
(tenth of a second preferred when available)

2b.

RANGE OF ACCURACY:

		latitude (y)	longitude (x)
EXAMPLE:	WELL LOCATION	34° 52' 30.0" /	109° 47' 30.0"



Close-up of NE corner of USGS Topographic Quadrangle

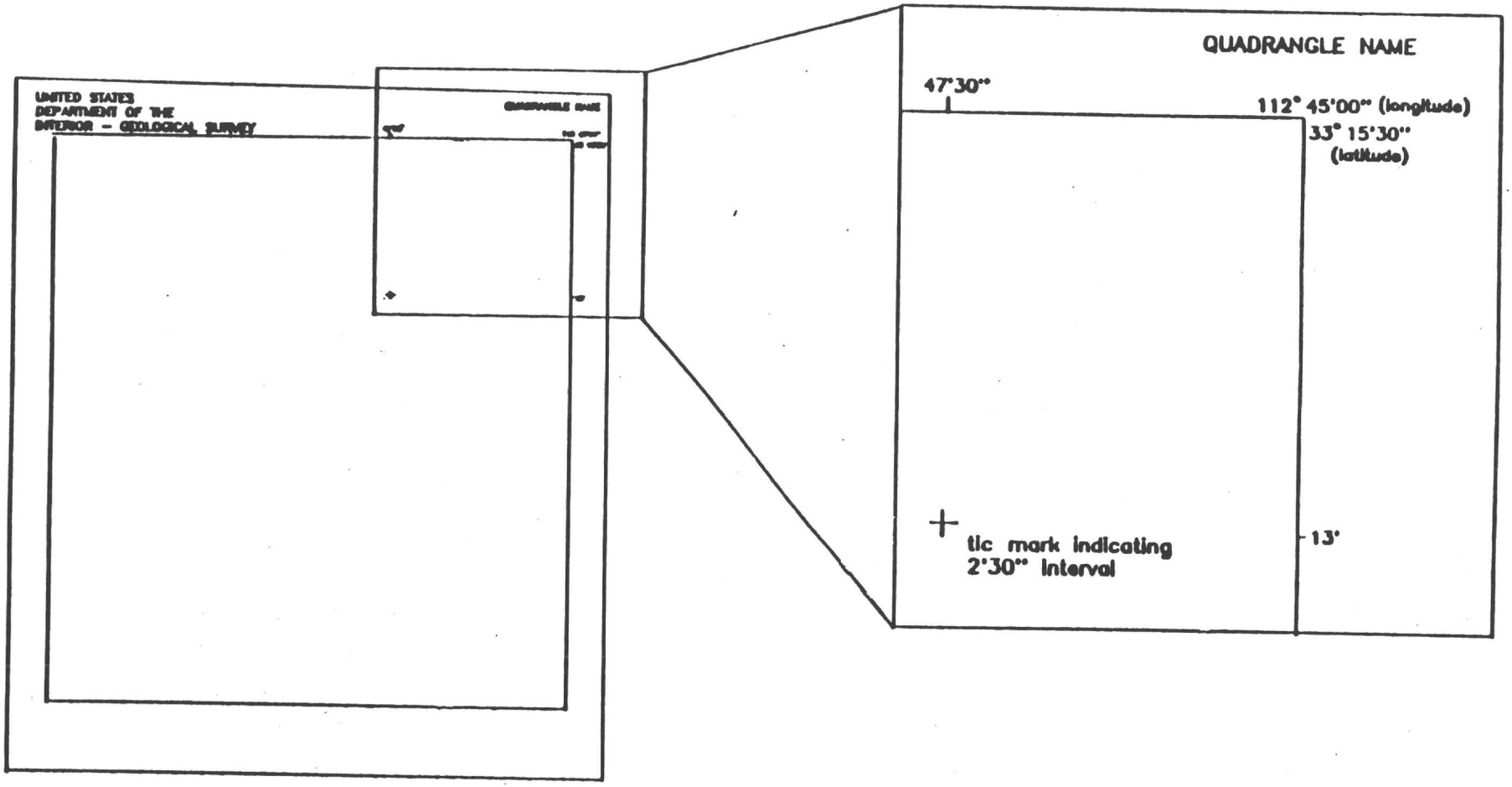


figure 1

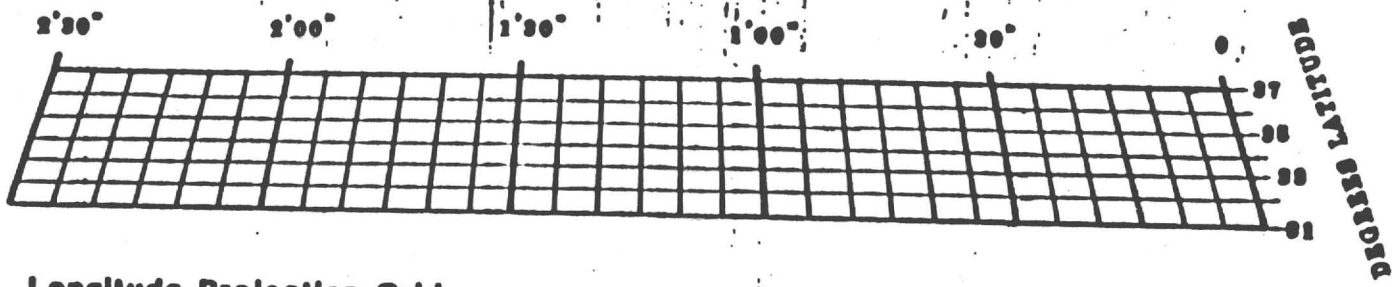


FIGURE 3: Longitude Projection Grid.

Use the degree line that corresponds to your latitude (see step 5)

FIGURE 4: Latitude Projection Grid. See step 7.

APPENDIX C

The following chemical list has been designed to allow a person to determine which of the rules, statues or regulations a chemical belongs under.

The columns are set up so as to provide information on a chemical. The first column is an alphabetical list of the chemicals listed under the following;

1. Clean Water Act Sections 307(a) and 311(b)
2. CERCLA 102 as 302.4 of 40Code of Federal Regulations
3. RCRA 40 Code of Federal Regulations Section 261.33(e)
4. United States Code 42 241(b)(4).
5. A.R.S. 49-243D.

Since many chemicals have more than one name, the first column contains both the primary and the secondary names. Information on the chemicals is provided under the primary name, therefore when referencing the list by other than a primary name the second column will refer you to the primary name. The second column also provides a list of secondary names which a chemical may be referred to. The third column is the Chemical Abstracts Service Registry Number (CASRN) this number is unique to the chemical and therefore can be used as a final method of identifying the chemical. The next 3 columns are considered Hazardous Substances under ARS 49-201.16, and are the Clean Water Act Sections 311(b), 307(a) and CERCLA 102 as 302.4 of 40 Code of Federal Regulations. The seventh column corresponds to 40 Code of Federal Regulations 261.33(e) and is regulated under the Resource Conservation Recovery Act. The eighth column is United States Code 42 241(b)(4). The last column is organic substances referenced in ARS 49-243(D).

If a "Y" (or yes) is given in any of the columns 4 through 9 it indicates the chemical is included on the list designated for that column similarly an "N" (or no) would mean that the chemical is not included on that list.

A "Y" in any of the columns 4 through 8 would mean the chemical is a hazardous substance as defined by A.R.S. 49-201.16.

A "Y" in the column marked A.R.S. 49-243D would mean the chemical is a chemical that requires the application of BADCT without regard to cost.

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS- 425 2430 97-243
ACENAPHTHENE	1,8-HYDROACENAPHTHYLENE; ETHYLENEAPHTHALENE	83329	N	Y	Y	N	N	N
ACENAPHTHYLENE	NONE	208968	N	Y	Y	N	N	N
ACETALDEHYDE	ETHANAL; ETHYLALDEHYDE	75070	Y	N	Y	N	N	N
ACETALDEHYDE, CHLORO-	CHLOROACETALDEHYDE	107200	N	N	Y	Y	N	Y
ACETALDEHYDE, TRICHLORO-	CHLORAL; TRICHLOROETHANAL	75876	N	N	Y	N	N	N
ACETAMIDE, N-(AMINOTHIOXOMETHYL)-	1-ACETYL-2-THIOUREA	591082	N	N	Y	Y	N	Y
ACETAMIDE, N-(4-ETHOXYPHENYL)-	PHENACETIN	62442	N	N	Y	N	Y	Y
ACETAMIDE, N-9H-FLUOREN-2-YL	2-ACETYLAMINOFLUORENE	53963	N	N	Y	N	Y	Y
ACETAMIDE, 2 FLUORO-	FLUOROACETAMIDE	640197	N	N	Y	Y	N	Y
ACETATE FAST ORANGE R	see 1-AMINO-2-METHYLANTHRAQUINONE							
ACETIC ACID	ETHANIC ACID; METHANE CARBOXYLIC ACID	64197	Y	N	Y	N	N	N
ACETIC ACID, ETHYL ESTER	ETHYL ACETATE; ACETIC ETHER	141786	N	N	Y	N	N	N
ACETIC ACID, FLUORO-, SODIUM SALT	FLUOROACETIC ACID, SODIUM SALT	62748	N	N	Y	Y	N	N
ACETIC ACID, LEAD SALT	LEAD ACETATE; SUGAR OF LEAD	301042	Y	N	Y	N	Y	N
ACETIC ACID, THALLIUM(1) SALT	THALLIUM ACETATE	563688	N	N	Y	N	N	N
ACETIC ANHYDRIDE	NONE	108247	Y	N	Y	N	N	N
ACETIC ETHER	see ACETIC ACID, ETHYL ESTER							
ACETIMIDIC ACID, N-[(METHYLCARBAMOYL)OXY] THIO-, METHYL ESTER	METHOMYL	16752775	N	N	Y	Y	N	Y
ACETONE	2-PROPANONE; DIMETHYLKETONE	67641	N	N	Y	N	N	N
ACETONE CYANOHYDRIN	2-METHYLLACTONITRILE, PROPANENITRILE,2-HYDROXY-2-METHYL	75865	Y	N	Y	N	N	N
ACETONITRILE	ETHANENITRILE	75058	N	N	Y	N	N	N
3-(alpha-ACETANYLBENZYL)-4-HYDROCOUMARIN AND SALTS	see WARFARIN							
ACETOPHENONE	ETHANONE, 1-PHENYL-; METHYL PHENYL KETONE	98862	N	N	Y	N	N	N
2-ACETLYAMINOFLUORENE	ACETAMIDE, N-9H-FLUOREN-2-YL	53963	N	N	Y	N	Y	Y
ACETYL BROMIDE	NONE	506967	Y	N	Y	N	N	N
ACETYL CHLORIDE	ETHANOYL CHLORIDE	75365	Y	N	Y	N	N	N
1-ACETYL-2-THIOUREA	ACETAMIDE, N-(AMINOTHIOXOMETHYL)-	591082	N	N	Y	Y	N	Y
ACRALDEHYDE	see ACROLIEN							
ACROLIEN	2-PROPENAL;ACRALDEHYDE; ACYLIC ALDEHYDE	107028	Y	Y	Y	Y	N	Y
ACRYLAMIDE	2-PROPENAMIDE	79061	N	N	Y	N	N	N
ACRYLIC ACID	2-PROPENOIC ACID	79107	N	N	Y	N	N	N
ACRYLON	see ACRYLONITRILE							
ACRYLONITRILE	2-PROPENENITRILE; ACRYLON; CARACRYL	107131	Y	Y	Y	N	Y	Y
ACYLIC ALDEHYDE	see ACROLIEN							
ADIPIC ACID	PIRIMOPHOSMETHYL	124049	Y	N	Y	N	N	N
ADRIAMYCIN	DOXORUBICIN; 14-HYDROXYDAUNOMYCIN; ADRIABLASTINE	23214928	N	N	N	N	Y	Y
ADRIABLASTINE	see ADRIAMYCIN							
AFLATOXINS	NONE	1162659	N	N	N	N	Y	Y
ALDICARB	PROPANAL, 2METHYL-2-(METHYLTHIO)-,O-[(METHYLAMINO) CARBONYL] OXIME	116063	N	N	Y	N	N	N
ALANINE, 3-[P-BIS(2-CHLOROETHYL)AMINO] PHENYL- L-	MELPHALAN; NITROGEN MUSTARD	148823	N	N	Y	N	Y	Y
ALDRIN	1,2,3,4,10-10-HEXACHLORO-1,4,4a,5,8,8a-HEXAHYDRO-1,4:5,8-ENDO, EXO-DIMETHANONAPHTHALENE	309002	Y	Y	Y	Y	N	Y
ALLYL ALCOHOL	2-PROPEN-1-OL; PROPENYLALCOHOL	107186	Y	N	Y	Y	N	Y
ALLYL CHLORIDE	3-CHLORO-1-PROPENE	107051	Y	N	Y	N	N	N
ALUMINUM PHOSPHIDE	NONE	20859738	N	N	Y	N	N	N
ALUIMINUM SULFATE	NONE	10043013	Y	N	Y	N	N	N
AMEROL	see AMITROLE							
2-AMINO-9	see 2-AMINO ANTHRAQUINONE							

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2-AMINOANTHRAQUINONE	2-AMINO-9; 10-ANTHTRACENEDIONE	117793	N	N	N	N	Y	Y
AMINOBENZENE	see ANILINE							
4-AMINOBIPHENYL	BIPHENYLINE; P-PHENYLANILINE; XENYLAMINE	92671	N	N	N	N	Y	Y
1-AMINO-2-METHYLANTHRAQUINONE	ACETATE FAST ORANGE R	82800	N	N	N	N	Y	Y
2-AMINO-1-METHYL BENZENE	O-TOLUIDINE	95534	N	N	Y	N	Y	N
4-AMINO-1-METHYL BENZENE	P-TOLUIDINE	106490	N	N	Y	N	N	Y
5-(AMINOMETHYL)-3-ISOAZOLOL	3(2H)-ISOXAZOLONE,5-(AMINOMETHYL)-	2763964	N	N	Y	Y	N	N
2-AMINO-5-NITROANIOLE	see 5-NITRO-o-ANISIDINE							
4-AMINOPYRIDINE	4-PYRIDINAMINE	504245	N	N	Y	Y	N	Y
AMITROLE	1H-1,2,4-TRIAZOL-3-AMINE; AMEROL	61825	N	N	Y	N	Y	N
AMMONIA	NONE	7664417	Y	N	Y	N	N	N
AMMONIUM ACETATE	NONE	631618	Y	N	Y	N	N	N
AMMONIUM BENZOATE	NONE	1863634	Y	N	Y	N	N	N
AMMONIUM BICARBONATE	NONE	1066337	Y	N	Y	N	N	N
AMMONIUM BICHROMATE	NONE	7789095	Y	N	Y	N	N	N
AMMONIUM BIFLUORIDE	NONE	1341497	Y	N	Y	N	N	N
AMMONIUM BISULFITE	NONE	10192300	Y	N	Y	N	N	N
AMMONIUM CARBAMATE	NONE	1111780	Y	N	Y	N	N	N
AMMONIM CARBONATE	NONE	506876	Y	N	Y	N	N	N
AMMONIUM CHLORIDE	NONE	1215029	Y	N	Y	N	N	N
AMMONIUM CHROMATE	NONE	7788989	Y	N	Y	N	N	N
AMMONIUM CITRATE, DIBASIC	NONE	3012655	Y	N	Y	N	N	N
AMMONIUM FLUOBORATE	NONE	133826830	Y	N	Y	N	N	N
AMMONIUM FLUORIDE	NONE	1212518	Y	N	Y	N	N	N
AMMONIUM HYDROXIDE	NONE	1336216	Y	N	Y	N	N	N
AMMONIUM N-NITROSOPHENYLHYDROXYLAMINE	see CUPFERRON							
AMMONIUM OXALATE	NONE	6009707	Y	N	Y	N	N	N
		5972736						
		14258492						
AMMONIUM PICRATE	PHENOL, 2,4,6-TRINITRO- AMMONIUM SALT	131748	N	N	Y	Y	N	Y
AMMONIUM SILICOFLUORIDE	NONE	16919190	Y	N	Y	N	N	N
AMMONIUM SULFAMATE	NONE	7773060	Y	N	Y	N	N	N
AMMONIUM SULFIDE	NONE	12135761	Y	N	Y	N	N	N
AMMONIUM SULFITE	NONE	10196040	Y	N	Y	N	N	N
AMMONIUM TARTRATE	NONE	14307438	Y	N	Y	N	N	N
		3164292						
AMMONIUM THIOCYANATE	NONE	1762954	Y	N	Y	N	N	N
AMMONIUM THIOSULFATE	NONE	7783188	Y	N	Y	N	N	N
AMMONIUM VANADATE	VANADIC ACID, AMMONIUM SALT	7803556	N	N	Y	N	N	N
AMYL ACETATE	NONE	628637	Y	N	Y	N	N	N
ISO-		123922						
SEC-		626380						
TERT-		625161						
ANILINE	BENZENAMINE; AMINOBENZENE	62533	Y	N	Y	N	N	N
o-ANISIDINE AND o-ANISIDINE HYDROCHLORIDE	2-METHOANILINE	92519	N	N	N	N	Y	Y
ANTHRACENE	NONE	120127	N	Y	Y	N	N	N
10-ANTHRACENEDIONE	see 2-AMINOANTRAQUINONE							
ANTIMONY	NONE	7440360	N	Y	Y	N	N	N
ANTIMONY AND COMPOUNDS	NONE		N	Y	Y	N	N	N
ANTIMONY PENTACHLORIDE	NONE	7647189	Y	N	Y	N	N	N
ANTIMONY POTASSIUM TARTRATE	NONE	28300745	Y	N	Y	N	N	N
ANTIMONY TR[illegible]OMIDE	NONE	7789619	Y	N	Y	N	N	N
ANTIMONY T[illegible]LORIDE	NONE	10025919	Y	N	Y	N	N	N

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ANTIMONY TRIFLOURIDE	NONE	7783564	Y	N	Y	N	N	N
ANTIMONY TRIOXIDE	NONE	1309644	Y	N	Y	N	N	N
ARAMITE	SULFUROUS ACID 2-(p-TERT-BUTYLPHENOXY)-1-METHYLETHYL-2-CHLOROETHYL ESTER	140578	N	N	N	N	Y	Y
AROCLOR 1016	POLYCHLORINATED BIPHENYLS; PCBs	12674112	Y	Y	Y	N	Y	N
AROCLOR 1221	POLYCHLORINATED BIPHENYLS; PCBs	11104282	Y	Y	Y	N	Y	N
AROCLOR 1232	POLYCHLORINATED BIPHENYLS; PCBs	11141165	Y	Y	Y	N	Y	N
AROCLOR 1242	POLYCHLORINATED BIPHENYLS; PCBs	53469219	Y	Y	Y	N	Y	N
AROCLOR 1248	POLYCHLORINATED BIPHENYLS; PCBs	12672296	Y	Y	Y	N	Y	N
AROCLOR 1254	POLYCHLORINATED BIPHENYLS; PCBs	11097691	Y	Y	Y	N	Y	N
AROCLOR 1260	POLYCHLORINATED BIPHENYLS; PCBs	11096825	Y	Y	Y	N	Y	N
ARSENIC	NONE	7440382	N	Y	Y	N	Y	N
ARSENIC ACID	NONE	1327522	N	N	Y	Y	Y	N
ARSENIC AND COMPOUNDS	NONE	7778394	N	Y	Y	N	N	N
ARSENIC DISULFIDE	NONE	1303328	Y	N	Y	N	N	N
ARSENIC(111) OXIDE	ARSENIC TRIOXIDE	1327533	Y	N	Y	Y	Y	N
ARSENIC(V) OXIDE	ARSENIC PENTOXIDE	1303282	Y	N	Y	Y	Y	N
ARSENIC PENTAOXIDE	ARSENIC (V) OXIDE	1303282	Y	N	Y	Y	Y	N
ARSENIC TRICHLORIDE	NONE	7784341	Y	N	Y	N	N	N
ARSENIC TRIOXIDE	ARSENIC (111) OXIDE	1327533	Y	N	Y	Y	Y	N
ARSENIC TRISULFIDE	NONE	1303339	Y	N	Y	N	N	N
ARSINE, DIETHYL-	DIETHYLARSINE	692422	N	N	Y	N	Y	Y
ASBESTOS	NONE	1332214	N	Y	Y	Y	N	N
AURAMINE	BENZENAMINE, 4,4'-CARBONIMIDOYLBIS(N,N-DOMETHYL	492808	N	N	Y	N	Y	N
AZASERINE	L-SERINE, DIAZOACETATE (ESTER)	115026	N	N	Y	N	N	N
AZATHIOPRINE	6-[(1-METHYL-4-NITRO-1H-IMIDAZOL-5-YL)THIO]-1H-PURINE		N	N	N	N	Y	Y
AZIRIDINE	ETHYLENIMINE	151564	N	N	Y	Y	N	Y
AZIRIDINE, 2-METHYL-	NONE		N	N	N	Y	N	N
AZIRINO (2',3':3,4)PYRROLO (1,2-a)INDOLE-4,7-DIONE, 6-AMINO-8-[((AMINOCARBONYL)OXY)METHYL]-1,1a,2,8a,8b-HEXAHYDRO-8a-METHOXY-5-METHYL	MITOMYCIN C	50077	N	N	Y	N	N	N
BARIUM CYANIDE	NONE	542621	Y	N	Y	N	N	N
BENZ(j)ACEANTHRYLENE,1,2-DIHYDRO-3-METHYL-	3-METHYLCHOLANTHRENE	66495	N	N	Y	N	N	N
BENZ(c)ACRIDINE	3,4-BENZACRIDINE	225514	N	N	Y	N	N	N
3,4-BENZACRIDINE	BENZ[c]ACRIDINE	225514	N	N	Y	N	N	N
BENZAL CHLORIDE	BENZENE, DICHLOROMETHYL-	98873	N	N	Y	N	N	N
BENZ[a]ANTHRACENE	1,2-BENZANTHRACENE, BENZO[a]ANTHRACENE	56553	Y	N	Y	N	N	N
1,2-BENZANTHRACENE	see BENZ[a]ANTHRACENE							
1,2-BENZANTHRACENE, 7,12-DIMETHYL-	7,12-DIMETHYLBENZ[a]ANTHRACENE	57976	N	N	Y	N	N	N
1-BENZAZINE	see PYRIDINE							
BENZENAMINE	see ANILINE							
BENZENAMINE, 4,4'-CARBONIMIDOYLBIS(N,N-DIMETHYL	see AURAMINE							
BENZENAMINE, 4-CHLORO	p-CHLOROANLINE							
BENZENAMINE, 4-CHLORO-2-METHYL-HYDROCHLORIDE	4-CHLORO-o-TOLUIDINE, HYDROCHLORIDE	106478	N	N	Y	Y	N	Y
BENZINAMINE,N,N-DIMETHYL-4-PHENYLAZO-	DIMETHYLAMINOAZOBENZENE	3165933	N	N	Y	N	N	N
BENZENAMINE, 4,4'-METHYLENEBIS(2-CHLORO-	4,4'-METHYLENEBIS(2CHLOROANILINE)	60117	N	N	Y	N	N	N
BENZENAMINE-2-METHYL-, HYDROCHLORIDE	o-TOLUIDINE HYDROCHLORIDE	101144	N	N	Y	N	N	N
BENZENAMINE, 2-METHYL- 5-NITRO	5-NITRO-o-TOLUIDINE	636215	N	N	Y	N	N	N
BENZENAMINE, 4-NITRO-	p-NITROANILINE	99558	N	N	Y	N	N	N
BENZENE	NONE	100016	N	N	Y	Y	N	Y
BENZENE, 1-BROMO-4-PHENOXY-	4-BROMOPHENYL PHENYLETHER	71432	Y	Y	Y	N	Y	Y
BENZENE, CHLORO-	see CHLOROBENZENE	101553	N	Y	Y	N	N	N

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BENZENE, CHLOROMETHYL-	see BENZYL CHLORIDE							
BENZENE, 1,2-DICHLORO-	1,2-DICHLOROBENZENE, o-DICHLOROBENZENE	95501	Y	Y	Y	N	N	N
BENZENE, 1,3-DICHLORO-	1,3-DICHLOROBENZENE, m-DICHLOROBENZENE	541731	N	Y	Y	N	N	N
BENZENE, 1,4-DICHLORO-	1,4-DICHLOROBENZENE, p-DICHLOROBENZENE	106467	Y	Y	Y	N	N	N
BENZENE, DICHLOROMETHYL-	see BENZAL CHLORIDE							
BENZENE, 2,4-DIISOCYANATOMETHYL	see TOLUENE DIISOCYANATE							
BENZENE, DIMETHYL m-, o- p-	see XYLENE (MIXED) m-, o-, p-							
BENZENE, HEXACHLORO-	see HEXACHLOROBENZENE							
BENZENE, HEXAHYDRO-	see CYCLOHEXANE							
BENZENE, HYDROXY-	see PHENOL							
BENZENE, METHYL-	see TOLUENE							
BENZENE, 1-METHYL-2,4-DINITRO-	2,4-DINITROTOLUENE	121142	Y	Y	Y	N	N	N
BENZENE, 1-METHYL-2,6-DINITRO-	2,6-DINITROTOLUENE	606202	Y	Y	Y	N	N	N
BENZENE, 1,2-METHYLENEDIOXY-4-ALLYL-	see SAFROLE							
BENZENE, 1,2-METHYLENEDIOXY-4-PROPENYL	see ISOSAFROLE							
BENZENE, 1,2-METHYLENEDIOXY-4-PROPYL	see DIHYDROSAFROLE							
BENZENE, 1-METHYL ETHYL-	see CUMENE							
BENZENE, NITRO-	see NITROBENZENE							
BENZENE, PENTACHLOR-	see PENTACHLOROBENZENE							
BENZENE, PENTACHLORONITRO-	see PENTACHLORONITROBENZENE							
BENZENE, 1,2,4,5-TETRACHLORO-	see 1,2,4,5,-TETRACHLOROBENZENE							
BENZENE, TRICHLOROMETHYL-	see BENZOTRICHLORIDE							
BENZENE,1,3,5-TRINITRO	sym-TRINITROBENZENE							
BENZENEACETIC ACID, 4-CHLORO-ALPHA-(4-CHLOROPHENYL)-ALPHA-HYDROXY-, ETHYL ESTER	see ETHYL 4,4'-DICHLOROBENZILATE	99354	N	N	Y	N	N	N
1,2-BENZENEDICARBOXYLIC ACID, ANHYDRIDE	see PHTHALIC ANHYDRIDE							
1,2-BENZENEDICARBOXYLIC ACID, [BIS(2-ETHYLHEXYL)] ESTER	see BIS (2-ETHYLHEXYL) PHTHALATE							
1,2-BENZENEDICARBOXYLIC ACID DIBUTYL ESTER	see n-BUTYL PHTHALTE							
1,2-BENZENEDOCARBOXYLIC ACID, DIETHYL ESTER	see DIETHYLPHTHALATE							
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER	see DIMETHYL PHTHALATE							
1,2-BENZENEDICARBOXYLIC ACID, DI-n-OCTYL ESTER	see DI-n-OCTYL PHTHALATE							
1,3-BENZENEDIOL	see RESORCINOL							
1,2 BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO-ETHYL	see EPINEPHRINE							
BENZENESULFONIC ACID CHLORIDE	see BENZENESULFONYL CHLORIDE							
BENZENESULFONYL CHLORIDE	BENZENESULFONIC ACID CHLORIDE							
BENZENETHIOL	THIOPHENOL	98099	N	N	Y	N	N	N
BENZIDINE	(1,1'-BIPHENYL)-4,4'-DIAMINE	108985	N	N	Y	Y	N	Y
1,2-BENZISOTHIAZOLIN-3-ONE-1,1-DIOXIDE, AND SALTS	see SACCHARIN AND SALTS	92875	N	Y	Y	N	Y	Y
BENZO[a]ANTHRACENE	see BENZ[a]ANTHRCENE							
BENZO[b]FLUORANTHENE	NONE	205992	N	Y	Y	N	Y	Y
BENZO(k)FLUORANTHENE	NONE	207089	N	Y	Y	N	N	N
BENZO[j,k]FLUORENE	see FLUORANTHENE							
BENZOIC ACID	NONE	65850	Y	N	Y	N	N	N
BENZONITRILE	NONE	100470	Y	N	Y	N	N	N
BENZO[ghi]PERYLENE	NONE	191242	N	Y	Y	N	N	N
BENZO[def]PHENANTHRENE	see PYRENE							
BENZO[a]PYRENE	3,4-BENZOPYRENE	50328	N	Y	Y	N	Y	Y
BENZO[b]PYRIDINE	see PYRIDINE							
3,4-BENZOPYRENE	see BENZO[a]PYRENE							
p-BENZOQUINONE	1,4-CYCLOHEXADIENEDIONE	106514	N	N	Y	N	N	N
BENZOTRICHLORIDE	BENZENE, TRICHLOROMETHYL-	98077	N	N	Y	N	Y	Y
BENZOYL CHL[illegible]E	NONE	98884	Y	N	Y	N	[illegible]	N

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1,2-BENZPHENANTHRENE	CHRYSENE	218019	N	Y	Y	N	N	N
BENZYL CHLORIDE	BENZENE, CHLOROMETHYL	100447	Y	N	Y	Y	N	Y
BERYLLIUM	BERYLLIUM DUST	7440417	N	Y	Y	N	Y	N
BERYLLIUM AND COMPOUNDS	NONE		N	Y	Y	N	Y	N
BERYLLIUM CHLORIDE	NONE	7787475	Y	N	Y	N	N	N
BERYLLIUM DUST	see BERYLLIUM							
BERYLLIUM FLUORIDE	NONE	7787497	Y	N	Y	N	N	N
BERYLLIUM NITRATE	NONE	13597994	Y	N	Y	N	N	N
alpha- BHC	NONE	319846	N	Y	Y	N	N	N
beta- BHC	NONE	319857	N	Y	Y	N	N	N
gamma- BHC	HEXACHLORCYCLOHEXANE (GAMMA ISOMER), LINDANE	58899	Y	Y	Y	N	Y	Y
delta-BHC	NONE	319868	N	Y	Y	N	N	N
2,2'-BIOXIRANE	1,2:3,4-DIEPOXYBUTANE	1464535	N	N	Y	N	N	N
(1,1'-BIPHENYL)-4,4'-DIAMINE	see BENZIDINE							
(1,1'-BIPHENYL)-4,4'-DIAMINE,3,3'-DIMETHOXY-	3,3'-DIMETHOXYBENZIDINE	92875	N	N	Y	N	N	N
(1,1'-BIPHENYL)-4,4'-DIAMINE,3,3'-DICHLORO-	3,3'-DICHLOROBENZIDINE	91941	N	Y	Y	N	N	N
(1,1'-BIPHENYL)-4,4'-DIAMINE,3,3'-DIMETHYL	3,3'-DIMETHYLBENZIDINE	119904	N	N	Y	N	N	N
BIPHENYLINE	see 4-AMINOBIPHENYL							
BIS(2-CHLOROETHOXY) METHANE	ETHANE, 1,1'-[METHYLENEBIS(OXY)] BIS(2-CHLORO-	119937	N	Y	Y	N	N	N
BIS(2-CHLOROETHYL) ETHER	DICHLOROETHYL ETHER, ETHANE, 1,1'-OXYBIS(2-CHLORO	111444	N	Y	Y	N	N	N
BIS(2-CHLOROISOPROPYL) ETHER	PROPANE, 2,2'-OXYBIS(2-CHLORO-	108601	N	Y	Y	N	N	N
BISCHLOROETHYL NITROSOUREA	NONE		N	N	N	N	Y	Y
BIS(CHLOROMETHYL) ETHER	METHANE, OXYBIS(CHLORO-	542881	N	N	Y	N	Y	Y
BIS(DIMETHYLTHIOCARBAMOYL) DISULFIDE	THIRAM	137268	N	N	Y	N	N	N
BIS (2-ETHYLHEXYL)PHTHALATE	1,2-BENZENEDICARBOXYLIC ACID, [BIS(2-ETHYLHEXYL)] ESTER	117817	N	Y	Y	N	N	N
BROMINE CYANIDE	CYANOGEN BROMIDE	506683	N	N	Y	N	N	N
BROMOACETONE	2-PROPANONE, 1-BROMO	598312	N	N	Y	Y	N	Y
BROMOFORM	METHANE, TRIBROMO	75252	N	Y	Y	N	N	N
4-BROMOPHENYL PHENYL ETHER	BENZENE, 1-BROMO-4-PHENOXY-	101553	N	Y	Y	N	N	N
BRUCINE	STRYCHNIDIN-10-ONE, 2,3- DIMETHOXY	357573	N	N	Y	N	Y	Y
BUTADIENE DIOXIDE	see DIEPOXYBUTANE							
1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO-	HEXACHLOROBUTADIENE	87683	N	Y	Y	N	N	N
1-BUTANAMINE, N,BUTYL-N-NITROSO-	N-NITROSODI-n-BUTYLAMINE	924163	N	N	Y	N	N	N
1-,4-BUTANEDIOL DIMETHYLSULFONATE (MYLERAN)	NONE		N	N	N	N	Y	N
BUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO] BENZENE	CHLORAMBUCIL	305033	N	N	Y	N	Y	Y
1-BUTANOL	n-BUTYL ALCOHOL	71363	N	N	Y	N	N	N
2-BUTANONE	METHYL ETHYL KETONE	78933	N	N	Y	N	N	N
2-BUTANONE PERPXIDE	METHYL ETHYL KETONE PEROXIDE	1338234	N	N	Y	N	N	N
2-BUTENAL	CROTONALDEHYDE	123739	Y	N	Y	N	N	N
2-BUTENE, 1,4-DICHLORO-	1,4-DICHLORO-2-BUTENE	4170303						
BUTTER YELLOW	see 4-DIMETHYLAMINOZOBENZENE	764410	N	N	Y	N	N	N
BUTYL ACETATE	NONE							
ISO-		123864	Y	N	Y	N	N	N
SEC-		110190						
TERT-		105464						
n-BUTYL ALCOHOL	see 1-BUTANOL	540885						
BUTYLAMINE	NONE							
ISO-		109739	Y	N	Y	N	N	N
SEC-		78819						
TERT-		513495						
BUTYLBENZYLPHTHALATE	NONE	13952846						
n-BUTYL PHTHALATE	1,2-BENZENEDICABOXYLIC ACID, DIBUTYL ESTER; DIBUTYL	85687	N	Y	Y	N	N	N
		84742	Y	Y	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
BUTYRIC ACID, ISO-	PHTHALATE; DI-n-BUTYL PHTHALATE							
	NONE	107926	Y	N	Y	N	N	N
CACODYLIC ACID	HYDROXYDIMETHYLARSINE OXIDE	79312						
CADMIUM	NONE	75605	N	N	Y	N	N	N
CADMIUM ACETATE	NONE	7440439	N	Y	Y	N	Y	N
CADMIUM AND COMPOUNDS	NONE	543908	Y	N	Y	N	N	N
CADMIUM BROMIDE	NONE		N	Y	Y	N	Y	N
CADMIUM CHLORIDE	NONE	7789426	Y	N	Y	N	N	N
CALCIUM ARSENATE	NONE	10108642	Y	N	Y	N	N	N
CALCIUM ARSENITE	NONE	7778441	Y	N	Y	N	N	N
CALCIUM CARBIDE	NONE	52740166	Y	N	Y	N	N	N
CALCIUM CHROMATE	CHROMIC ACID, CALCIUM SALT	75207	Y	N	Y	N	N	N
CALCIUM CYANIDE	NONE	13765190	Y	N	Y	N	N	N
CALCIUM DODECYLBENZENE SULFONATE	NONE	592018	Y	N	Y	N	N	N
CALCIUM HYPOCHLORITE	NONE	26264062	Y	N	Y	N	N	N
CAMPHENE, OCTACHLORO	TOXAPHENE	7778543	Y	N	Y	N	N	N
CAPTAN	NONE	8001352	Y	Y	Y	N	Y	Y
CARBAMIC ACID, ETHYL ESTER	ETHYLCARBAMATE (URETHAN)	133062	Y	N	Y	N	N	N
CARBAMIC ACID, METHYLNITROSO-ETHYL ESTER	N-NITROSO-N-METHYLURETHANE	51796	N	N	Y	N	N	N
CARBAMIDE, N-ETHYL-N-NITROSO-	N-NITROSO-N-ETHYLUREA	615532	N	N	Y	N	N	N
CARBAMIDE, N-METHYL-N-NITROSO-	N-NITROSO-N-METHYLUREA	759739	N	N	Y	N	N	N
CARABAMIDE, THIO	THIOUREA	684935	N	N	Y	N	N	N
CARACRYL	see ACRYLONITRILE	62566	N	N	Y	N	Y	N
CARBAMIMIDOSELENOIC ACID	SELENOUREA							
CARBAMOYL CHLORIDE, DIMETHYL-	DIMETHYLCARBAMOYLCHLORIDE	630104	N	N	Y	Y	N	Y
CARBARYL	NONE	79447	N	N	Y	N	N	N
CARBOFURAN	NONE	63252	Y	N	Y	N	N	Y
CARBOLIC ACID	see PHENOL	156362	Y	N	Y	N	N	N
CARBON BISULFIDE	CARBON DISULFIDE							
CARBON DISULFIDE	see CARBON BISULFIDE	75150	Y	N	Y	Y	N	Y
CARBONIC ACID, DITHALLIUM(1) SALT	THALLIUM(1) CARBONATE							
CARBONIC DICHLORIDE	see CARBONYL CHLORIDE	6533739	N	N	Y	N	N	N
CARBONOCHLORIDIC ACID, METHYL ESTER	METHYL CHLOROCARBONATE							
CARBONOXYFLUORIDE	CARBONYL FLUORIDE	79221	N	N	Y	N	N	N
CARBON TETRACHLORIDE	METHANE, TETRACHLORO-	353504	N	N	Y	N	N	N
CARBONYL CHLORIDE	PHOSGENE; CARBONIC DICHLORIDE	56235	Y	Y	Y	N	Y	Y
CARBONYL FLUORIDE	CARBON OXYFLUORIDE	75445	Y	N	Y	Y	N	Y
CERTAIN COMBINED CHEMOTHERAPY FOR LYMPHOMAS		353504	N	N	Y	N	N	N
CHLORAL	ACETALDEHYDE, TRICHLORO-; TRICHLOROETHANAL		N	N	N	N	Y	N
CHLORAMBUCIL	see BUTANOIC ACID, 4[BIS(2-CHLOROETHYL)AMINO] BENZENE	75876	N	N	Y	N	N	N
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES	NONE							
CHLORDANE	CHLORDANE, TECHNICAL; 4,7-METHANOINDAN,1,2,4,5,6,7,8,8' OCTACHLORO-3a,4,7,7a-TETRAHYDRO-	57749	N	Y	Y	N	N	N
CHLORDANE, TECHNICAL	see CHLORDANE	57749	Y	Y	Y	N	N	N
CHLORINATED BENZENES	NONE							
CHLORINATED ETHANES			N	Y	Y	N	N	N
CHLORINATED NAPHTHALENE			N	Y	Y	N	N	N
CHLORINATED PHENOLS			N	Y	Y	N	N	N
CHLORINE	NONE		N	Y	Y	N	N	N
CHLORINE CYANIDE	CYANOGEN CHLORIDE	7782505	Y	N	Y	N	N	N
CHLORNAPHAZINE	2-NAPHTHYLAMINE, N,N-BIS(2-CHLORO[illegible]YL)-	506774	Y	N	Y	N	N	N
CHLOROACETA[illegible]YDE	ACETALDEHYDE, CHLORO-	494031	N	N	Y	N	N	N
		107200	N	N	Y	Y	N	Y

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CHLOROALKYL ETHERS			N	Y	Y	N	N	N
2-CHLOROALLYL DIETHYLDITHIOCARBAMATE	see SULFALLATE							
p-CHLOROANILINE	see BENZENAMINE, 4-CHLORO							
CHLOROBENZENE	BENZENE, CHLORO-	108907	Y	Y	Y	N	N	N
4-CHLORO-m-CRESOL	p-CHLORO-m-CRESOL; PHENOL, 4-CHLORO-3-METHYL-	59507	N	Y	Y	N	N	N
p-CHLORO-m-CRESOL	see 4-CHLORO-m-CRESOL							
CHLORODIBROMOMETHANE	NONE	124481	N	Y	Y	N	N	N
1-CHLORO-2,3-EPOXYPROPANE	EPICHLOROHYDRIN; OXIRANE, 2-(CHLOROMETHYL)-	106898	Y	N	Y	N	N	N
CHLOROETHANE	NONE	75003	N	Y	Y	N	Y	Y
1-(2-CHLOROETHYL)-3-CYCLOHEXYL-1-NITROSOUREA	CCNU		N	N	N	N	Y	Y
2-CHLOROETHYL VINYL ETHER	ETHANE, 2-CHLOROETHOXY	110758	N	Y	Y	N	N	N
CHLOROFORM	METHANE TRICHLORO-	67663	Y	Y	Y	N	Y	Y
CHLOROMETHYL METHYL	see BIS(CHLOROMETHYL) ETHER							
CHLOROMETHYL METHYL ETHER	METHANE, CHLOROMETHOXY; BIS(CHLOROMETHYL) ETHER	107302	N	N	Y	N	N	N
beta-CHLORONAPHTHALENE	2-CHLORONAPHTHALENE; NAPHTHALENE, 2-CHLORO-	91587	N	Y	Y	N	N	N
2-CHOLORNAPHTHALENE	see beta-CHLORONAPHTHALENE							
4-CHLORO-o-PHENYLENEDIAMINE	NONE		N	N	N	N	Y	N
2-CHLOROPHENOL	o-CHOLOROPHENOL; PHENOL, 2-CHLORO-	95578	N	Y	Y	N	N	N
o-CHLOROPHENOL	see 2-CHLOROPHENOL							
4-CHLOROPHENYL PHENYL ETHER	NONE	7005723	N	Y	Y	N	N	N
1-(o-CHLOROPHENYL) THIOUREA	THIOUREA, (2-CHLOROPHENYL)-	5344821	N	N	Y	Y	N	Y
3-CHLORO-1-PROPENE	see ALLYL CHLORIDE							
3-CHLOROPROPIONITRILE	PROPANENITRILE, 2-CHLORO	542767	N	N	Y	Y	N	Y
CHLOROSULFONIC ACID	NONE	7790945	Y	N	Y	N	N	N
4-CHLORO-o-TOLUIDINE, HYDROCHLORIDE	see BENZENAMINE, 4-CHLORO-2-METHYL-HYDROCHLORIDE							
CHLORPYRIFOS	NONE	2921882	Y	N	Y	N	N	N
CHROMIC ACETATE	NONE	1066304	Y	N	Y	N	N	N
CHROMIC ACID	NONE	11115745 7738945	Y	N	Y	N	N	N
CHROMIC ACID, CALCIUM SALT	see CALCIUM CHROMATE							
CHROMIC SULFATE	NONE	10101538	Y	N	Y	N	N	N
CHROMIUM	NONE	7440473	N	Y	Y	N	Y	N
CHROMIUM AND COMPOUNDS	NONE		N	Y	Y	N	Y	N
CHROMOUS CHLORIDE	NONE	10049055	Y	N	Y	N	N	N
CHRYSENE	1,2-BENZPHENANTHRENE	218019	N	Y	Y	N	N	N
COBALTOUS BROMIDE	NONE	7789437	Y	N	Y	N	N	N
COBALTOUS FORMATE	NONE	544183	Y	N	Y	N	N	N
COBALTOUS SULFAMATE	NONE	14017415	Y	N	Y	N	N	N
COKE OVEN EMISSIONS			N	N	Y	N	Y	Y
CONJUGATED ESTROGENS	NONE		N	N	N	N	Y	Y
COPPER	NONE	7440508	N	Y	Y	N	N	N
COPPER AND COMPOUNDS			N	Y	Y	N	N	N
COPPER CYANIDE	NONE	544923	N	N	Y	N	N	N
COUMAPHOS	NONE	56724	Y	N	Y	N	N	N
CREOSOTE	NONE	8001589	N	N	Y	N	N	N
p-CRESIDINE	5-METHYL-o-ANISIDINE	120718	N	N	N	N	Y	Y
CRESOL(s)	see CRESYLIC ACID							
m-								
o-								
p-								
CRESYLIC ACID	CRESOL(s)	1319773	Y	N	Y	N	N	N
m-		108394						
o-		95487						

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p-CROTONALDEHYDE	see 2-BUTENAL	106445						
CUMENE	BENZENE, 1-METHYLETHYL-; ISOPROPYLBENZENE	98828	N	N	Y	N	N	N
CUPFERRON	AMMONIUM N-NITROSOPHENYLHYDROXYLAMINE	135206	N	N	N	N	Y	Y
CUPRIC ACETATE	NONE	142712	Y	N	Y	N	N	N
CUPRIC ACETOARSENITE	NONE	12002038	Y	N	Y	N	N	N
CUPRIC CHLORIDE	NONE	7447394	Y	N	Y	N	N	N
CUPRIC NITRATE	NONE	3251238	Y	N	Y	N	N	N
CUPRIC OXALATE	NONE	5893663	Y	N	Y	N	N	N
CUPRIC SULFATE	NONE	7758987	Y	N	Y	N	N	N
CUPRIC SULFATE AMMONIATED	NONE	10380297	Y	N	Y	N	N	N
CUPRIC TARTRATE	NONE	815827	Y	N	Y	N	N	N
CYANIDES	NONE	151508	N	Y	Y	N	N	N
		143339						
CYANIDES (SOLUBLE CYANIDE SALTS)	NOT ELSEWHERE SPECIFIED	57125	N	N	Y	N	N	N
CYANOGEN	NONE	460195	N	N	Y	Y	N	Y
CYANOGEN BROMIDE	see BROMINE CYANIDE							
CYANOGEN CHLORIDE	see CHLORINE CYANIDE							
CYCASIN	METHYLAZOXYMETHANOL BETA-d-GLUCOIDE	14901087	N	N	N	N	Y	Y
1,4-CYCLOHEXADIENEDIONE	p-BENZOQUINONE	106514	N	N	Y	N	N	N
CYCLOHEXANE	BENZENE, HEXAHYDRO-	110827	Y	N	Y	N	N	N
CYCLOHEXANONE	NONE	108941	N	N	Y	N	N	N
1,3-CYCLOPENTADIENE,1,2,3,4,5,5-HEXACHLORO-	HEXACHLOROCYCLOPENTADIENE; PERCHLOROCYCLOPENTADIENE	77474	Y	Y	Y	N	N	N
CYCLOPHOSPHAMIDE	2H-1,3,2-OXAZAPHOSPHORINE,2-[BIS(2-CHLOROETHYL) AMINO] TETRAHYDRO-2-OXIDE	50180	N	N	Y	N	Y	Y
		94111						
2,4-D ACID	2,4-DICHLOROPHENOXYACETIC ACID, SALTS AND ESTERS; 2,4-D SALTS AND ESTERS	94757	Y	N	Y	N	N	N
2,4-D ESTERS	NONE	94791	Y	N	Y	N	N	N
		94804						
		1320189						
		1928387						
		1928616						
		1929733						
		2971382						
		53467111						
		25168267						
2,4-D-SALTS AND ESTERS	see 2,4-D ACID							
DACARBAZINE	NONE		N	N	N	N	Y	Y
DAUNOMYCIN	5,12-NAPHTHACENEDIONE,(8S-CIS)-8-ACETYL-10-[3-AMINO-2,3,6-TRIDEOXY-ALPHA-L-LYOXY-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-	20830813	N	N	Y	N	N	N
DDD	see DICHLORODIPHENYL DICHLOROETHANE							
4,4'-DDD	see DICHLORODIPHENYL DICHLOROETHANE							
DDE	4,4'DDE							
4,4'-DDE	see DDE	72559	N	Y	Y	N	N	N
DDT	see DICHLORODIPHENYL TRICHLOROETHANE							
4,4'-DDT	see DICHLORODIPHENYL TRICHLOROETHANE							
DDT AND METABOLITES			N	Y	Y	N	Y	N
DECACHLOROOCTAHYDRO-1,3,4-METHENO-2H-CYCLOBUTA [c,d]PENTALEN-2-ONE	see KEPONE							
DECHLORANE	see MIREX							
DIALLATE	S-(2,3-DICHLOROALLYL)DIISOPROPYL CARBAMATE	2303164	N	N	Y	N	[illegible]	N

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DIAMINE	HYDRAZINE	302012	N	N	Y	N	Y	Y
DIAMINOTOLUENE	TOLUENEDIAMINE	95807	N	N	Y	N	N	N
		25376458						
		496720						
		823405						
2,4-DIAMINOANISOLE SULFATE	NONE		N	N	N	N	Y	N
4,4'-DIAMINODIPHENYLMETHANE	4,4'-METHYLENEDIANILINE AND ITS DICHLORIDE	101779	N	N	N	N	Y	N
DIAMINOETHANE	see ETHYLENDIAMINE							N
2,4-DIAMINOTOLUENE	TOLUENE, 2,4-DIAMINO	95807	N	N	N	N	Y	Y
DIAZINON	NONE	5333415	Y	N	Y	N	N	N
DIBENZ (a,h) ACRIDINE	1,2-5,6-DIBENZACRIDINE		N	N	N	N	Y	Y
DIBENZ (a,j) ACRIDINE			N	N	N	N	Y	Y
DIBENZ[a,h] ANTHRACENE	1,2:5,6-DIBENZANTHRACENE; DIBENZO[a,h]ANTHRACENE;	53703	N	Y	Y	N	Y	Y
DIBENZ [a,i] PYRENE	1,2:7,8-DIBENZOPYRENE		N	N	Y	N	Y	Y
1,2:5,6-DIBENZACRIDINE	see DIBENZ[a,h]ACRIDINE							
1,2:5,6-DIBENZANTHRACENE	see DIBENZ[a,h]ANTHRACENE							
1,2:7,8-DIBENZOPYRENE	see DIBENZ[a,i]PYRENE							
DIBENZO[a,h] ANTHRACENE	see DIBENZ[a,h]ANTHRACENE							
DIBENZO(a,i)PYRENE			N	N	N	N	Y	Y
7H- DIBENZO (c,g) CARBAZOLE			N	N	N	N	Y	Y
DIBENZO(a,i) PYRENE			N	N	N	N	Y	Y
1,2-DIBROMOMETHANE	ETHYLENE BROMIDE; EDB		N	N	N	N	Y	Y
1,2-DIBROMO-3-CHLOROPROPANE	PROPANE, 1,2-DIBROMO-3-CHLORO-; DBCP; DBCP	96128	N	N	Y	N	Y	Y
1,2-DIBROMO-2,2-DICHLORO-ETHYLDIMETHYLPHOSPHATE	see MUSTARD GAS							
DIBUTYL PHTHALATE	see n-BUTYL PHTHALATE							
DI-n-BUTYL PHTHALATE	see n-BUTYL PHTHALATE							
DICAMBA	NONE	1918009	Y	N	Y	N	N	N
DICHLOBENIL	NONE	1194656	Y	N	Y	N	N	N
DICHLONE	NONE	117806	Y	N	Y	N	N	N
S-(2,3-DICHLOROALLYL)DIISOPROPYLTHIOCARBAMATE	see DIALLATE							
3,5-DICHLORO-N-(1,1-DIMETHYL-2-PROPYNYL) BENZAMIDE	see PRONAMIDE							
DICHLOROBENZENE (MIXED)	NONE	25321226	Y	N	Y	N	N	N
1,2-DICHLOROBENZENE	see BENZENE,1,2-DICHLORO-							
1,3-DICHLOROBENZENE	see BENZENE, 1,3-DICHLORO-							
1,4-DICHLOROBENZENE	see BENZENE, 1,4-DICHLORO-							
m-DICHLOROBENZENE	see BENZENE, 1,3-DICHLORO-							
o-DICHLOROBENZENE	see BENZENE, 1,2-DICHLORO-							
p-DICHLOROBENZENE	see BENZENE, 1,4-DOCHLORO-							
DICHLOROBENZIDINE	NONE		N	Y	Y	N	N	N
3,3'-DICHLOROBENZIDINE	(1,1'-BIPHENYL)-4,4'DIAMINE,3,3'DICHLORO-	91941	N	Y	Y	N	Y	Y
DICHLORORBROMOMETHANE	NONE	75274	N	Y	Y	N	N	N
1,4-DICHLORO-2-BUTENE	see 2-BUTENE,1,4-DICHLORO							
DICHLORODIFLUOROMETHANE	METHANE, DICHLORODIFLUORO-	75718	N	N	Y	N	N	N
DICHLORODIPHENYL DICHLOROETHANE	DDD; 4,4'-DDD; TDE	72548	Y	Y	Y	N	N	N
DICHLORODIPHENYL TRICHLOROETHANE	DDT; 4,4' DDT	50293	Y	Y	Y	N	Y	Y
1,1-DICHLOROETHANE	ETHANE, 1,1-DICHLORO; ETHYLIDENE DICHLORIDE	75343	N	Y	Y	N	N	N
1,2-DICHLOROETHANE	ETHYLENE DICHLORIDE; ETHANE, 1,2-DICHLORO-	107062	N	N	N	N	Y	Y
1,1-DICHLOROETHYLENE	ETHENE, 1,1-DICHLORO; VINYLIDENE CHLORIDE	75354	Y	Y	Y	N	N	N
1,2-TRANS-DICHLOROETHYLENE	ETHENE, TRANS-1,2-DICHLORO	156605	N	Y	Y	N	N	N
DICHLOROETHYL ETHER	see BIS(2-CHLOROETHYL) ETHER							
2,4-DICHLORO-1(4-NITROPHENOXY) BENZENE	see NITROFEN							
2,4-DICHLOROPHENOL	PHENOL, 2,4-DICHLORO	120832	N	Y	Y	N	N	N

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2,6-DICHLOROPHENOL	PHENOL, 2,6-DICHLORO	87650	N	N	Y	N	N	N
2,4-DICHLOROPHENOXYACETIC ACID, SALTS AND ESTERS	see 2,4-D ACID							
DICHLOROPHENYLARSINE	PHENYL DICHLOROARSINE	696286	N	N	Y	Y	N	Y
'3-(3,4-DICHLOROPHENYL)1,1-DIMETHYUREA	see DIURON							
DICHLOROPROPANE	NONE	26638197	Y	N	Y	N	N	N
1,1-DICHLOROPROPANE		78999						
1,3-DICHLOROPROPANE		142289						
1,2- DICHLOROPROPANE	PROPYLENE DICHLORIDE	78875	Y	Y	Y	N	N	N
DICHLOROPROPENE-DICHLOROPROPENE MIXTURE		8003198	Y	N	Y	N	N	N
DICHLOROPROPENE(S)	NONE	26952238	Y	N	Y	N	N	N
2,3-DICHLOROPROPENE (ISOMERS)		78886						
1,3-DICHLOROPROPENE	PROPENE, 1,3-DICHLORO	542756	Y	Y	Y	N	N	N
2,2-DICHLOROPROPIONIC ACID SODIUM SALT	DPA; BASFAPON	75990	Y	N	Y	N	N	N
DICHLOROVINYLDIMETHYLPHOSPHATE	see DICHLORVOS							
DICHLORVOS	DICHLOROVINYLDIMETHYLPHOSPHATE	62737	Y	N	Y	N	N	N
DIELDRIN	1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4a,5,6,7,8,8a-OCTAHYDRO-ENDO, EXO-1,4:5,8-DIMETHANONAPHTHALENE	60571	Y	Y	Y	Y	N	Y
DIEPOXYBUTANE	BUTADIENE DIOXIDE; DEB	1464535	N	N	N	N	Y	Y
1,2:3,4-DIEPOXYBUTANE	2,2'-BIOXIRANE	1464535	N	N	Y	N	N	N
DIETHYLAMINE	NONE	109897	Y	N	Y	N	N	N
DIETHYLARSINE	see ARSINE DIETHYL							
1,4-DIETHYLENE DIOXIDE	1,4-DIOXANE	123911	N	N	Y	N	N	N
N-N'DIETHYLHYDRAZINE	HYDRAZINE, 1,2-DIETHYL-	1615801	N	N	Y	N	N	N
O,O-DIETHYL-S-[2-(ETHYLTHIO)ETHYL] PHOPHORODITHIOATE	see DISULFOTON							
O,O'-DIETHYL S-METHYL DITHIOPHOSPHATE	PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-METHYLESTER	3288582	N	N	Y	N	N	N
DIETHYL-p-NITROPHENYL PHOSPHATE	PHOSPHORIC ACID, DIETHYL p-NITROPHENYL ESTER	311455	N	N	Y	Y	N	Y
DIETHYL PHTHALATE	1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER	84662	N	Y	Y	N	N	N
O,O-DIETHYL O-PYRAZINYL PHOSPHOROTHIOATE	PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-PYRAZINYL ESTER	297972	N	N	Y	Y	N	Y
DIETHYLSTILBESTROL	4,4'STILBENEDIOL,ALPHA,ALPHA'-DIETHYL-	56531	N	N	Y	N	Y	Y
DI(2-ETHYLHEXYL) PHTHALATE	DI-OCTYLPHTHATE; DOP; DEHP	117817	N	N	N	N	Y	N
DIETHYL SULFATE	NONE		N	N	N	N	Y	N
1,2-DIHYDRO-3,6-PYRIDAZINEDIONE	see MALEIC HYDRAZIDE							
DIHYDROSAFROLE	BENZENE, 1,2-METHYLENEDIOXY-4-PROPYL	94586	N	N	Y	N	N	N
DIISOPROPYL FLUOROPHOSPHATE	PHOSPHOROFLUORIDIC ACID, BIS(1-METHYLETHYL)ESTER	55914	N	N	Y	Y	N	Y
DIMETHOATE	PHOSPHORODITHIOIC ACID, O,O-DIMETHYL S-[2(METHYLAMINO)-2-OXOETHYL] ESTER	60515	N	N	Y	Y	N	Y
3,3'-DIMETHOXYBENZIDINE	(1,1'-BIPHENYL)-4,4'DIAMINE,3,3'DIMETHOXY	119904	N	N	Y	N	Y	Y
DIMETHYLAMINE	METHANAMINE, N-METHYL-	124403	Y	N	Y	N	N	N
DIMETHYLAMINOAZOBENZENE	see BENZENAMINE, N,N-DIMETHYL-4-PHENYLAZO-							
4-DIMETHYLAMINOAZOBENZENE	METHYL YELLOW; BUTTER YELLOW	60117	N	N	N	N	Y	Y
7,12-DIMETHYLBENZ[a]ANTHRACENE	see 1,2-BENZANTHRACENE, 7,12-DIMETHYL-	57976						
3,3'-DIMETHYLBENZIDINE	(1,1'BIPHENYL)-4,4'-DIAMINE,3,3'-DIMETHYL	119937	N	N	Y	N	Y	Y
alpha,alpha-DIMETHYLBENZLHYDROPEROXIDE	HYDROPEROXIDE, 1-METHYL- 1-PHENYLETHYL-	80159	N	N	Y	N	N	N
3,3-DIMETHYLL-1-(METHYLTHIO)-2-[(METHYLAMINO) CARBONYL]OXIME	see THIOFANOX							
DIMETHYLCARBAMOYLCHLORIDE	see CARBOMOYL CHLORIDE, DIMETHYL							
1,1-DIMETHYLHYDRAZINE	HYDRAZINE,1,1-DIMETHYL-	57147	N	N	Y	N	Y	Y
1,2-DIMETHYLHYDRAZINE	HYDRAZINE,1,2-DIMETHYL-	540738	N	N	Y	N	N	N
DIMETHYLKETONE	see ACETONE							
O,O-DIMETHYL O-p-NITROPHENYL PHOSPHOROTHIOATE	METHYL PARATHION	298000	Y	N	Y	Y	N	Y
DIMETHYLNITROSAMINE	N-NITROSODIMETHYLAMINE	62759	N	Y	Y	Y	Y	Y
DIMETHYL PARATHION	see METHYL PARATHION							

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
ALPHA, ALPHA- DIMETHYLPHENETHYLAMINE	ETHANAMINE, 1,1-DIMETHYL-2PHENYL	122098	N	N	Y	Y	N	Y
2,4-DIMETHYLPHENOL	PHENOL, 2,4-DIMETHYL; 2,4-XYLENOL	105679	N	Y	Y	N	N	N
DIMETHYL PHTHALATE	1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER	131113	N	Y	Y	N	N	N
DIMETHYL SULFATE	SULFURIC ACID, DIMETHYL ESTER	7781	N	N	Y	N	Y	Y
DINITROBENZENE (MIXED)	NONE	25154545	Y	N	Y	N	N	N
m-		99650						
o-		528290						
p-		100254						
4,6-DINITRO-o CRESOL AND SALTS	PHENOL, 2,4-DINITRO-6-METHYL- AND SALTS	534521	N	Y	Y	Y	N	Y
4,6-DINTRO-o-CYCLOHEXYLPHENOL	PHENOL, 2-CYCLOHEXYL-4,6-DINITRO-	131895	N	N	Y	Y	N	Y
DINITROPHENOL	NONE	25550587	Y	N	Y	N	N	N
2,5-		329715						
2,6-		573568						
2,4-DINITROPHENOL	PHENOL, 2,4-DINITRO-	51285	Y	Y	Y	Y	N	Y
DINITROTOLUENE	NONE	25321146	Y	Y	Y	N	N	N
3,4-		610399						
2,4-DINITROTOLUENE	see BENZENE, 1-METHYL-2,6-DINITRO-							
2,6-DINITROTOLUENE	see BENZENE, 1-METHYL-2,6-DINITRO-							
DINOSEB	PHENOL, 2,4-DINITRO-6-(1-METHYLPROPYL)-	88857	N	N	Y	Y	N	Y
DI-OCTYLPHTHATE	see DI(2-ETHYLHEXLY) PHTHATE							
DI-n-OCTYL PHTHALATE	1,2-BENZENEDICARBOXYLIC ACID, DI-N-OCTYL ESTER	117840	N	Y	Y	N	N	N
1,4-DIOXANE	see 1,4-DIETHYLENE DIOXIDE							
5,5-DIPHENYL HYDRANTOIN	see PHENYTOIN							
DIPHENYLHYDRAZINE	NONE		N	Y	Y	N	N	N
1,2-DIPHENYLHYDRAZINE	HYDRAZINE, 1,2-DIPHENYL; HYDRAZOBENZENE	122667	N	Y	Y	N	N	N
DIPHOSPHORAMIDE,OCTAMETHYL-	OCTAMETHYLPYROPHOS-PHORAMIDE	152169	N	N	Y	Y	N	Y
DIPROPYLAMINE	1-PROPANAMINE, N-PROPYL-	142847	N	N	Y	N	N	N
DI-n-PROPYLNITROSAMINE	N-NITROSODI-n-PROPYLAMINE	621647	N	Y	Y	N	N	N
DIQUAT		85007	Y	N	Y	N	N	N
		2764729						
DIRECT BLACK 38	NONE		N	N	N	N	Y	Y
DIRECT BLUE 6	SODIUMDIPHENYL-4,4'-BIS-AZO-2",8"-AMINO-1"-NAPTHOL-3",6"DISULFONATE		N	N	N	N	Y	Y
DISULFOTON	O,O-DETHYL-S-[2-(ETHYLTHIO)ETHYL]PHOSPHORODITHIOATE	298044	Y	N	Y	Y	N	Y
2,4-DITHIOBIURET	THIOMIDODICARBONIC DIAMIDE	541537	N	N	Y	Y	N	Y
DITHIOPYROPHOSPHORIC ACID, TETRAETHYL ESTER	TETRAETHYLDITHIOPYROPHOSPHATE	3689245	N	N	Y	Y	N	Y
DIURON	3-(3,4-DICHLOROPHENYL)-1,1-DIMETHYUREA	330541	Y	N	Y	N	N	N
DODECYLBENZENESULFONIC ACID	NONE	27176870	Y	N	Y	N	N	N
DOXORUBICIN	see ADRIAMYCIN							
ENDOSULFAN	5-NORBORNENE-2,3-DIMETHANOL,1,4,5,6,7,7-HEXACHLORO, CYCLIC SULFITE	115297	Y	Y	Y	Y	N	Y
alpha-ENDOSULFAN	NONE	959988	N	Y	Y	N	N	N
beta-ENDOSULFAN	NONE	33213659	N	Y	Y	N	N	N
ENDOSULFAN AND METABOLITES			N	Y	Y	N	N	N
ENDOSULFAN SULFATE	NONE	1031078	N	Y	Y	N	N	N
ENDOTHALL	7-OXABICYCLO[2,2,1] HEPTANE-2,3-DICARBOXYLIC ACID	145733	N	N	Y	Y	N	Y
ENDRIN	1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4a,5,6,7,8,8a-OCTAHYDRO-ENDO, ENDO-1,4:5,8-DIMETHANONAPHTHALENE	72208	Y	Y	Y	Y	N	Y
ENDRIN ALDEHYDE	NONE	7421934	N	Y	Y	N	N	N
ENDRIN AND METABOLITIES	NONE		N	Y	Y	N	N	N
EPICHLOROHYDRIN	1-CHLORO-2,3-EPOXYPROPANE; OXIRANE, 2-(CHLOROMETHYL)-	106898	Y	N	Y	N	Y	Y
EPINEPHRINE	1,2-BENZENEDIOL, 4-[1-HYDOXY -2-(METHYLAMINO_ETHYL]-	51434	N	N	Y	Y	N	Y
ESTRADIOL 17B	NOT CONJUGATED ESTROGEN		N	N	N	N	Y	Y

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
ESTRONE	NOT CONJUGATED ESTROGEN		N	N	N	N	Y	Y
ETHANAL	ACETALDEHYDE; ETHYLALDEHYDE	75070	Y	N	Y	N	N	N
ETHANAMINE, 1,1DIMETHYL-2PHENYL	see alpha,alpha-DIMETHYLPHENETHYLAMINE							
ETHANAMINE,N-ETHYL-N-NITROSO-	see N-NITROSODIETHYLAMINE							
1,2-ETHANEDIAMINE	see ETHYLENEDIAMINE							
ETHANE, 1,2-DIBROMO-	see ETHYLENE DIBROMIDE							
ETHANE, 1,1-DICHLORO-	see 1,1-DICHLOROETHANE							
ETHANE, 1,2-DICHLORO-	see 1,2-DICHLOROETHANE							
ETHANE, 1,1,1,2,2,2,-HEXACHLORO-	see HEXACHLOROETHANE							
ETHANE, 1,1'-[METHYLENEBIS(OXY)] BIS(2-CHLORO-	see BIS(2-CHLOROTHOXY) METHANE							
ETHANE, 1,1'-OXYBIS	see ETHYL ETHER							
ETHANE, 1,1'-OXYBIS(2-CHLORO-	see BIS(2-CHLOROETHYL) ETHER							
ETHANE, PENTACHLORO-	see PENTACHLORETHANE							
ETHANE, 1,1,1,2-TETRACHLORO-	1,1,1,2-TETRACHLOROETHANE	630206	N	N	Y	N	N	N
ETHANE, 1,1,2,2-TETRACHLORO-	1,1,2,2-TETRACHLOROETHANE	79345	N	Y	Y	N	N	N
ETHANE, 1,1,2-TRICHLORO-	1,1,2-TRICHLOROETHANE	79005	N	Y	Y	N	N	N
ETHANE, 1,1,1-TRICHLORO-2,2-BIS(P-METHOXYPHENYL	see METHOXYCHLOR							
1,2-ETHANEDIYLBISCARBAMODITHIOIC ACID	see ETHYLENEBIS DITHIOCABAMIC ACID							
ETHANENITRILE	see ACETONITRILE							
ETHANETHIOAMIDE	THIOACETAMIDE	62555	N	N	Y	N	Y	Y
ETHANIC ACID	see ACETIC ACID							
ETHANOL,2,2'-(NITROSOIMINO) BIS	see N-NITROSODIETHANOLAMINE							
ETHANONE, 1-PHENYL	see ACETOPHENONE							
ETHANOYL CHLORIDE	see ACETYL CHLORIDE							
ETHENAMINE, N-METHYL-N-NITROSO-	see N-NITROSOMETHYLVINYLAMINE							
ETHENE, CHLORO-	see VINYL CHLORIDE							
ETHENE,2-CHLOROETHOXY	see 2-CHLOROETHYL VINYL ETHER							
ETHENE, 1,1-DICHLORO-	see 1,1-DICHLOROETHYLENE							
ETHENE,1,1,2,2-TETRACHLORO-	see TETRACHLOROETHYLENE							
ETHENE, trans-1,2-DICHLORO	see 1,2-TRANS-DICHLOROETHYLENE							
ETHENYLETHANOTE	see VINYL ACETATE							
ETHINYLESTRADIOL	NOT CONJUGATED ESTROGEN		N	N	N	N	Y	Y
ETHION	NONE	563122	Y	N	Y	N	N	N
2-ETHOXYETHANOL	see ETHYLENE GLYCOL MONOETHYL ETHER							
ETHYL ACETATE	see ACETIC ACID ETHYL ESTER							
ETHYL ACRYLATE	2-PROPENOIC ACID, ETHYL ESTER	140885	N	N	Y	N	N	N
ETHYLALDEHYDE	ACETALDEHYDE; ETHANAL	75070	Y	N	Y	N	N	N
ETHYLBENZENE	NONE	100414	Y	Y	Y	N	N	N
ETHYLCARBAMATE (URETHAN)	see CARBAMIC ACID, ETHYL ESTER							
ETHYL CYANIDE	PROPANENITRILE	107120	N	N	Y	Y	N	Y
ETHYL 4,4'-DICHLOROBENZILATE	BENZENEACETIC ACID, 4-CHLORO-ALPHA-(4-CHLOROPHENYL)-ALPHA-HYDROXY-, ETHYL ESTER	510156	N	N	Y	N	N	N
ETHYLENEAPHTHALENE	ACENAPHTHENE; 1,8-HYDROACENAPHTHYLENE	83329	N	Y	Y	N	N	N
ETHYLENE BROMIDE	see 1,2-DIBROMOMETHANE							
ETHYLENE DIBROMIDE	ETHANE, 1,2-DIBROMO-	106934	Y	N	Y	N	N	N
ETHYLENE DICHLORIDE	see 1,2-DICHLOROETHANE							
ETHYLENEOXIDE	see OXIRANE							
ETHYLENEBIS (DITHIOCARBAMIC ACID	1,2-ETHANEDIYLBISCARBAMODITHIOIC ACID	111546	N	N	Y	N	N	N
ETHYLENEBISIMINODIACETIC ACID	see ETHYLENDIAMINE TETRAACETUC ACID							
ETHYLENEDIAMINE	DIAMINOETHANE; 1,2-ETHANEDIAMINE	107153	Y	N	Y	N	N	N
ETHYLENEDIAMINE TETRAACETIC ACID (EDTA)	EDTA; ETHYLENEBISIMINODIACETIC ACID	60004	Y	N	Y	N	N	N
ETHYLENE GLYCOL MONOETHYL ETHER	2-ETHOXYETHANOL	110805	N	N	Y	N	N	N
ETHYLENETHIO[illegible]	2-IMIDAZOLIDINETHIONE	96457	N	N	Y	N	[illegible]	Y

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ETHYLENETRICHLORIDE	see TRICHLOROETHENE							
ETHYLENIMINE	see AZIRIDINE							
ETHYL ETHER	ETHANE, 1,1"-OXYBIS	60297	N	N	Y	N	N	N
ETHYLIDENE DICHLORIDE	see 1,1-DICHLOROETHANE							
ETHYL METHACRYLATE	2-PROPENOIC ACID, 2-METHYL-,ETHYL ESTER	97632	N	N	Y	N	N	N
EHTYLMETHANESULFONATE	METHANESULFONIC ACID, ETHYL ESTER	62500	N	N	Y	N	N	N
FAMPHUR	PHOSPHOROTHIOIC ACID, O,O-DIMETHYL-O-[p-[(DIMETHYLAMINO)-SULFONYL]PHENYL] ESTER	52857	N	N	Y	Y	N	Y
FERRIC AMMONIUM CITRATE	NONE	1185575	Y	N	Y	N	N	N
FERRIC AMMONIUM OXALATE	NONE	2944674 65488874	Y	N	Y	N	N	N
FERRIC CHLORIDE	NONE	7705080	Y	N	Y	N	N	N
FERRIC DEXTRAN	see IRON DEXTRAN							
FERRIC FLUORIDE	NONE	7783508	Y	N	Y	N	N	N
FERRIC NITRATE	NONE	10421484	Y	N	Y	N	N	N
FERRIC SULFATE	NONE	10028225	Y	N	Y	N	N	N
FERROUS AMMONIUM SULFATE	NONE	10045893	Y	N	Y	N	N	N
FERROUS CHLORIDE	NONE	7758943	Y	N	Y	N	N	N
FERROUS SULFATE	NONE	7720787 7782630	Y	N	Y	N	N	N
FLUOROACETIC ACID, SODIUM SALT	see ACETIC ACID, FLUORO-, SODIUM SALT							
FLUORANTHENE	BENZO[j,k]FLUORENE	206440	N	Y	Y	N	N	N
FLUORENE	NONE	86737	N	Y	Y	N	N	N
FLUORINE	NONE	7782414	N	N	Y	N	N	N
FLUOROACETAMIDE	see ACETAMIDE, 2-FLUORO-							
FORMALDEHYDE	METHYLENE OXIDE	50000	Y	N	Y	N	Y	Y
FORMIC ACID	METHANOIC ACID	64186	Y	N	Y	N	N	N
FULMINIC ACID, MERCURY(II)SALT	MERCURY FULMINATE	628864	N	N	Y	Y	N	Y
FULMARIC ACID	NONE	110178	Y	N	Y	N	N	N
FURAN	FURFURAN	110009	N	N	Y	N	N	N
FURAN, TETRAHYDRO-,	see TETRAHYDROFURAN							
2,5-FURANDINE	see MALEIC ANHYDRIDE							
FURFURAL	2-FURANCARBOXALDHYDE	98011	Y	N	Y	N	N	N
FURFURAN	see FURAN							
D-GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREIDO)-,	see STREPTOZOCIN							
GLYCIDYLALDEHYDE	1-PROPANAL,2,3-EPOXY-	765344	N	N	Y	N	N	N
GUANIDINE, N-NITROSO-N-METHYL-N'-NITRO-	N-METHYL-N'-NITRO-N-NITROGUANIDINE	70257	N	N	Y	N	N	N
GUTHION	NONE	86500	Y	N	Y	N	N	N
HALOETHERS	NONE		N	Y	Y	N	N	N
HALOMETHANES	NONE		N	Y	Y	N	N	N
HEMATITE UNDERGROUND MINING			N	N	N	N	Y	
HEPTACHLOR	4,7-METHANO-1H-INDENE,1,4,5,6,7,8,8-HEPTACHLORO-3a,4,7,7a-TETRAHYDRO-	76448	Y	Y	Y	Y	N	Y
HEPTACHLOR AND METABOLITES			N	Y	Y	N	N	N
HEXACHLORCYCLHEXANE (GAMMA ISOMER)	see gamma-BHC							
HEPTACHLOR EPOXIDE	NONE	1024573	N	Y	Y	N	N	N
HEXACHLOROBENZENE	BENZENE, HEXACHLORO-	118741	N	Y	Y	N	Y	Y
HEXACHLOROBUTADIENE	see 1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO-							
HEXACHLOROCYCLOHEXANE (ALL ISOMERS)		608731	N	Y	Y	N	N	N
HEXACHLOROCYCLOPENTADIENE	see 1,3-CYCLOPENTADIENE,1,23,4,5,5-HEXACHLORO-							
1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4a,5,6,7,8,8a-OCTAHYDRO-ENDO, ENDO-1,4:5,8-	see ENDRIN							

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DIMETHANONAPHTHALENE								
1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4a,5,6,7,8, 8a-OCTAHYDRO-ENDO EXO-1,4:5,8-DIMETHANONAPHTHALENE	see DIELDRIN							
HEXACHLOROETHANE	ETHANE, 1,1,1,2,2,2-HEXACHLORO-	67721	N	Y	Y	N	N	N
HEXACHLOROHEXAHYDRO-ENDO,ENDO DIMETHANONAPHTHALENE	1,2,3,4,10-10-HEXACHLORO-1,4,4a,5,8,8a-HEXAHYDRO-1,4:5,8-ENDO, ENDO DIMETHYANOPHTHALENE	465736	N	N	Y	Y	N	Y
1,2,3,4,10-10-HEXACHLORO-1,4,4a,5,8,8a-HEXAHYDRO-1,4:5,8-ENDO, ENDO DIMETHYANOPHTHALENE	see HEXACHLOROHEXAHYDRO-ENDO,ENDO DIMETHANONAPHTHALENE							
1,2,3,4,10-10-HEXACHLORO-1,4,4a,5,8,8a-HEXAHYDRO-1,4:5,8-ENDO, EXO DIMETHYANOPHTHALENE	see ALDRIN							
HEXACHLOROPHENE	2,2'-METHYLENEBIS(3,4,6-TRICHLOROPHENOL)	70304	N	N	Y	N	N	N
HEXACHLOROPROPENE	1,-PROPENE, 1,1,2,3,3,3-HEXACHLORO-	1888717	N	N	Y	N	N	N
HEXAETHYL TETRAPHOSPHATE	TETRAPHOSPHORIC ACID, HEXAETHYL ESTER	757584	N	N	Y	Y	N	Y
HEXAMETHYLPHOSPHORAMIDE	see HEXAMETHYLPHOSPHORIC TRIAMIDE							
HEXAMETHYLPHOSPHORIC TRIAMIDE	HEXAMETHYLPHOSPHORAMIDE	680319	N	N	N	N	Y	Y
HYDRAZINE	see DIAMINE							
HYDRAZINE, 1,2-DIETHYL-	see N-N'DIETHYLHYDRAZINE							
HYDRAZINE, 1,1-DIMETHYL-	see 1,1-DIMETHYLHYDRAZINE							
HYDRAZINE, 1,2-DIMETHYL-	see 1,2-DIMETHYLHYDRAZINE							
HYDRAZINE, 1,2-DIPHENYL-	see 1,2-DIPHENOLHYDRAZINE							
HYDRAZINE, METHYL	METHYL HYDRAZINE							
HYDRAZINECARBOTHIOAMIDE	THIOSEMICARBAZIDE	60344	N	N	Y	Y	N	Y
HYDRAZOBENZENE	see 1,2-DIPHENOLHYDRAZINE	79196	N	N	Y	Y	N	Y
1,8-HYDROACENAPHTHYLENE	ACENAPHTHENE; ETHYLENEAPHTHALENE							
HYDROCHLORIC ACID	NONE	83329	N	Y	Y	N	N	N
HYDROCYANIC ACID	HYDROGEN CYANIDE	7647010	Y	N	Y	N	N	N
HYDROFLUORIC ACID	HYDROGEN FLUORIDE	74908	Y	N	Y	Y	N	N
HYDROGEN CYANIDE	see HYDROCYANIC ACID	7664393	Y	N	Y	N	N	N
HYDROGEN FLUORIDE	see HYDROFLUORIC ACID							
HYDROGEN PHOSPHIDE	see PHOSPHINE							
HYDROGEN SULFIDE	HYDROSULFURIC ACID; SULFUR HYDRIDE							
HYDROPEROXIDE, 1-METHYL-1-PHENYLETHYL-	alpha,alpha-DIMETHYLBENZYLHYDRO-PEROXIDE	7783064	Y	N	Y	N	N	N
HYDROSULFURIC ACID	see HYDROGEN SULFIDE	80159	N	N	Y	N	N	N
HYDROXYBENZENE	see PHENOL							
14-HYDROXYDAUNOMYCIN	see ADRIAMYCIN							
HYDROXYDIMETHYLARSINE OXIDE	see CACODYLIC ACID							
17 beta-HYDROXY-2-(HYDROXYMETHYLENE)-17gamma-METHYLDIHYDROTESTOOSTERONE	see OXYMETHOLONE							
2-HYDROXY-2-METHYL	see ACETONE CYANOHYDRIN							
m-HYDROXYPHENOL	see RESORCINOL							
2-IMIDAZOLIDINETHIONE	see ETHYLENETHIOUREA							
INDENO(1,2,3-cd)PYRENE	1,10-(1,2-PHENYENE)PYRENE							
IRON DEXTRAN	FERRIC DEXTRAN	193395	N	Y	Y	N	Y	Y
ISOBUTYL ALCOHOL	1-PROPANOL, 2-METHYL-	9004664	N	N	Y	N	Y	Y
ISOCYANIC ACID, METHYL ESTER	METHYL ISOCYANATE	78831	N	N	Y	N	N	N
ISOPHORONE	NONE	624839	N	N	Y	Y	N	N
ISOPRENE	NONE	78591	N	Y	Y	N	N	N
ISOPROPANOLAMINE DODECYLBENZENESULFONATE	NONE	78795	Y	N	Y	N	N	N
ISOPROPYL ALCOHOL MANUFACTURE (STRONG ACID PROCESS		42504461	Y	N	Y	N	N	N
ISOPROPYLBENZENE	see CUMENE		N	N	N	N	Y	N
N- ISOPROPYL-alpha-(METHYHLHYDRAZINE)-p-TOLUAMIDE	see PROCARBAZINE							
ISOSAFROLE	BENZENE, 1,2-METHYLENEDIOXY-4-PRO	120581	N	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
3(2H)- ISOXAZOLONE, 5-(AMINOMETHYL)-	see 5-(AMINOMETHYL)-3-ISOAZOLOL							
KELTHANE	NONE	115322	Y	N	Y	N	N	N
KEPONE	DECACHLOROOCTAHYDRO-1,3,4-METHANO-2H-CYCLOBUTA[c,d]-PENTALEN-2-ONE	143500	Y	N	Y	N	Y	Y
LASIOCARPINE	NONE	303344	N	N	Y	N	N	N
LEAD	NONE	7439921	N	Y	Y	N	N	N
LEAD ACETATE	see ACETIC ACID, LEAD SALT							
LEAD AND COMPOUNDS			N	Y	Y	N	N	N
LEAD ARSENATE	NONE	7784409 7645525 10102484	Y	N	Y	N	N	N
LEAD CHLORIDE	NONE	7758954	Y	N	Y	N	N	N
LEAD FLUOBORATE	NONE	13814965	Y	N	Y	N	N	N
LEAD FLUORIDE	NONE	7783462	Y	N	Y	N	N	N
LEAD IODIDE	NONE	10101630	Y	N	Y	N	N	N
LEAD NITRATE	NONE	10099748	Y	N	Y	N	N	N
LEAD PHOSPHATE	PHOSPHORIC ACID, LEAD SALT	7446277	N	N	Y	N	Y	N
LEAD STEARATE	NONE	7428480 1072351 52652592 56189094	Y	N	Y	N	N	N
LEAD SUBACETATE	NONE	1335326	N	N	Y	N	N	N
LEAD SUFLATE	NONE	15739807 7446142	Y	N	Y	N	N	N
LEAD SULFIDE	NONE	1314870	Y	N	Y	N	N	N
LEAD THIOCYANATE	NONE	592870	Y	N	Y	N	N	N
LINDANE	see gamma-BHC							
LITHIUM CHROMATE	NONE	14307358	Y	N	Y	N	N	N
MALATHION	NONE	121755	Y	N	Y	N	N	N
MALEIC ACID	NONE	110167	Y	N	Y	N	N	N
MALEIC ANHYDRIDE	2,5-FURANDINE	108316	Y	N	Y	N	N	N
MALEIC HYDRAZIDE	1,2-DIHYDRO-3,6-PYRIDAZINEDIONE	123331	N	N	Y	N	N	N
MALONONITRILE	PROPANEDINITRILE	109773	N	N	Y	N	N	N
MELPHALAN	ALANINE,3,-[P[BIS(2-CHLOROETHYL)AMINO] PHENYL-,L-	148823	N	N	Y	N	Y	Y
MERCAPTODIMETHUR	NONE	2032657	Y	N	Y	N	N	N
MERCURIC CYANIDE	NONE	592041	Y	N	Y	N	N	N
MERCURIC NITRATE	NONE	10045940	Y	N	Y	N	N	N
MERCURIC SULFATE	NONE	8873359	Y	N	Y	N	N	N
MERCURIC THIOCYANATE	NONE	592858	Y	N	Y	N	N	N
MERCUROUS NITRATE	NONE	10415755	Y	N	Y	N	N	N
MERCURY	NONE	7439976	N	Y	Y	N	N	N
MERCURY AND COMPOUNDS	NONE		N	Y	Y	N	N	N
MERCURY, (ACETATO-O)PHENYL	see PHENYLMERCURIC ACETATE							
MERCURY FULMINATE	see FULMINIC ACID, MERCURY (II)SALT							
MESTRANOL	NOT CONJUGATED ESTROGEN		N	N	N	N	Y	Y
METHACRYLONITRILE	2-PROPENENITRILE, 2-METHYL-	126987	N	N	Y	N	N	N
METHANAMINE, N-METHYL-	see DIMETHYLAMINE							
METHANE, BROMO-,	see METHYL BROMIDE							
METHANE CARBOXYLIC ACID	see ACETIC ACID							
METHANE, CHLORO-,	see METHYL CHLORIDE							
METHANE, CHLOROMETHOXY	see CHLOROMETHYL METHYL ETHER							
METHANE, DIBROMO-	see METHYLENE BROMIDE							
METHANE, DICHLORO-,	see METHYLENE CHLORIDE							

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
METHANE, DICHLORODIFLUORO-,	see DICHLORODIFLUOROMETHANE							
METHANE, IODO-	see METHYL IODIDE							
METHANE, OXYBIS(CHLORO-	see BIS(CHLOROMETHYL) ETHER							
METHANE, TETRACHLORO-,	see CARBON TETRACHLORIDE							
METHANE, TETRANITRO-,	see TETRANITROMETHANE							
METHANE, TRIBROMO-	see BROMOFORM							
METHANE, TRICHLORO-,	see CHLOROFORM							
METHANE, TRICHLOROFLUORO-,	see TRICHLOROMONOFLUORO-METHANE							
METHANESULFONIC ACID,ETHYL ESTER	see ETHYLLMETHANESULFONATE							
METHANETHIOL	METHYLMECAPTAN; THIOMETHANOL	74931	Y	N	Y	Y	N	N
METHANESULFENYL CHLORIDE, TRICHLORO-,	see TRICHLORMETHANESULFENYL CHLORIDE							
4,7-METHANO-1H-INDENE,1,4,5,6,7,8,8-HEPTACHLORO-3a,4,7,7a-TETRAHYDRO-	see HEPTACHLOR							
METHANOIC ACID	see FORMIC ACID							
4,7-METHANOINDAN, 1,2,4,5,6,7,8,8'-OCTACHLORO-3A,4,7,7a-TETRAHYDRO-,	see CHLORDANE							
METHANOL	METHYL ALCOHOL	6756661	N	N	Y	N	N	N
METHAPYRILENE	PYRIDINE, 2-[(2-(DIMETHYLAMINO)ETHYL)-2-THENYLAMINO]-	91805	N	N	Y	N	N	N
2-METHOANILINE	see o-ANISIDINE							
METHOMYL	see ACETIMIDIC ACID, N-[(METHYLCARBAMOYL)OXY] THIO-							
METHOXSALEN WITH ULTRA VIOLET A THEARPY (PUVA)			N	N	N	N	Y	N
METHOXYCHLOR	ETHANE, 1,1,1-TRICHLORO-2,2-BIS(P-METHOXYPHENYL	72435	Y	N	Y	N	N	N
METHYLAMINE	see MONOMETHYLAMINE							
METHYL ALCOHOL	see METHANOL							
METHYL-o-ANISIDINE	see p-CRESIDINE							
beta-METHYLARCOLIEN	see CROTONALDHYDE							
2-METHYLAZIRIDINE	1,2-PROPYLENIMINE	75558	N	N	Y	Y	N	Y
METHYLAZOXYMETHANOL BETA-d-GLUCOIDE	see CYCASIN							
METHYL BROMIDE	METHANE, BROMO	74839	N	Y	Y	N	N	N
1-METHYLBUTADIENE	1,3-PENTADIENE	504609	N	N	Y	N	N	N
METHYL CHLORIDE	METHANE, CHLORO-	74873	N	Y	Y	N	N	N
METHYL CHLOROCARBONATE	see CARBONOCHLORIDIC ACID, METHYL ESTER							
METHYL CHLOROFORM	1,1,1-TRICHLOROETHANE	71556	N	Y	Y	N	N	N
4,4'-METHYLENEBIS(2-CHLOROANILINE)	BENZENAMINE, 4,4'-METHYLENEBIS (2-CHLORO-	101144	N	N	Y	N	N	N
4,4'-METHYLENEBIS(N,N-DIMETHYL) BENZENAMINE	NONE		N	N	N	N	Y	Y
2,2'-METHYLENEBIS(3,4,6-TRICHLOROPHENOL)	see HEXACHLOROPHENE							
3-METHYLCHOLANTHRENE	see BENZ(J)ACEANTHRYLENE,1,2-DIHYDRO-3-METHYL							
METHYLENE BROMIDE	METHANE, DIBROMO	74953	N	N	Y	N	N	N
METHYLENE CHLORIDE	METHANE, DICHLORO-	75092	N	Y	Y	N	N	N
4,4'-METHYLENEDIANILINE AND ITS DIHYDROCHLORIDE	see 4,4' DIAMINODIPHENYLMETHANE							
METHYLENE OXIDE	see FORMALDEHYDE							
METHYL ETHYL KETONE	see 2-BUTANONE							
METHYL ETHYL KETONE PEROXIDE	see 2-BUTANONE PEROXIDE							
METHYL HYDRAZINE	see HYDRAZINE, METHYL							
METHYL IODIDE	METHANE, IODO-	74884	N	N	Y	N	Y	Y
METHYL ISOBUTYL KETONE	4-METHYL-2-PENTANONE	108101	N	N	Y	N	N	N
METHYL ISOCYANATE	see ISOCYANIC ACID, METHYL ESTER							
2-METHYLLACTONITRILE	see ACETONE CYANOHYDRIN							
METHYLMECAPTAN	see METHANETHIOL							
METHYL METHACRYLATE	2-PROPENONIC ACID, 2-METHYL-,METHYL ESTER	80626	Y	N	Y	N	N	N
6-[(1-METHYL-4-NITRO-1H-IMIDAZOL-5-YL)THIO]-1H-PURINE	see AZATHIOPRINE							
N-METHYL-N' [illegible]RO-N-NITROGUANIDINE	see GUANIDINE, N-NITROSO-N-METHY[illegible]-NITRO							

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243b
METHYL PARATHION	0,0-DIMETHYL 0-P-NITROPHENYL PHOSPHOROTHIOATE; DIMETHYL PARATHION	298000	Y	N	Y	Y	N	Y
4-METHYL-2-PENTANONE	see METHYL ISOBUTAL KETONE							
METHYL PHENYL KETONE	see ACETOPHENONE							
METHYLTHIOURACIL	4(1H)-PYRIMIDINONE,2,3-DIHYDRO-6-METHYL-2-THIOXO-	56042	N	N	Y	N	N	N
METHYL YELLOW	see 4-DIMETHYLAMINOZOBENZENE							
METRONIDAZOLE	NONE		N	N	N	N	Y	Y
MEVINPHOS	NONE	7786347	Y	N	Y	N	N	N
MEXACARBATE	NONE	315184	Y	N	Y	N	N	N
MICHLER'S KETONE	TETRAMETHYLDIAMINOBENZOPHENONE	90948	N	N	N	N	Y	Y
MIREX	DECHLORANE	2385855	N	N	N	N	Y	Y
MITOMYCIN C	AZIRINO(2',3':3,4)PYRROLO(1,2-A)INDOLE-4,7-DIONE, 6-AMINO-8-[((AMINOCARBONYL)OXY)METHYL]-1,1a,2,8,8a,8b-HEXAHYDRO-8a-METHOXY-5-METHYL-	50077	N	N	Y	N	N	N
MONOETHYLAMINE	NONE	75047	Y	N	Y	N	N	N
MONOMETHYLAMINE	METHYAMINE	74895	Y	N	Y	N	N	N
MUSTARD GAS	1,2-DIBROMO-2,2-DICHLORO-ETHYLDIMETHYLPHOSPHATE	505602	N	N	N	N	Y	Y
NALED	NONE	300765	Y	N	Y	N	N	N
5,12-NAPTHACENEDIONE, (8S cis)-8-ACETYL-10-[AMINO][3-AMINO-2,3,6-TRIEOXY-ALPHA-L-LYOXY-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-	see DAUNOMYCIN							
NAPHTHALENE	NONE	91203	Y	Y	Y	N	N	N
NAPHTHALENE, 2-CHLORO-	see beta-CHLORONAPHTHALENE							
1,4-NAPHTHALENEDIONE	see 1,4-NAPHTHOQUINONE							
2,7-NAPHTHALENEDISULFONIC ACID,3,3'-[3,3'-DIMETHYL-(1,1'-BIPHENYL)-4,4'-DIYL)-BIS(AZO)]BIS(5-AMINO-4-HYDROXY)-TETRASODIUM SALT	see TRYPAN BLUE							
NAPHTHENIC ACID	NONE	1338245	Y	N	Y	N	N	N
1,4-NAPHTHOQUINONE	1,4-NAPHTHALENEDIONE	130154	N	N	Y	N	N	N
1-NAPHTHYLAMINE	alpha-NAPHTHYLAMINE	134327	N	N	Y	N	N	N
2-NAPHTHYLAMINE	beta-NAPHTHYLAMINE	91598	N	N	Y	N	Y	Y
alpha-NAPHTHYLAMINE	see 1-NAPHTHYLAMINE							
beta-NAPHTHYLAMINE	see 2-NAPHTHYLAMINE							
2-NAPHTHYLAMINE, N,N-BIS(2-CHLOROETHYL)-	see CHLORNAPHAZINE							
alpha-NAPHTHYLTHIOUREA	THIOUREA, 1-NAPHTHALENYL	86884	N	N	Y	Y	N	Y
NICKEL	NONE	7440020	N	Y	Y	N	Y	N
NICKEL AND COMPOUNDS			N	Y	Y	N	Y	N
NICKEL AMMONIUM SULFATE	NONE	15699180	Y	N	Y	N	N	N
NICKEL CARBONYL	NICKEL TETRACARBONYL	13463393	N	N	Y	Y	N	Y
NICKEL CHLORIDE	NONE	7718549	Y	N	Y	N	N	N
		37211055						
NICKEL CYANIDE	NICKEL(11)CYANIDE	557197	N	N	Y	Y	N	N
NICKEL(11)CYANIDE	see NICKEL CYANIDE							
NICKEL HYROXIDE	NONE	12054487	Y	N	Y	N	N	N
NICKEL NITRATE	NONE	14216752	Y	N	Y	N	N	N
NICKEL SULFATE	NONE	7786814	Y	N	Y	N	N	N
NICKEL TETRACARBONYL	see NICKEL CARBONYL							
NICOTINE AND SALTS	PYRIDINE, (S)-3-(1-METHYL-2-PYRROLIDINYL)-, AND SALTS	54115	N	N	Y	N	N	N
NITIRC ACID	NONE	7697372	Y	N	Y	N	N	N
NITIRC OXIDE	NITROGEN(11)OXIDE	10102439	N	N	Y	N	N	N
NITRILOTRIACETIC ACID	NTA; TRIGLYCINE; TGA	139139	N	N	N	N	Y	Y
p-NITROANILINE	see BENZENAMINE, 4-NITRO-							

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
5-NITRO-o-ANISIDINE	2-AMINO-5-NITROANIOLE	99592	N	N	N	N	Y	Y
NITROBENZENE	BENZENE, NITRO-	98953	Y	Y	Y	N	N	N
NITROFEN	2,4-DICHLORO-1(4-NITROPHENOXY) BENZENE	1836755	N	N	N	N	Y	Y
NITROGEN DIOXIDE	NITROGEN(IV)OXIDE	10102440	Y	N	Y	N	N	N
NITROGEN MUSTARD	see MELPHALAN	10544726						
NITROGEN(II)OXIDE	see NITRIC OXIDE							
NITROGEN(IV)OXIDE	see NITROGEN DIOXIDE							
NITROGYLCERINE	1,2,3-PROPANETRIOL, TRINITRATE-	55630	N	N	Y	N	N	N
NITROPHENOL (MIXED)		25154556	Y	N	Y	N	N	N
m-		554847						
o-	2-NITROPHENOL	88755	Y	Y	Y	N	N	N
p-	4-NITROPHENOL; PHENOL, 4-NITRO-	100027						
p-NITROPHENOL	4-NITROPHENOL; PHENOL, 4-NITRO-	100027	Y	Y	Y	N	N	N
2-NITROPHENOL	o-NITROPHENOL	88755	Y	Y	Y	N	N	N
4-NITROPHENOL	see p-NITROPHENOL							
NITROPHENOLS			N	Y	Y	N	N	N
2-NITROPROPANE	see PROPANE, 2-NITRO-							
NITROSAMINES			N	Y	Y	N	N	Y
N,N-BIS(2-CHLOROETHYL)-2-NAPHTYLAMINE	CHLORNAPHAZINE	494031	N	N	N	N	Y	Y
N-NITROSOARCOSINE	NONE		N	N	N	N	Y	Y
N-NITROSODI-n-BUTYLAMINE	1-BUTANAMINE, N-BUTYL-N-NITROSO-	924163	N	N	Y	N	Y	Y
N-NITROSODIETHANOLAMINE	ETHANOL, 2,2'-(NITROSOIMINO)BIS-	1116547	N	N	Y	N	Y	Y
N-NITROSODIETHYLAMINE	EHTANAMINE, N--ETHYL-N-NITROSO-	55185	N	N	Y	N	Y	Y
N-NITROSODIMETHYLAMINE	see DIMETHYLNITROSAMINE							
N-NITROSODIPHENYLAMINE	NONE	86306	N	Y	Y	N	N	N
N-NITROSO-n-PROPYLAMINE	see DI-n-PROPYLNITROSAMINE							
N-NITROSO-n-ETHYLUREA	see CARBAMIDE, N-ETHYL-N-NITROSO-							
N-NITROSO-n-METHYLUREA	see CARBAMIDE, N-METHYL-N-NITROSO-							
N-NITROSO-n-METHYLURETHANE	see CARBAMIC ACID, METHYLNITROSO-ETHYL ESTER							
N-NITROSOMETHYLVINYLAMINE	ETHENAMINE, N-METHYL-N-NITROSO-	4549400	N	N	Y	Y	Y	Y
N-NITROSOMORPHOLINE	NONE		N	N	N	N	Y	Y
N-NITROSONORNICOTINE	NONE		N	N	N	N	Y	Y
N-NITROSOPIPERIDINE	PYRIDINE, HEXAHYDRO-N-NITROSO	100754	N	N	Y	N	Y	Y
N-NITROSOPYRROLIDINE	PYRROLE, TETRAHYDRO-N-NITROSO-	930552	N	N	Y	N	N	Y
p-NITROSODIPHENYLAMINE	NONE		N	N	N	N	Y	N
NITROTOLUENE m-, o-,p-	NONE	1321126	Y	N	Y	N	N	N
m-		99081						
o-		88722						
p-		99990						
5-NITRO-o-TOLUIDINE	see BENZENAMINE, 2-METHYL- 5-NITRO-							
5-NORBORNENE-2,3-DIMETHANOL,1,4,5,6,7,7-HEXACHLORO CYCLIC SULFITE	see ENDOSUFAN							
NORETHISTERONE	NONE		N	N	N	N	Y	Y
OCTAMETHLYLPYRPPHOS-PHORAMIDE	see DIPHOSPHORAMIDE,OCTAMETHYL							
OSMIUM OXIDE	OSMIUM TETROXIDE	20816120	N	N	Y	N	N	N
OSMIUM TETROXIDE	see OSMIUM OXIDE							
7-OXABICYCLO[2,2,1]HEPTANE-2,3-DICARBOXYLIC ACID	ENDOTHALL	145733	N	N	N	Y	N	Y
1,2-OXATHIOLANE, 2,2-DIOXIDE	see 1,3-PROPANE, SULTONE							
2H-1,3,2-OXAZAPHOSPHORINE,2-[BIS(2-CHLOROETHYL) AMINO]TETRAHYDRO-2-OXIDE	see CYCLOPHOSPHAMIDE							
2-OXETANONE	see beta-PROIOACTONE							
OXIRANE	ETHYLENEOXIDE	75218	N	N	Y	N		Y

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
OXIRANE, 2-(CHLOROMETHYL)-	see EPICHLOROHYDRIN							
OXYMETHOLONE	17BETA-HYDROXY-2-(HYDROXY METHYLENE)-17GAMMA-METHYL DIHYROTESTOSTERONE	434071	N	N	N	N	Y	Y
PARAFORMALDEHYDE	NONE	30525894	Y	N	Y	N	N	N
PARALDEHYDE	1,3,5-TRIOXANE, 2,4,6-TRIMETHYL	123637	N	N	Y	N	N	N
PARATHION	PHOSPHOROTHIOIC ACID,0,0-DIETHYL O-(P-NITROPHENYL) ESTER	56382	Y	N	Y	Y	N	Y
PENTACHLOROBENZENE	BENZENE, PENTACHLORO	608935	N	N	Y	N	N	N
PENTACHLOROETHANE	ETHANE, PENTACHLORO,; PENTALIN	76017	N	N	Y	N	N	N
PENTACHLORONITROBENZENE	BENZENE, PENTACHLORONITRO; PCNB;	82688	N	N	Y	N	N	N
PENTACHLOROPHENOL	PHENOL, PENTACHOLORO-; PCP; PENTA	87865	Y	Y	Y	N	N	N
1,3-PENTADIENE	see 1-METHYLBUTADIENE							
PENTALIN	see PENTACHLOROETHANE							
PERCHLOROCYCLOPENTADIENE	see 1,3-CYCLOPENTADIENE,1,2,3,4,5,5-HEXACHLORO-							
PHENACETIN	ACETAMIDE, N-(4-ETHOXYPHENYL)-	62442	N	N	Y	N	Y	Y
PHENANTHRENE	NONE	85018	N	Y	Y	N	N	N
PHENAZOPYRIDINE HYDROCHLORIDE	NONE	136403	N	N	N	N	Y	Y
PHENOL	BENZENE, HYDROXY-; CARBOLIC ACID; HYDROXYBENZENE	108952	Y	Y	Y	N	N	N
PHENOL, 2-CHLORO-	see 2-CHLOROPHENOL							
PHENOL, 4-CHLORO-3METHYL-	see 4-CHLORO-m-CRESOL							
PHENOL, 2-CYCLOHEXYL-4,6-DINITRO-	see 4,6-DINITRO-o-CYCLOHEXYLPHENOL							
PHENOL, 2,4-DICHLORO-	see 2,4-DICHLOROPHENOL							
PHENOL, 2,6-DICHLORO-	see 2,6-DICHLOROPHENOL							
PHENOL, 2,4-DIMETHYL-2,4-XYLENOL	see 2,4-DIMETHYLPHENOL							
PHENOL, 2,4-DINITRO-	see 2,4-DINITROPHENOL							
PHENOL, 2,4-DINITRO-6-(1-METHYLPROPYL)-	see DINOSEB							
PHENOL, 2,4-DINITRO-6-METHYL- AND SALTS	see 4,6-DINITRO-o-CRESOL AND SALTS							
PHENOL,4-NITRO-	see p-NITROPHENOL							
PHENOL, PENTACHLORO	see PENTACHLOROPHENOL							
PHENOL, 2,3,4,6-TETRACHLORO-	2,3,4,6-TETRACHLOROPHENOL	58902	N	N	Y	N	N	N
PHENOL, 2,4,5-TRICHLORO-	2,4,5-TRICHLOROPHENOL	95954	Y	N	Y	N	N	N
PHENOL, 2,4,6-TRICHLORO-	2,4,6-TRICHLOROPHENOL	88062	Y	Y	Y	N	N	N
PHENOL, 2,4,6-TRINITRO-AMMONIUM SALT	see AMMONIUM PICRATE							
PHENYL DICHLOROARSINE	see DICHLOROPHENYLARSINE							
1,10-(1,2-PHENYLENE)PYRENE	see INDENO(1,2,3-cd)PYRENE							
PHENYLMERCURIC ACETATE	MERCURY, (ACETATO-O)PHENYL-	62384	N	N	Y	Y	N	Y
N-PHENYLTHIOUREA	THIOUREA,PHENYL	103855	N	N	Y	Y	N	Y
P-PHENYLANILINE	see 4-AMINOBIPHENYL							
PHENYTOIN	5,5-DIPHENYL HYDRANTOIN	57410	N	N	N	N	Y	Y
PHENYLTOIN, SODIUM SALT	NONE		N	N	N	N	Y	Y
PHORATE	PHOSPHORODITHIOIC ACID, 0,0-DIETHYL S-(EHTYLTHIO) METHYL ESTER	298022	N	N	Y	Y	N	Y
PHOSGENE	see CARBONYL CHLORIDE							
PHOSPHINE	HYDROGEN PHOSPHIDE	7803512	N	N	Y	N	N	N
PHOSPHORIC ACID	NONE	7664382	Y	N	Y	N	N	N
PHOSPHORIC ACID, DIETHYL p-NITROPHENYL ESTER	see DIETHYL-p-NITROPHENYL PHOSPHATE							
PHOSPHORIC ACID, LEAD SALT	see LEAD PHOSPHATE							
PHOSPHORODITHIOIC ACID, 0,0' DIETHYL s-METHYLESTER	see 0,0'-DIETHYL s-METHYL DITHIOPHOSPHATE							
PHOSPHORODITHIOIC ACID, 0,0-DIETHYL S-(ETHYLTHIO) METHYL ESTER	see PHORATE							
PHOSPHOROTHIOIC ACID, 0,0-DIMETHYL s-[2(METHYL AMINO)-2-OXOETHYL] ESTER	see DIMETHOATE							
PHOSPHOROFLUORIDIC ACID, bis(1-METHYLETHYL) ESTER	see DIISOPROPYL FLUOROPHOSPHATE							
PHOSPHOROTHIOIC ACID, 0,0-DIETHYL O-(P-NITROPHENYL	see PARATHION							

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ESTER								
PHOSPHOROTHIOIC ACID, 0,0'DIETHYL o-PYRAZINYLESTER	see 0,0'DIETHYL o-PYRAZINYL PHOSPHOROTHIOATE							
PHOSPHOROTHIOIC ACID, 0,0-DIMETHYL-0-[p-[(DIMETHYLAMINO)-SULFONYL]PHENYL] ESTER	see FAMPHUR							
PHOPHORUS	NONE							
PHOSPHORUS OXYCHLORIDE	NONE	7723140	Y	N	Y	N	N	N
PHOSPHORUS PENTASULFIDE	see PHOPHORUS SULFIDE	10025873	Y	N	Y	N	N	N
PHOSPHORUS SULFIDE	PHOSPHORUS PENTASULFIDE; SULFUR PHOSPHIDE							
PHOSPHORUS TRICHLORIDE	NONE	1314803	Y	N	Y	N	N	N
PHTHALATE ESTERS		7719122	Y	N	Y	N	N	N
PHTHALIC ANHYDRIDE	1,2-BENZENEDICARBOXYLIC ACID ANHYDRIDE		N	Y	Y	N	N	N
2-PICOLINE	PYRIDINE, 2-METHYL-; ALPHA PICOLINE	85449	N	N	Y	N	N	N
PIRIMOPHOSMETHYL	see ADIPIC ACID	109068	N	N	Y	N	N	N
PLUMBANE, TETRAETHYL	see TETRAETHYL LEAD							
POLYBROMINATED BIPHENYLS								
POLYCHLORINATED BIPHENYLS	AROCLORS		N	N	N	N	Y	Y
	AROCLOR 1016	1336363	N	N	N	N	Y	Y
	AROCLOR 1221	12674112						
	AROCLOR 1232	11104282						
	AROCLOR 1242	11141165						
	AROCLOR 1248	53469219						
	AROCLOR 1254	12672296						
	AROCLOR 1260	11097691						
POLYNUCLEAR AROMATIC HYDROCARBONS		11096825						
POTASSIUM ARSENATE	NONE		N	Y	Y	N	N	N
POTASSIUM ARSENITE	NONE	7784410	Y	N	Y	N	N	N
POTASSIUM BICHROMATE	NONE	10124502	Y	N	Y	N	N	N
POTASSUUUIUM CHROMATE	NONE	7778509	Y	N	Y	N	N	N
POTASSIUM CYANIDE	NONE	7789006	Y	N	Y	N	N	N
POTASSIUM HYDROXIDE	NONE	151508	Y	N	Y	N	N	N
POTASSIUM PERMANGANATE	NONE	1310583	Y	N	Y	N	N	N
POTASSIUM SILVER CYANIDE	NONE	7722647	Y	N	Y	N	N	N
PROCARBAZINE	N-ISOPROPYL-ALPHA-(METHYLHYDRAZINE)-p-TOLUAMIDE	506616	Y	N	Y	N	N	N
PROCARBAZINE, HYDROCHLORIDE	NONE	671167	N	N	N	N	Y	Y
PROGESTERONE	NONE	366701	N	N	N	N	Y	Y
beta-PROIOLACTONE	2-OXETANONE; PROPIOLACTONE; BPL		N	N	N	N	Y	Y
PRONAMIDE	3,5-DICHLORO-N-(1,1-DIMETHYL -2-PROPYNYL)BENZAMIDE		N	N	N	N	Y	Y
1-PROPANAL, 2,3 EPOXY-	see GLYCIDYLALDEHYDE	239505585	N	N	Y	N	N	N
PROPANAL, 2-METHYL-2-(METHYLTHIO)-,0-[(METHYLAMINO)CARBONYL]OXIME	see ALDICARB							
1-PROPANAMINE	n-PROPYLAMINE							
1-PROPANAMINE, N-PROPYL-	see DIPROPYLAMINE	107108	N	N	Y	N	N	N
1-PROPANOL, 2,3-DIBROMO-PHOSPHATE (3:1)	see TRIS(2,3-DIBROMOPROPYL) PHOSPHATE							
1-PROPANOL, 2-METHYL-								
PROPANE, 1,2-DIBROMO-3-CHLORO-	see 1,2-DIBROMO-3-CHLOROPROPANE							
PROPANE, 2-NITRO-	2-NITROPROPANE							
PROPANE, 2,2'-OXYBIS(2-CHLORO-	BIS(2-CHLOROISOPROPYL) ETHER	79469	N	N	Y	N	Y	Y
1,3-PROPANE,SULTONE	1,2-OXATHIOLANE, 2,2-DIOXIDE	108601	N	Y	Y	N	N	N
PROPANEDINITRILE	see MALONONNITRILE	1120714	N	N	Y	N	Y	Y
PROPANENITRILE	see ACETONE CYANOHYDRIN							
PROPANENITRILE, 3-CHLORO-	see 3-CHLOROPROPIONITRILE							
1,3-PROPANETRIOL, TRINITRATE-	see NITROGLYCERINE							
PROPANOIC ACID	see PROPIONIC ACID							

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2-PROPANONE	see ACETONE							
2-PROPANONE, 1-BROMO-	see BROMOACETONE							
PROPARGITE	NONE	2312358	Y	N	Y	N	N	N
PROPARGYL ACHOHOL	2-PROPYN-1-ol	107197	N	N	Y	Y	N	Y
2-PROPENAMIDE	see ACRYLAMIDE							
PROPENE, 1,3-DICHLORO-,	see 1,3-DICHLOROPROPENE							
1-PROPENE, 1,1,2,3,3,3-HEXACHLORO-,	see HEXACHLOROPROPENE							
2-PROPENENITRILE	see ACRYLONITRILE							
2-PROPENENITRILE, 2-METHYL-,	see METHACRYLONITRILE							
PROPENEOXIDE	see PROPYLENE OXIDE							
2-PROPENOIC ACID	see ACRYLIC ACID							
2-PROPENOIC ACID, ETHYL ESTER	see ETHYL ACRYLATE							
2-PROPENOIC ACID, 2-METHYL-, ETHYL ESTER	see ETHYL METHACRYLATE							
2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER	see METHYL METHACRYLATE							
2-PROPEN-1-OL	see ALLYL ALCOHOL							
PROPIOLACTONE	see beta PROIOLACTONE							
PROPIONIC ACID	PROPANOIC ACID	79094	Y	N	Y	N	N	N
PROPIONIC ACID, 2-(2,4,5-TRICHLOROPHENOXY)	see SILVEX							
PROPIONIC ANHYDRIDE	NONE	123626	Y	N	Y	N	N	N
PROPENYLALCOHOL	see ALLYL ALCOHOL							
n-PROPYLAMINE	see 1-PROPANAMINE							
PROPYLENE DICHLORIDE	see 1,2-DICHLOROPROPANE							
PROPYLENE OXIDE	PROPENEOXIDE	75569	Y	N	Y	N	N	N
1,2-PROPYLENIMINE	see 2-METHYLAZILLRLIDINE							
PROPYLTHIOURACIL	NONE		N	N	N	N	Y	Y
2-PROPYN-1-OL	see PROPARGYL ALCOHOL							
PYRENE	BENZO(def)PHENANTHRENE	129000	N	Y	Y	N	N	N
PYRETHRINS	NONE	121299	Y	N	Y	N	N	N
		121211						
		8003347						
4-PYRIDINAMINE	see 4-AMINOPYRIDINE							
PYRIDINE	BENZO(b)PYRIDINE; 1-BENZAZINE	110861	N	N	Y	N	N	N
PYRIDINE, 2-[(2-(DIMETHYLAMINO)ETHYL)-2-THENYLAMINO]-	see METHAPYRILENE							
PYRIDINE, HEXAHYDOR-N-NITROSO	see N-NITROSOPIPERIDINE							
PYRIDINE, 2-METHYL	see 2-PICOLINE							
PYRIDINE, (S)-3-(1-METHYL-2-PYRROLIDINYL)-, &SALTS	see NICOTINE AND SALTS							
4(1H)-PYRIMIDINONE,2,3-DIHYDRO-6-METHYL-2-THIOXO-	see METHYLTHIOURACIL							
PYROPHOSPHORIC ACID, TETRAETHYL ESTER	see TETRA ETHYL PYROPHOSPHATE							
PYRROLE, TETRAHYDRO-N-NITROSO	see N-NITROSOPYRROLIDINE							
QUINOLINE	NONE	91225	Y	N	Y	N	N	N
RADIONUCLIDES	NONE		N	N	Y	N	N	N
RESERPINE	YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHYOXY-18-[(3,4,5-TRIMETHYOXY-BENZOYL)OXY]-METHYL ESTER	50555	N	N	Y	N	Y	Y
RESORCINOL	1,3-BENZENEDIOL; m-HYDROXYPHENOL	108463	Y	N	Y	N	N	N
RUBBER INDUSTRY (CERTAIN COMPOUNDS)			N	N	N	N	Y	N
SACCHARIN AND SALTS	1,2-BENZISOTHIAZOLIN-3-ONE,1,1-DIOXIDE, AND SALTS	81072	N	N	Y	N	Y	Y
SAFROLE	BENZENE, 1,2-METHYLENEDIOXY-4-ALLYL-,	94597	N	N	Y	N	Y	Y
SELENIOUS ACID	NONE	7783008	N	N	Y	N	N	N
SELENIUM	NONE	7782492	N	Y	Y	N	N	N
SELENIUM AND COMPOUNDS			N	Y	Y	N	N	N
SELENIUM DIOXIDE	SELENIUM OXIDE	7446084	Y	N	Y	N	N	N
SELENIUM DISULFIDE	SULFUR SELENIDE	7488564	N	N	Y	N	Y	N

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SELENIUM OXIDE	see SELENIUM DIOXIDE							
SELENOUREA	see CARBAMIMIDOSELENOIC ACID							
L-SERINE, DIAZOACETATE (ESTER)	see AZASERINE							
SILVER	NONE	7440224	N	Y	Y	N	N	N
SILVER AND COMPOUNDS			N	Y	Y	N	N	N
SILVER CYANIDE	NONE	506649	Y	N	Y	N	N	N
SILVER NITRATE	NONE	7761888	Y	N	Y	N	N	N
SILVEX	PROPIONIC ACID, 2-(2,4,5-TRICHLOROPHENOXY); 2,4,5-TP ACID	93721	Y	N	Y	N	N	N
SODIUM	NONE	7440235	Y	N	Y	N	N	N
SODIUM ARSENATE	NONE	7631892	Y	N	Y	N	N	N
SODIUM ARSENITE	NONE	7784465	Y	N	Y	N	N	N
SODIUM AZIDE	NONE	26628228	N	N	Y	N	N	N
SODIUM BICHROMATE	NONE	10588019	Y	N	Y	N	N	N
SODIUM BIFLUORIDE	NONE	1333831	Y	N	Y	N	N	N
SODIUM BISULFITE	NONE	7631905	Y	N	Y	N	N	N
SODIUM CHROMATE	NONE	7775113	Y	N	Y	N	N	N
SODIUM CYANIDE	NONE	143339	Y	N	Y	N	N	N
SODIUM DIPHENYL-4,4'-bis-azo-2°, 8°-AMINO-1°-NAPTHOL-3°, 6°DISULFONATE	see DIRECT BLUE 6							
SODIUM DODECYLBENZENE SULFONATE	NONE	25155300	Y	N	Y	N	N	N
SODIUM FLUORIDE	NONE	7681494	Y	N	Y	N	N	N
SODIUM HYDROSULFIDE	NONE	16721805	Y	N	Y	N	N	N
SODIUM HYROXIDE	NONE	1310732	Y	N	Y	N	N	N
SODIUM HYPOCHLORITE	NONE	7681529	Y	N	Y	N	N	N
		10022705						
SODIUM METHYLATE	NONE	124414	Y	N	Y	N	N	N
SODIUM NITRITE	NONE	7632000	Y	N	Y	N	N	N
SODIUM PHOSPHATE,DIBASIC	NONE	7558794	Y	N	Y	N	N	N
		10039324						
		10140655						
SODIUM PHOSPHATE, TRIBASIC	NONE	7601549	Y	N	Y	N	N	N
		7785844						
		10101890						
		10361894						
		7758294						
		10124568						
SODIUM SELENITE	NONE	1012188	Y	N	Y	N	N	N
		7782823						
SOOTS, TARS AND MINERAL OILS			N	N	N	N	Y	Y
STILBENEDIOL, alpha, alpha'-DIETHYL-	see DIETHYLSTILBESTROL							
STREPTOZOTOCIN	D-GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREIDO)-,	18883664	N	N	Y	N	Y	Y
STRONTIUM CHROMATE	NONE	7789062	Y	N	Y	N	N	N
STRONTIUM SULFIDE	NONE	1314961	N	N	Y	N	N	N
STRYCHNIDIN-10-ONE, AND SALTS	see STRYCHNINE AND SALTS							
STRYCHNIDIN-10-ONE, 2,3-DIMETHOXY	see BRUCINE							
STRYCHNINE AND SALTS	STRYCHNIDIN-10-ONE, AND SALTS	57249	Y	N	Y	Y	N	Y
STYRENE	NONE	100425	Y	N	Y	N	N	N
SUGAR OF LEAD	see ACETIC ACID, LEAD SALT							
SULFALLATE	CDEC; 2-CHLOROALLYL DIETHYLDITHIOCARBAMATE	95067	N	N	N	N	Y	Y
SULFUR HYDRIDE	see HYDROGEN SULFIDE							
SULFUR MONOCHLORIDE	NONE	12771083	Y	N	Y	N	N	N
SULFUR PHOSPHIDE	see PHOSPHORUS SULFIDE							
SULFUR SELENIDE	see SELENIUM DISULFIDE							

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SULFURIC ACID	NONE	7664939	Y	N	Y	N	N	N
SULFURIC ACID, DIMETHYL ESTER	see DIMETHYL SULFATE							
SULFURIC ACID, THALLUM(1)SALT	THALLIUM(1)SULFATE	7446186	Y	N	Y	N	N	N
SULFUROUS ACID 2-(p-TERT-BUTYLPHENOXY)-1-METHYLETHYL-2-CHLOROETHYL ESTER	see ARAMITE	10031591						
2,4,5-T	see 2,4,5-T ACID							
2,4,5-T ACID	2,4,5-T; 2,4,5-TRICHLOROPHENOXY-ACETIC ACID							
2,4,5-T AMINES	NONE	93765	Y	N	Y	N	N	N
		2008460	Y	N	Y	N	N	N
		6369966						
		6369977						
		1319728						
		3813147						
2,4,5-T ESTERS	NONE	93798	Y	N	Y	N	N	N
		2545597						
		61792072						
		1928478						
		25168154						
2,4,5-TP ACID	see SILVEX							
2,4,5-T SALTS	NONE							
TDE	see DICHLORODIPHENYL TRICHLOROETHANE	13560991	Y	N	Y	N	N	N
1,2,4,5-TETRACHLOROBENZENE	BENZENE, 1,2,4,5-TETRACHLORO-							
2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD)	NONE	95943	N	N	Y	N	N	N
1,1,1,2-TETRACHLOROETHANE	see ETHANE 1,1,1,2-TETRACHLORO-	1746016	N	Y	Y	N	Y	Y
1,1,2,2-TETRACHLOROETHANE	see ETHANE, 1,1,2,2-TETRACHLORO-							
TETRACHLOROETHYLENE	ETHENE,1,1,2,2-TETRACHLORO-							
2,3,4,6-TETRACHLOROPHENOL	see PHENOL, 2,3,4,6-TETRACHLORO-	127184	N	Y	Y	N	N	N
TETRAETHYLDITHIOPYRPHOSPHATE	see DITHIOPYRPHOSPORIC ACID TETERA ESTER							
TETRAETHYL LEAD	PLUMBANE, TETRAETHYL; TEL							
TETRAETHYL PYROPHOSPHATE	PYROPHOSPHORIC ACID, TETRAETHYL ESTER	78002	Y	N	Y	Y	N	Y
TETRAHYDROFURAN	FURAN, TETRAHYDRO-	107493	Y	N	Y	Y	N	Y
TETRAMETHYLDIAMINOBENZOPHENONE	see MICHLER'S KETONE	109999	N	N	Y	N	N	N
TETRANITROMETHANE	METHANE, TETRANITRO-							
TETRAPHOSPHORIC ACID, HEXAETHYL ESTER	see HEXAETHYL TETRAPHOSPHATE	509148	N	N	Y	Y	N	Y
THALLIC OXIDE	THALLIUM OXIDE							
THALLIUM	NONE	1314325	N	N	Y	N	N	N
THALLIUM ACETATE	see ACETIC ACID THALLIUM (1) SALT	7440280	N	Y	Y	N	N	N
THALLIUM AND COMPOUNDS								
THALLIUM(1)CARBONATE	see CARBONIC ACID, DITHALLIUM(L) SALT		N	Y	Y	N	N	Y
THALLIUM(1) CHLORIDE	NONE							
THALLIUM(1) NITRATE	NONE	7791120	N	N	Y	N	N	N
THALLIUM OXIDE	see THALLIC OXIDE	10102451	N	N	Y	N	N	N
THALLIUM(1) SELENIDE	NONE							
THALLIUM(1)SULFATE	see SULFURIC ACID, THALLIUM(1)SALT	12039520	N	N	Y	N	N	N
THIOACETAMIDE	see ETHANETHIOAMIDE							
THIOEPTA	see TRIS(1-AZIRIDINYL) PHOSPHINE SULFIDE							
THIOFANOX	3,3-DIMETHYL-1-(METHYLTHIO)-2-BUTANONE,O-[(METHYLAMINO) CARBONYL] OXIDE	39196184	N	N	Y	Y	N	Y
THIOMETHANOL	see METHANETHIOL							
THIOMIDODICARBONIC DIAMIDE	see 2,4-DITHIOBIURET							
THIOPHENOL	see BENZENETHIOL							
THIOSEMICARBAZIDE	see HYDRAZINECARBOTHIOAMIDE							
THIOUREA	see CARBAMIDE, THIO-							

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THIOUREA, (2-CHLOROPHENYL)-	see 1-(o-CHLOROPHENYL) THIOUREA							
THIOUREA, 1-NAPHTHALENL	see alpha-NAPHTHYLTHIOUREA							
THIOUREA, PHENYL	see N-PHENYLTHIOUREA							
THIRAM	BIS(DIMETHYLTHIOCARBAMOYL) DISULFIDE	137268	N	N	Y	N	N	N
THORIUM DIOXIDE			N	N	N	N	Y	N
TOLUENE	BENZENE, METHYL-,	108883	Y	Y	Y	N	N	N
TOLUENEDIAMINE	DIAMINOTOLUENE	95807	N	N	Y	N	N	N
		25376458						
		496720						
		823405						
TOLUENE DIISOCYANATE	BENZENE, 2,4-DIISOCYANATOMETHYL	584849	N	N	Y	N	Y	Y
		91087						
		26471625						
O-TOLUIDINE	see 2-AMINO-1-METHYL BENZENE							
o-TOLUIDINE HYDROCHLORIDE	see BENZENAMINE, 2-METHYL-, HYDROCHLORIDE							
p-TOLUIDINE	see 4-AMINO-1-METHYL BENZENE							
TOXAPHENE	see CAMPHENE, OCTACHLORO							
2,4,5-TP ACID ESTERS	NONE	32534955	Y	N	Y	N	N	N
1H-1,2,4-TRIAZOL-3-AMINE	see AMITROLE							
TRICHLORFON	NONE	52686	Y	N	Y	N	N	N
1,2,4-TRICHLOROBENZENE	NONE	120821	N	Y	Y	N	N	N
TRICHLOROETHANAL	ACETALDEHYDE, TRICHLORO-; CHLORAL	75876	N	N	Y	N	N	N
1,1,1-TRICHLOROETHANE	see METHYL CHLOROFORM							
1,1,2-TRICHLOROETHANE	see ETHANE 1,1,2-TRICHLORO-							
TRICHLOROETHENE	TRICHLORETHYLENE; ETHYLENETRICHLORIDE	79016	Y	Y	Y	N	N	N
TRICHLOROETHYLENE	see TRICHLOROETHENE							
TRICHLORMETHANESULFENYL CHLORIDE	METHANESULFENYL CHLORIDE, TRICHLORO-	594423	N	N	Y	N	N	N
TRICHLOROMETHANETHIOL	NONE		N	N	N	Y	N	Y
TRICHLOROMONOFLUORO-METHANE	METHANE, TRICHLOROFLUORO-	75694	N	N	Y	N	N	N
TRICHLOROPHENOL	NONE	25167822	Y	N	Y	N	Y	Y
2,3,4-		15950660						
2,3,5-		933788						
2,3,6-		933755						
2,4,5-	PHENOL, 2,4,5-TRICHLORO-	95954						
2,4,6-	PHENOL, 2,4,6-TRICHLORO-	88062						
3,4,5-		609198						
2,4,5-TRICHLOROPHENOXY-ACETIC ACID	see 2,4,5-T ACID							
TRIETHANOLAMINE DODECYLBENZENESULFONATE	NONE	27323417	Y	N	Y	N	N	N
TRIETHYLAMINE	NONE	121448	Y	N	Y	N	N	N
TRIGLYCINE	see NITRILOTRIACETIC ACID							
TRIMETHYLAMINE	NONE	75503	Y	N	Y	N	N	N
sym-TRINITROBENZENE	see BENZENE, 1,3,5-TRINITRO-							
1,3,4-TRIOXANE, 2,4,6-TRIMETHYL	see PARALDEHYDE							
TRIS(1-AZIRIDINYL) PHOSPHINE SULFIDE	THIOEPTA	52240	N	N	N	N	Y	Y
TRIS(2,3-DIBROMOPROPYL) PHOSPHATE	1-PROPANOL, 2,3-DIBROMO- PHOSPHATE (3:1)	126727	N	N	Y	N	Y	Y
TRYPAN BLUE	2,7-NAPHTHALENEDISULFONIC ACID,3,3'-[3,3'-DIMETHYL-(1,1'-BIPHENYL)-4,4'-DIYL)-BIS(AZO)]BIS(5-AMINO-4-HYDROXY)-TETRASODIUM SALT	72571	N	N	Y	N	N	N
UNLISTED HAZARDOUS WASTES CHARACTERISTIC OF EP TOXICITY.			N	N	Y	N	N	N
Characteristic of Ignitability			N	N	Y	N	N	N
Characteristic of Corrosivity			N	N	Y	N	[illegible]	N
Characteristic of Reactivity			N	N	Y	N	[illegible]	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
Characteristic of EP Toxicity								
Arsenic			N	N	Y	N	N	N
Barium			N	N	Y	N	N	N
Cadmium			N	N	Y	N	N	N
Chromium			N	N	Y	N	N	N
Lead			N	N	Y	N	N	N
Mercury			N	N	Y	N	N	N
Selenium D010			N	N	Y	N	N	N
Silver			N	N	Y	N	N	N
Endrin			N	N	Y	N	N	N
Lindane			Y	N	Y	N	N	N
Methoxychlor			Y	N	Y	N	N	N
Toxaphene			Y	N	Y	N	N	N
2,4-D			Y	N	Y	N	N	N
2,4,5-TP			Y	N	Y	N	N	N
URACIL, 5-[BIS(2-CHLOROETHYL)AMINO-,	see URACIL MUSTARD							
URACIL MUSTARD	URACIL, 5-[BIS(2-CHLOROETHYL)AMINO]-,	66751	N	N	Y	N	N	N
URANYL ACETATE	NONE	541093	Y	N	Y	N	N	N
URANYL NITRATE	NONE	10102064	Y	N	Y	N	N	N
URETHANE	ETHYL CARBAMATE	51796	N	N	N	N	Y	Y
VANADIC ACID, AMMONIUM SALT	see AMMONIUM VANADATE							
VANADIUM(V)OXIDE	see VANADIUM PENTAOXIDE							
VANADIUM PENTAOXIDE	VANADIUM(V) OXIDE	1314621	Y	N	Y	N	N	N
VANADYL SULFATE	NONE	2774136	Y	N	Y	N	N	N
VINYL ACETATE	ETHENYLETHANOTE	108054	Y	N	Y	N	N	N
VINYL CHLORIDE	ETHANE, CHLORO-,; MVC	75014	N	Y	Y	N	Y	Y
VINYLIDENE CHLORIDE	see 1,1-DICHLOROETHYLENE							
WARFARIN	3-(ALPHA-ACETANYLBENZYL)-4-HYDROXYCOUMARIN AND SALTS	81812	N	N	Y	Y	N	Y
XYLENE (MIXED)	BENZENE, DIMETHYL	1330207	Y	N	Y	N	N	N
m-	m-	108383						
o-	o-	95476						
p-	p-	106423						
XYLENOL	NONE	1300716	Y	N	Y	N	N	N
XENYLAMINE	see 4-AMINOBIPHENYL							
YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXY-BENZOYL)OXY]-METHYL ESTER	see RESERPINE							
ZINC	NONE	7440666	N	Y	Y	N	N	N
ZINC AND COMPOUNDS			N	Y	Y	N	N	N
ZINC ACETATE	NONE	557346	Y	N	Y	N	N	N
ZINC AMMONIUM CHLORIDE	NONE	52625258	Y	N	Y	N	N	N
ZINC BORATE	NONE	1332076	Y	N	Y	N	N	N
ZINC BROMIDE	NONE	7699458	Y	N	Y	N	N	N
ZINC CARBONATE	NONE	3486359	Y	N	Y	N	N	N
ZINC CHLORIDE	NONE	7646857	Y	N	Y	N	N	N
ZINC CYANIDE	NONE	557211	Y	N	Y	N	N	N
ZINC FLUORIDE	NONE	7783495	Y	N	Y	N	N	N
ZINC FORMATE	NONE	557415	Y	N	Y	N	N	N
ZINC HYDROSULFITE	NONE	7779864	Y	N	Y	N	N	N
ZINC NITRATE	NONE	7779886	Y	N	Y	N	N	N
ZINC PHENOSULFONATE	NONE	127822	Y	N	Y	N	N	N
ZINC PHOSPHIDE	NONE	1314847	Y	N	Y	N	N	N
ZINC SILCOFLUORIDE	NONE	16871719	Y	N	Y	N	N	N
ZINC SULFATE	NONE	7733020	Y	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
ZIRCONIUM NITRATE	NONE	13746899	Y	N	Y	N	N	N
ZIRCONIUM POTASSIUM FLUORIDE	NONE	16923958	Y	N	Y	N	N	N
ZIRCONIUM SULFATE	NONE	14644612	Y	N	Y	N	N	N
ZIRCONIUM TETRACHLORIDE	NONE	10026116	Y	N	Y	N	N	N
F001			N	N	Y	N	N	N
The following spent halogenated solvents used in degreasing and sludges from the recovery of these solvents in degreasing operations:								
a) Tetra chloroethylene		127184						
b) Trichloroethylene		79016						
c) Methylene chloride		75092						
d) 1,1,1-Trichloroethane		71556						
e) Carbon tetrachloride		56235						
f) Chlorinated fluorocarbons		(N.A.)						
F002			N	N	Y	N	N	N
The following spent halogenated solvents and the still bottoms from the recovery of these solvents:								
a) Tetrachloroethylene		127184						
b) Methylene Chloride		75092						
c) Trichloroethylene		79016						
d) 1,1,1-Trichloroethane		71556						
e) Chlorobenzene		108907						
f) 1,1,2-Trichloro-1,2,2-trifluoroethane		76131						
g) o-dichlorobenzene		106467						
h) trichlorofluoromethane		75694						
F003			N	N	Y	N	N	N
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:								
a) Xylene		1330207						
b) Acetone		67641						
c) Ethyl acetate		141786						
d) Ethylbenzene		100414						
e) Ethyl ether		60297						
f) Methyl isobutyl ketone		108101						
g) n-Butyl alcohol		71363						
h) Cyclohexanone		108941						
i) Methanol		67561						
F004			N	N	Y	N	N	N
The following spent non-halogenated slovents and still bottoms from the recovery of these solvents: a) Cresols/Cresylic acid b) Nitrobenzene								
F005			N	N	Y	N	N	N
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:								
a) Toluene								
b) Methyl ethyl ketone								
c) Carbo[illegible]isulfide								
d) Isobu[illegible]l								

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
e) Pyridine								
F006			N	N	Y	N	N	N
Wastewater treatment sludges from electroplating operations except from the following processes 1) Sulfuric acid anodizing of aluminum 2) tin plating on carbon steel; 3) zinc plating (segregated basis) on carbon steel; 4) aluminum or zinc-aluminum plating on carbon steel; 5)cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and 6) chemical etching and milling of aluminum								
F007			N	N	Y	N	N	N
Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions)								
F008			N	N	Y	N	N	N
Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges)								
F009			N	N	Y	N	N	N
Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions)								
F010			N	N	Y	N	N	N
Quenching bath sludge from oil baths frommetal heat treating operations where cyanides are used in the process (except for precious metal heat treating quenching bath sludges)								
F011			N	N	Y	N	N	N
Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning)								
F012			N	N	Y	N	N	N
Quenching wastewater treatment sludges from metal heat treating operations where cyanides used in the process (except for precious metals heat treating quenching wastewater treatment sludges)								
F019			N	N	Y	N	N	N
Wastewater treatment sludges from the chemical conversion coating of aluminum								
F020			N	N	Y	N	N	N
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the								

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol)								
F021			N	N	Y	N	N	N
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, of component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives								
F022			N	N	Y	N	N	N
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in aformulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions								
F023			N	N	Y	N	N	N
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a process) of tri- and tetrachlorophenols (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol)								
F024			N	N	Y	N	N	N
Wastes, including but not limited to distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of chlorinated aliphalic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters aand filter aids, spent dessicants(sic), wastwater,wastewater treatment sludges, spent cataylsts, and wastes listed in 261.32)								
F026			N	N	Y	N	N	N
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline								

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
K014 Bottoms from the acetonitrile purification column in the production of acrylonitrile			N	N	Y	N	N	N
K015 Still bottoms from the distillation of benzyl chloride			N	N	Y	N	N	N
K016 Heavy ends or distillation residues from the production of carbon tetrachloride			N	N	Y	N	N	N
K017 Heavy ends(still bottoms) from the purification column in the production of epichlorohydrin			N	N	Y	N	N	N
K018 Heavy ends from the fractionation column in ethyl chloride production			N	N	Y	N	N	N
K019 Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production			N	N	Y	N	N	N
K020 Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production			N	N	Y	N	N	N
K021 Aqueous spent antimony catalyst waste from fluoromethanes production			N	N	Y	N	N	N
K022 Distillation bottom tars from the production of phenol/acetone from cumene			N	N	Y	N	N	N
K023 Distillation light ends from the production of phthalic anhydeide from naphthalene			N	N	Y	N	N	N
K024 Distillation bottoms from the production of phthalic anhydride from naphthalene			N	N	Y	N	N	N
K025 Distillationbottoms fromthe production of nitrobenzene by the nitration of benzene			N	N	Y	N	N	N
K026 Stripping still tails from the production of methyl ethyl pyridines			N	N	Y	N	N	N
K027 Centrifuge and distillation residues from toluene diisocyanate production			N	N	Y	N	N	N
K028 Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane			N	N	Y	N	N	N
K029 Waste from the product steam stripper in the production of 1,1,1-trichloroethane			N	N	Y	N	N	N
K030 Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene			N	N	Y	N	N	N
K031			N	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
conditions.								
F027			N	N	Y	N	N	N
Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)								
F028			N	N	Y	N	N	N
Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.								
K001			N	N	Y	N	N	N
Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use cresote and/or pentachlorophenol								
K002			N	N	Y	N	N	N
Wastewater treatment sludge from the production of chrome yellow and orange pigments								
K003			N	N	Y	N	N	N
Wastewater treatment sludge from the production of molybdate orange pigments								
K004			N	N	Y	N	N	N
Wastewater treatment sludge from the production of zinc yellow pigments								
K005			N	N	Y	N	N	N
Wastewater treatment sludge from the production of chrome green pigments								
K006			N	N	Y	N	N	N
Wastewater treatment sludge from the production of chrome green pigments (anhydrous and hydrated)								
K007			N	N	Y	N	N	N
Wastewater treatment sludge from the production of iron blue pigments								
K008			N	N	Y	N	N	N
Oven residue from the production of chrome oxide green pigments								
K009			N	N	Y	N	N	N
Distillation bottoms from the production of acetaldehyde from ethylene								
K010			N	N	Y	N	N	N
Distillation side cuts from the production of acetaldehyde from ethylene								
K011			N	N	Y	N	N	N
Bottom stream from the wastewater stripper in production of acrylonitrile								
K013			N	N	Y	N	N	N
Bottom s[illegible] from the acetonitrile column in the pro[illegible]tion of acrylonitrile								

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 2430
Decanter tank tar sludge from coking operations K093			N	N	Y	N	N	N
Distillation light ends from the production of phthalic anhydride from ortho-xylene K094			N	N	Y	N	N	N
Distillation bottoms from the produciton of phthalic anhydride from ortho-xylene K095			N	N	Y	N	N	N
Distillation bottoms from the production of 1,1,1-trichloroethane K096			N	N	Y	N	N	N
Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane K097			N	N	Y	N	N	N
Vacuum stripper dicharge from the chlordane chlorinator in the production of chlordane K098			N	N	Y	N	N	N
Untreated process wastewater from the production of toxaphene K099			N	N	Y	N	N	N
Untreated wastewater from the production of 2,4-D K100			N	N	Y	N	N	N
Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting(Components of this waste are identical with those of K069) K101			N	N	Y	N	N	N
Distillation tar residues from the distillation of aniline-bsed compounds of veterinary pharmaceuticals from arsenic of organo-arsenic compounds K102			N	N	Y	N	N	N
Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic of organo-arsenic compounds K103			N	N	Y	N	N	N
Process residues from aniline extraction from the production of aniline K104			N	N	Y	N	N	N
Combined wastewater streams generated from nitrobenzene/anniline chlorobenzenes K105			N	N	Y	N	N	N
Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes K106			N	N	Y	N	N	N
Wastewater treatment sludge from the mercury cell process in chlorine production K111			N	N	Y	N	N	N
Product washwaters from the production of dinitrotoluene via nitration of toluene			N	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
K112 Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene			N	N	Y	N	N	N
K113 Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene			N	N	Y	N	N	N
K114 Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene			N	N	Y	N	N	N
K115 Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene			N	N	Y	N	N	N
K116 Organic condensate form the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine			N	N	Y	N	N	N
K117 Wastewater from the reaction vent gas scrubber in the production of ethylene bromide via bromination of ethene			N	N	Y	N	N	N
K118 Spent absorbent solids from the puification of ethylene bromide in the production of ethylene bromide			N	N	Y	N	N	N
K136 Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene			N	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
By-product salts generated in the production of MSMA and cacodylic acid								
K032			N	N	Y	N	N	N
Wastewater treatment sludge from the production of chlordane								
K033			N	N	Y	N	N	N
Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane								
K034			N	N	Y	N	N	N
Filter solids from the filtration of Hexachlorocyclopentadiene in the produciton of chlordane								
K035			N	N	Y	N	N	N
Wsatewater treatment sludges generated in the production of creosote								
K036			N	N	Y	N	N	N
Still bottoms from toluene reclamation distillation in the production of disulfoton								
K037			N	N	Y	N	N	N
Wastewater treatment sludges from the production of disulfoton								
K038			N	N	Y	N	N	N
Wastewater from the washing adn stripping of phorate production								
K039			N	N	Y	N	N	N
Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate								
K040			N	N	Y	N	N	N
Wastewater treatment sludge from the production of phorate								
K041			N	N	Y	N	N	N
Wastewater treatment sludge from the production of toxaphene								
K042			N	N	Y	N	N	N
Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the produciton of 2,4,5-T								
K043			N	N	Y	N	N	N
2,6-Dichlorophenol waste from, the production of 2,4-D								
K044			N	N	Y	N	N	N
Wastewater treatment sludges from the manufacturing and processing of explosives								
K045			N	N	Y	N	N	N
Spent carbon from the treatment of wastewater containing explosives								
K046			N	N	Y	N	N	N
Wastewater treatment sludges from the manufacturing formulation and loading of lead-based initiating compounds								
K047			N	N	Y	N	N	N

CHEMICAL NAME	OTHER PARAMETER NAMES	CASRN	CWA 311(b)(4)	CWA 307(a)	CERCLA 302.4	RCRA 261.33e	USCODE 241b.4	ARS 243D
Pink/red water from TNT operations								
K048			N	N	Y	N	N	N
Dissolved air flotation (DAF) float from the petroleum refining industry								
K049			N	N	Y	N	N	N
Slop oil emulsion solids from the petroleum refining industry								
K050			N	N	Y	N	N	N
Heat exchanger bundle cleaning sludge from the petroleum refining industry								
K051			N	N	Y	N	N	N
API separator sludge from the petroleum refining industry								
K052			N	N	Y	N	N	N
Tank bottoms (leaded) from the petroleum refining industry								
K060			N	N	Y	N	N	N
Ammonia still lime sludge from coking operations								
K061			N	N	Y	N	N	N
Emission control dust/sludge from the primary production ofsteel in electric furnaces								
K062			N	N	Y	N	N	N
Spent pickle liquor from steel finishing operations								
K069			N	N	Y	N	N	N
Emission control dust/sludge from secondary lead smelting								
K071			N	N	Y	N	N	N
Brine purification muds from the mercury cell process in chlorine production, where seperately prepurified brine is not used								
K073			N	N	Y	N	N	N
Chlorinated hydroarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production								
K083			N	N	Y	N	N	N
Distillation bottoms from aniline extraction								
K084			N	N	Y	N	N	N
Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds								
K085			N	N	Y	N	N	N
Distillation or fractionation column bottoms from the production of chlorobenzenes								
K086			N	N	Y	N	N	N
Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lea								
K087			N	N	Y	N	N	N

TRUCK WASH
GUIDELINES

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY - (ADEQ)
OFFICE OF WATER QUALITY, WATER PERMITS UNIT
TRUCK/VEHICLE WASH FACILITY GUIDELINES

INTRODUCTION:

The purpose of these guidelines is to ensure the proper operation of wash facility's wastewater disposal, and therefore, minimize adverse impact to public health and the environment. The guidelines address technical aspects of the operational and disposal methods for the wastewater treatment. In addition, they outline facility-specific information that must be supplied to obtain an Aquifer Protection Permit (APP). These Guidelines are intended to be used as a reference. If you have any questions concerning the technical requirements or applicability to your facility, Please call the ADEQ, Water Permits Unit at (602) 257-2270.

SCOPE:

These guidelines pertain to all truck/vehicle wash facilities that discharge chemicals used in their washing operation to the surface and subsurface environment. Alternatives for facility operations and methods of disposal are also included.

CHEMICAL USE AND TREATABILITY:

1. *Facilities using synthetic surfactants.detergents and aluminum brightener which are anionic, nonionic, and cationic syndets, must provide the department with data on the chemical biodegradability and treatability by their proposed treatment and disposal method.*

2. *The permittee must submit appropriate Material Safety Data Sheets (MSDS) for the product(s) used in the washing operation.*

3. *The permittee should solicit the following information from chemical manufacturers or suppliers for inclusion in the Aquifer Protection Permit application:*

   a. *Toxicity*
   b. *Water solubility*
   c. *Rate of biodegradation*
   d. *Soil absorbtion*
   e. *Dissipation studies, including hydrolysis, photolysis, aerobic and anaerobic soil metabolism, and field dissipation, under similar environmental use conditions, if that information exists.*
   f. *The treatability of the chemical along with recommended treatment methods.*

4. *The above information may not be required if any of the following treatment/disposal methods are used:*

   a. *An extended aeration wastewater treatment plant*
   b. *A non-discharging recycling system*
   c. *A surface impoundment incorporating a liner system compatible with the chemicals of concern*
   d. *Changing to a non-toxic and biodegradable compound such as a linear alkyl sulfonate (LAS) product. However, depending on the site hydrological characteristics, alternatives a. through c. may be preferred.*
   e. *Discharge to a municipal sewer line*
   f. *Neutralization of pH and fluoride removal if hydrofluoric acid is used*

FACILITY OPERATION:

Pre-treatment of the wastewater should include primary settlement, followed by an industrial interceptor or oil/water separator, and subsequent treatment or disposal as approved by the department.

ARIZONA
REVISED STATUTES

ANNOTATED

1993
Cumulative Pocket Part

For Use In 1993–1994

Replacing 1992 Pocket Part in back of volume

Volume 15B

Title 48
§§ 48–2301 to 48–End
Title 49

Including Legislation Enacted In The First Regular
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TITLE 49

THE ENVIRONMENT

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CHAPTER 1

GENERAL PROVISIONS

ARTICLE 1. DEPARTMENT OF ENVIRONMENTAL QUALITY

Section

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49–109. Certificate of disclosure of violations; definition; remedies.
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ARTICLE 4. INTERAGENCY COMMITTEE ON ENVIRONMENTAL EDUCATION

49–161. Interagency committee on environmental education; appointment; meetings; duties.

Historical and Statutory Notes

Laws 1989, Ch. 238, § 11, provides:

"Sec. 11. Joint legislative study committee on hazardous material, hazardous waste, used and waste oil and blends, and medical wastes

"A. A joint legislative study committee on hazardous material, hazardous waste, used and waste oil and blends, and medical wastes is established. The committee consists of the chairman of the senate transportation committee, the chairman of the senate government committee, three members of the senate appointed by the president of the senate, the chairman of the house transportation committee, the chairman of the house environment committee and three members of the house of representatives appointed by the speaker of the house of representatives. The committee, by majority vote, shall select a chairman from among its members.

"B. The committee shall investigate hazardous materials, with special emphasis on authority and the coordination of regulations relating to hazardous materials between state agencies, enforcement and regulation of the transportation of hazardous materials, and the feasibility of establishing a comprehensive state hazardous materials management program. The committee shall also review current statutes and regulations related to hazardous waste, used and waste oil and blends, and medical wastes, including the degree to which such wastes are being imported into the state and the reasons they are being imported.

"C. The committee shall complete its work on or before December 31, 1989 and shall submit a report of its findings and recommendations for legislation to the president of the senate and the speaker of the house of representatives.

"D. This section expires from and after December 31, 1989."

Executive Order

Executive Order No. 90–10, dated May 18, 1990, created the Governor's Task Force on Environmental Impact Assessments.

Cross References

Oil and gas, declaration of policy, see § 27–502.

Administrative Code References

Environmental quality, department, administration, see A.A.C. R18–2–101 et seq.

ARTICLE 1. DEPARTMENT OF ENVIRONMENTAL QUALITY

Termination Under Sunset Law

The department of environmental quality shall terminate on July 1, 1998, unless continued. See §§ 41–2998.16 and 41–2955.

Title 49, Chapter 1, Article 1, relating to the department of environmental quality is repealed on January 1, 1999 by § 41–2998.16.

Historical and Statutory Notes

Laws 1989, 225, § 10, subsec. B, which purportedly repealed Title 49, Ch. 1, Art. 1 effective January 1, 1999, was deleted in the amendment by Laws 1991, Ch. 8, § 11.

Law Review Commentaries

Liability insurance in environmental litigation: An overview of selected issues in developing Arizona law. Nicholas J. Walwork, Lucas J. Narducci and Troy B. Froderman, 22 Ariz.St.L.J. 367 (1990).

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–101. Definitions

Administrative Code References

Public and semipublic water supply systems, see A.A.C. R18–4–201 et seq.

§ 49–102. Department of environmental quality; director; deputy director; assistant directors; divisions

Law Review Commentaries

Avoiding environmental liabilities: A primer for business. Steven M. Wheeler & Edward Z. Fox, 23 Ariz.St.L.J. 483 (1991).

§ 49–104. Powers and duties of the department and director

A. The department shall:

1. Formulate policies, plans and programs designed to protect the environment of this state and to effectuate this title.

2. Stimulate and encourage all local, state, regional and federal governmental agencies and all private persons and enterprises that have similar and related objectives and purposes,

cooperate with those agencies, persons and enterprises and correlate department plans, programs and operations with those of the agencies, persons and enterprises.

3. Conduct research on its own initiative or at the request of the governor, the legislature or state or local agencies pertaining to any department objectives.

4. Provide information and advice on request of any local, state or federal agencies and private persons and business enterprises on matters within the scope of the department.

5. Consult with and make recommendations to the governor and the legislature on all matters concerning department objectives.

6. Make annual reports to the governor and the legislature on its activities, its finances and the scope of its operations.

7. Promote and coordinate the management of air resources to assure their protection, enhancement and balanced utilization consistent with the environmental policy of this state.

8. Promote and coordinate the protection and enhancement of the quality of water resources consistent with the environmental policy of this state.

9. Encourage industrial, commercial, residential and community development which maximizes environmental benefits and minimizes the effects of less desirable environmental conditions.

10. Assure the preservation and enhancement of natural beauty and man-made scenic qualities.

11. Provide for the prevention and abatement of all water and air pollution including that related to particulates, gases, dust, vapors, noise, radiation, odor, nutrients and heated liquids.

12. Promote and recommend methods for the recovery, recycling and reuse or, if recycling is not possible, the disposal of solid wastes consistent with sound health, scenic and environmental quality policies.

13. Prevent pollution through the regulation of the storage, handling and transportation of solids, liquids and gases which may cause or contribute to pollution.

14. Promote the restoration and reclamation of degraded or despoiled areas and natural resources.

15. Assist the department of health services in recruiting and training state, local and district health department personnel.

16. Participate in the state civil defense program and develop the necessary organization and facilities to meet wartime or other disasters.

B. The department, through the director, shall:

1. Contract for the services of outside advisers, consultants and aides reasonably necessary or desirable to enable the department to adequately perform its duties.

2. Contract and incur obligations reasonably necessary or desirable within the general scope of department activities and operations to enable the department to adequately perform its duties.

3. Utilize any medium of communication, publication and exhibition in disseminating information, advertising and publicity in any field of its purposes, objectives or duties.

4. Adopt rules deemed necessary or desirable to govern its procedures and business.

5. Contract with other agencies including laboratories in furthering any department program.

6. Use monies, facilities or services to provide matching contributions under federal or other programs which further the objectives and programs of the department.

7. Accept gifts, grants, matching monies or direct payments from public or private agencies or private persons and enterprises to conduct programs which are consistent with the general purposes and objectives of this chapter.

8. Provide for the examination of any premises if the director has reasonable cause to believe that a violation of any environmental law or rule exists or is being committed on the premises.

9. Supervise sanitary engineering facilities and projects in this state, authority for which is vested in the department, and own or lease land on which sanitary engineering facilities are located, and operate the facilities, if the director determines that owning, leasing or operating is necessary for the public health, safety or welfare.

10. Adopt and enforce rules relating to plans and specifications for constructing, improving and operating sanitary engineering and other facilities for disposing of solid, liquid or gaseous deleterious matter, requiring that the plans and specifications be first approved by the director or his designated agent before any work is begun, requiring inspection of the projects during construction and enforcing compliance with the approved plans and specifications.

11. Define and prescribe reasonably necessary rules regarding the water supply, sewage disposal and garbage collection and disposal for subdivisions. The rules shall:

(a) Provide for minimum sanitary facilities to be installed in the subdivision and may require that water systems plan for future needs and be of adequate size and capacity to deliver specified minimum quantities of drinking water and to treat all sewage.

(b) Provide that the plans and specifications showing or describing the water supply, sewage disposal and garbage collection facilities be submitted with a fee to the department for review and that no lots in any subdivision be offered for sale before compliance with the standards and rules has been demonstrated by approval of the plans and specifications by the department.

12. Prescribe reasonably necessary measures to prevent pollution of water used in public or semipublic swimming pools and bathing places and to prevent deleterious conditions at such places. The rules shall prescribe minimum standards for the design of and for sanitary conditions at any public or semipublic swimming pool or bathing place and provide for abatement as public nuisances of premises and facilities which do not comply with the minimum standards. The rules shall be developed in cooperation with the director of the department of health services and shall be consistent with the rules adopted by the director of the department of health services pursuant to § 36–136, subsection H, paragraph 11.

13. Prescribe reasonable rules regarding sewage collection, treatment, disposal and reclamation systems to prevent the transmission of sewage borne or insect borne diseases. The rules shall:

(a) Prescribe minimum standards for the design of sewage collection systems, treatment, disposal and reclamation systems and for operating the systems.

(b) Provide for inspecting the premises, systems and installations and for abating as a public nuisance any collection system, process, treatment plant, disposal system or reclamation system which does not comply with the minimum standards.

(c) Require that the plans and specifications for all sewage collection systems, sewage collection system extensions, treatment plants, processes, devices, equipment, disposal systems, on-site wastewater treatment facilities and reclamation systems be submitted with a fee for review to the department and may require that such plans and specifications anticipate and provide for future sewage treatment needs.

(d) Prohibit construction, reconstruction, installation or initiation of any sewage collection system, sewage collection system extension, treatment plant, process, device, equipment, disposal system, on-site wastewater treatment facility or reclamation system before the approval of the plans and specifications and of the construction by the department after payment of the appropriate fees.

14. Prescribe reasonably necessary rules regarding excreta storage, handling, treatment, transportation and disposal. The rules shall:

(a) Prescribe minimum standards for human excreta storage, handling, treatment, transportation and disposal and shall provide for inspection of premises, processes and vehicles and

for abating as public nuisances any premises, processes or vehicles which do not comply with the minimum standards.

(b) Provide that vehicles transporting human excreta from privies, septic tanks, cesspools and other treatment processes shall be licensed by the department subject to compliance with the rules.

15. Perform the responsibilities of implementing and maintaining a data automation management system to support the reporting requirements of title III, of the superfund amendments and reauthorization act of 1986 (P.L. 99–499) [1] and title 26, chapter 2, article 3.[2]

C. The department may charge fees to cover the costs of all inspections it performs to insure compliance with rules adopted under subsection B, paragraph 11 or 13, except that state agencies are exempt from paying the fees. Monies collected pursuant to subsection B, paragraphs 11 and 13 shall be deposited in the state general fund. After appropriate fees are paid under such paragraphs, the department may approve construction of any facility.

D. The director may:

1. If he has reasonable cause to believe that a violation of any environmental law or rule exists or is being committed, inspect any person or property in transit through this state and any vehicle in which the person or property is being transported and detain or disinfect the person, property or vehicle as reasonably necessary to protect the environment if a violation exists.

2. Authorize in writing any qualified officer or employee in the department to perform any act that the director is authorized or required to do by law.

Amended by Laws 1989, Ch. 238, § 10.

[1] 42 U.S.C.A. § 11021 et seq.
[2] Section 26–341 et seq.

Historical and Statutory Notes

Laws 1990, Ch. 331, §§ 5 and 6, provide:

"Sec. 5. Duties of the director of the Arizona department of environmental quality; report; used oil regulations

"A. On or before July 1, 1991, and annually thereafter for the next four years, the director shall issue a report concerning the regulation of used oil during the prior calendar year. The report shall include the following:

"1. The volume of used oil produced by Arizona generators, including a breakdown by appropriate classifications of generators.

"2. Description of the used oil waste stream, including the volume of used oil disposed of in landfills or improperly on the land, in sewers or waterways, or elsewhere; the volume of used oil that flows through marketers who blend or process used oil into used oil fuel, road oil and paving material, and other uses; the volume of used oil fuel that flows directly to burners and other users; the volume of used oil that is shipped to another state; the volume of used oil fuel that is burned as on-specification fuel; the volume of used oil fuel that is burned as off-specification fuel, including a breakdown by each location that burns such off-specification used oil fuel, and the volume of used oil that is imported into Arizona for burning or other use.

"3. The impact on human health and the environment from the burning of used oil fuel and hazardous waste fuel, including the impact on air quality.

"4. The advisability of modifying the standards for the burning of off-specification used oil and hazardous waste fuel, including whether legislation should limit the types of burner or boilers authorized to burn off-specification used oil fuel and hazardous waste fuel and their proximity to schools, health care facilities, or other population clusters.

"5. The cost and benefits to Arizona of burning used oil as a fuel that is generated in another state.

"6. The impacts of the regulatory program established by this act on human health and the environment, and whether the program should be strengthened.

"7. The advisability of amending the provisions of this act.

"8. Any other matters deemed appropriate.

"B. The director shall submit the report to the governor, the president of the senate and the speaker of the house of representatives on or before July 1 of the years required by subsection A.

"Sec. 6. Duties of the director of the Arizona department of environmental quality; household used oil waste

"A. The director shall conduct a study to assess the role of household used oil in the used oil waste stream. The study shall consider and evaluate the following:

"1. The volume of household used oil and the manner of its disposal.

"2. The impact of current disposal methods for household used oil on human health and the environment.

"3. The costs and feasibility of alternative methods of collecting household used oil, including segregated curbside collection, drop-off centers, and other techniques, that are now being employed or that are capable of being implemented.

"4. The advisability of implementing a system of incentives, such as payment for household used oil, to encourage an increase in volume of household used oil that is recycled for further use.

"5. Possible funding mechanisms to finance alternative methods of collection and incentive systems.

"6. Possible legislation to implement a comprehensive program to increase the volume of household used oil that is recycled for further use.

"B. The director shall complete this study of household used oil and submit a report containing findings, conclusions and recommendations to the governor, the president of the senate and the speaker of the house of representatives on or before December 31, 1991."

Laws 1992, Ch. 298, § 6, provides:

"Sec. 6. **Duties of department of environmental quality**

"A. Consistent with the definitions prescribed by § 45–101, Arizona Revised Statutes, the department of environmental quality shall identify activities, operations and uses that occur on land in riparian areas of federal, state and private property in this state that involve removing or depositing material, removing vegetation or otherwise obstructing, altering or destroying riparian areas. The department shall evaluate at least the following activities:

"1. Timber harvesting.

"2. Agricultural land clearing.

"3. Recreational use and development.

"4. Commercial, industrial and residential development.

"5. Road and bridge construction.

"6. Dam and reservoir construction and operation.

"7. Channelization and bank stabilization.

"8. Sand and gravel extraction.

"9. Wetland drainage.

"10. Grazing.

"11. Landfills and sewage treatment facilities.

"12. Mining and metallurgical operations.

"B. The department shall complete the tasks prescribed under subsection A and submit a report evaluating the identified activities to the governor, the president of the senate, the speaker of the house of representatives and the riparian area advisory committee not later than October 1, 1993."

Executive Orders:

Executive Order No. 93–2, dated February 17, 1993, established the Arizona Comparative Environmental Risk Project.

Executive Order No. 93–5, dated February 25, 1993, superseding Executive Order No. 93–2, established the Arizona Comparative Environmental Risk Project.

Administrative Code References

Refuse and other objectionable wastes, see A.A.C. R18–8–501 et seq.

§ 49–107. Local delegation of state authority

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

§ 49–108. Hazardous materials emergency response operations

The director of environmental quality shall establish a hazardous materials emergency response and recovery organizational unit in the department to function as the scientific support, health, safety and environmental element of the hazardous materials emergency management program pursuant to § 26–305.02.

Added by Laws 1988, Ch. 292, § 5, eff. July 8, 1988.

Historical and Statutory Notes

Source:

A.R.S. former § 36–1681.
Laws 1986, Ch. 340, § 5.

§ 49–109. Certificate of disclosure of violations; definition; remedies

A. The following persons shall file a certificate of disclosure with the department as prescribed by this section:

1. A person who is engaged in an activity subject to regulation under this title and who has been convicted of a felony involving laws related to solid waste, special waste, hazardous waste, water quality or air quality in any state or federal jurisdiction or for a violation of 42 United States Code § 9603 [1] within the five year period immediately preceding execution of the certificate.

2. A person who is engaged in an activity subject to regulation under this title and who is or has been subject in any civil proceeding to an injunction, decree, judgment or permanent order of any state or federal court within the five year period immediately preceding the execution of the certificate that involved a violation of laws of that jurisdiction relating to solid waste, special waste, hazardous waste, used oil or used oil fuel, petroleum, water quality or air quality, except for a misdemeanor violation of § 49–550, or a violation of 42 United States Code § 9603.

B. The certificate of disclosure prescribed by subsection A of this section shall contain the following:

1. Identification of that person, including without limitation present full name, all prior names or aliases, including full birth name, present house address and all prior addresses for the immediately preceding five year period, date and location of birth and social security number.

2. The nature and description of each conviction or judicial action, the date and location, the court and public agency involved, and the file or cause number of the case.

3. A written declaration that each signer swears to its contents under penalty of perjury.

C. The certificate of disclosure submitted on behalf of a corporation shall be executed by any two executive officers or directors of that corporation.

D. For purposes of subsection A of this section, "person" means a natural person, any public or private corporation, its officers, directors, trustees, incorporators and persons controlling or holding over ten per cent of the issued and outstanding common shares or ten per cent of any other proprietary, beneficial or membership interest in the corporation, a partnership, including all general partners and limited partners controlling a ten per cent or more beneficial interest in the partnership, association or society of persons, the federal government and any of its departments or agencies, this state and any of its agencies, departments, political subdivisions, counties, towns or municipal corporations.

E. Initial certificates shall be delivered to the department within ninety days after July 3, 1991 or within ninety days after the person first becomes subject to the disclosure requirements of this section. Certificates shall be filed annually thereafter within ninety days after the close of that person's fiscal year as reported on the initial certificate.

F. By February 1 of each year, the department shall provide the attorney general with a list of all persons who were convicted of the crimes or who are the subject of the judicial actions described in subsection A of this section, as indicated from the certificates of disclosure filed during the preceding year.

G. In lieu of the certificate of disclosure prescribed by this section, a corporation may submit to the director copies of annual reports filed with the securities and exchange commission pursuant to § 13 or 15(d) of the securities exchange act of 1934 (15 United States Code § 78),[2] commonly known as a "10-K form", within ninety days of filing the annual report. The initial submission to the director shall include 10-K forms for the preceding five years.

H. A person who contributes information for a certificate of disclosure and who makes an untrue statement of material fact concerning the requirements of subsection B of this section or withholds any material fact concerning the requirements of subsection B of this section or

a person who is obligated to file a certificate of disclosure and who fails to file the certificate is subject to the remedies prescribed in § 49–110.

Added by Laws 1991, Ch. 315, § 6, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 1.

[1] 42 U.S.C.A. § 9603.
[2] 15 U.S.C.A. §§ 78*l*, 78m.

Historical and Statutory Notes

Laws 1991, Ch. 315, §§ 1, 2 and 39, effective July 3, 1991, provide:

"**Section 1. Legislative finding**

"The legislature finds that the public health, safety and welfare of this state may be seriously affected by the operation of a state hazardous waste facility in this state and that the measures taken by this act, including defining the operation of the state facility, are necessary in order to examine the impact of the state hazardous waste facility. The legislature also finds that it is necessary to examine and revise the past policies regarding the management of hazardous materials and waste in order to ensure safe management practices and protection of the environment. These measures are a reasonable and appropriate exercise of this state's police power.

"**Sec. 2. Policy**

"In the interest of protecting the public health and safety and the environment, the legislature declares that it is the policy of this state to:

"1. Encourage pollution prevention whenever technically and economically practicable, without shifting risks from one part of a process, environmental medium or product to another.

"2. Reduce the amount of hazardous substances used and reduce the amount of hazardous waste generated in this state."

"**Sec. 39. Severability**

"If a provision of this act or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of the act that can be given effect without the invalid provision or application, and to this end the provisions of this act are severable."

The 1992 amendment, in subsec. B, in the introductory sentence, substituted "contain" for "comply with"; in subsec. B, par. 3, deleted "The certificate shall contain" preceding "A written"; redesignated subsec. B, par. 4, as subsec. C; redesignated former subsecs. C, D, E, F, and G as subsecs. D, E, F, G and H; in subsec. E, in the first sentence, substituted "July 3, 1991" for "the effective date of this section", and in the second sentence, inserted "as reported on the initial certificate"; and in subsec. G, inserted the second sentence relating to forms included in initial submission.

§ 49–110. Compliance order; appeal; enforcement

A. If the director has reasonable cause to believe that a person is in violation of any of the provisions of § 49–109, the director may issue an order requiring compliance immediately or within a specified time period.

B. A compliance order shall state with reasonable specificity the nature of the violation, a time for compliance, if applicable, and the right to a hearing.

C. A compliance order shall be transmitted to the alleged violator by certified mail, return receipt requested, or by hand delivery.

D. A compliance order becomes final and enforceable in the superior court unless within thirty days after the receipt of the order the alleged violator requests a hearing before an administrative law judge appointed by the department of administration. If a hearing is requested, the order does not become final until the administrative law judge has issued a final decision on the appeal. Any final agency order issued pursuant to this section is subject to judicial review pursuant to title 12, chapter 7, article 6.[1]

E. If a violator fails to comply with a compliance order issued pursuant to subsection A of this section, the director may issue an order assessing a civil penalty of not more than one thousand dollars for each day of continued noncompliance with the order, not to exceed twenty-five thousand dollars.

Added by Laws 1991, Ch. 315, § 6, eff. July 3, 1991.

[1] Section 12–901 et seq.

§ 49–111. Permit application; plan approval; notice to counties, cities or towns

For any application for a permit or plan approval, substantial change to a plan or significant revision or modification to a permit requested pursuant to this title, the director

shall notify the appropriate county, city or town by sending a copy or notice of the application or change describing the purpose and scope of the proposed activity. The director shall not release any confidential information or trade secrets in the copy or notice.

Added by Laws 1993, Ch. 142, § 4, eff. April 20, 1993.

ARTICLE 2. COMMISSION ON THE ARIZONA ENVIRONMENT

Termination Under Sunset Law

The commission on the Arizona environment shall terminate on July 1, 1996, unless continued. See §§ 41–2996.14 and 41–2955.

Title 49, Chapter 1, Article 2, relating to the commission on the Arizona environment, is repealed on January 1, 1997 by § 41–2996.14.

Historical and Statutory Notes

Laws 1985, Ch. 326, §§ 1, 5, 6 and 7, provide:

"Section 1. Purpose

"Statewide change and growth have created major problems relating to the Arizona environment. Protection and enhancement of the Arizona environment are important goals for all Arizonans. The goals and objectives of the commission on Arizona environment are to preserve and enhance the quality of Arizona's total environment, to work to prevent destruction or degradation of Arizona's total environment and to balance a natural environment with a healthy economy.

"Sec. 5. Transfer of personnel, equipment and data

"All personnel, equipment and data of the governor's commission on Arizona environment on the effective date of this act are transferred to the commission on Arizona environment established by this act.

"Sec. 6. Initial terms of commission members

"A. Notwithstanding § 41–995 [renumbered as § 49–121], Arizona Revised Statutes, as added by this act, the initial terms of members of the commission on the Arizona environment are:

"1. Three terms ending on the third Monday in January, 1988.

"2. Four terms ending on the third Monday in January, 1990.

"3. Four terms ending on the third Monday in January, 1992.

"B. The governor shall make all subsequent appointments as prescribed by statute.

"Sec. 7. Effective date

"This act is effective from and after July 1, 1986."

Executive Order:

Executive Order No. 75–2, dated February 14, 1975, provides:

"NOW THEREFORE, by virtue of the authority vested in me as Governor of the State of Arizona by the Arizona Constitution and the Laws of Arizona, it is ordered as follows:

"I. Establishment of the Governor's Commission on Arizona Environment (formerly designated Governor's Commission on Arizona Environment and Advisory Commission on Arizona Environment).

"A. There is hereby established a Governor's Commission on Arizona Environment referred to as the Commission.

"B. The Commission shall be composed of such members as are appointed by the Governor from among persons with a competency and true interest in the various areas of Arizona environment, both natural and man-made, and shall serve at the Governor's pleasure. The Governor shall designate from among the membership a chairman and a vice-chairman.

"C. The Commission shall meet at the call of the chairman.

"II. Duties of the Governor's Commission on Arizona Environment.

"A. The Commission shall act as a clearinghouse and means of exchange of opinion and information relating to the problems of Arizona environment and the solution thereof. Conclusions and data resulting from this exchange of opinion and information shall, from time to time, be transmitted to the Governor for such consideration as he shall deem proper.

"B. The Commission shall endeavor to communicate with all sectors of the Arizona population and economy so that conclusions by the Commission will represent as nearly as possible a cross-section of Arizona thought on the subject environment.

"C. The Commission shall submit an annual report to the Governor on or before December 15 of each year.

"III. Miscellaneous

"A. Members of the Commission shall serve without compensation or expense to the State of Arizona, except that expenditures may be made from federal funds received by the State and allocated to the Commission for normal expenses of the Commission and its members if such expenditures are in accordance with the law."

§ 49–122. Advisory council; appointment; membership; compensation; duties

A. There is established the advisory council on the Arizona environment within the commission established in § 49–121. The commission shall appoint the members of the advisory council, who shall serve at the pleasure of the commission.

B. Members of the advisory council shall have demonstrated competence, experience and an interest in the environment of this state.

C. Each of the following state agencies shall designate a representative to serve as an ex officio member of the advisory council:

1. The department of education.
2. The game and fish department.
3. The department of health services.
4. The state land department.
5. The state parks board.
6. The department of water resources.
7. The department of transportation.
8. The department of commerce.
9. The office of tourism.
10. The Arizona department of agriculture.
11. The department of environmental quality.

D. The advisory council may establish committees to provide guidance and otherwise assist the commission in fulfilling its duties.

E. The advisory council shall meet at the direction of the commission.

F. Members of the advisory council or of any of its committees shall not receive compensation and are not entitled to reimbursement of expenses from the commission.

Amended by Laws 1990, Ch. 374, § 436, eff. Jan. 1, 1991.

Historical and Statutory Notes

1985 Reviser's Note:

Pursuant to authority of section 41–1304.02, in the section heading a semicolon was added after "membership".

§ 49–124. Revolving fund; use; accounting; disposition of monies; reversion

A. A permanent commission on the Arizona environment revolving fund is established which consists of monies which the commission receives from the sale of commission publications, grants and donations and fees derived from commission workshops.

B. Monies in the fund shall be used for commission surveys, studies, publications, internship programs, workshops and workshop equipment and in carrying out the provisions of this article.

C. The commission shall establish the permanent revolving fund as a separate account. The commission shall make a full accounting of its use to the department of administration annually or as required by the department of administration. Expenditures from the fund and reimbursement to the fund shall be as prescribed by rules of the department of administration.

D. Monies in the commission on the Arizona environment revolving fund are not subject to reversion, except that all monies in the fund in excess of seventy-five thousand dollars at the end of the fiscal year revert to the state general fund.

Amended by Laws 1988, Ch. 103, § 3; Laws 1993, Ch. 4, 2nd S.S., § 3.

ARTICLE 3. ENVIRONMENTAL NUISANCES

§ 49–141. Environmental nuisances

Notes of Decisions

Sewage 1

1. Sewage

Sewage treatment plant's effluent delivered by city for use in copper leaching was not same as "water" provided by water utility for its service area, and, thus, city was not illegally competing with utility. Arizona Water Co. v. City of Bisbee (App.1991) 172 Ariz. 176, 836 P.2d 389.

§ 49–142. Cease and desist order; hearing; injunction

A. If the director has reasonable cause to believe from information furnished to the director or from the director's own investigation that a person is maintaining an environmental nuisance or engaging in any practice contrary to the environmental laws or rules of the state, the director shall immediately serve, by certified mail, a cease and desist order on the person requiring the person to immediately cease and desist from the act.

B. Within fifteen days after receiving the order the person to whom it is directed may request the director to hold a hearing. The director shall hold the hearing as soon as practicable. If the director determines that the order is reasonable and just and that the practice engaged in is contrary to the environmental laws or rules of this state, the director shall order the person to comply with the cease and desist order.

C. If a person fails or refuses to comply with a cease and desist order issued under this section, the director may file an action in superior court in the county in which the violation occurred or in any county in which the department maintains an office to restrain and enjoin the person from further violations, to compel compliance with an order or to abate an environmental nuisance. The court shall proceed as in other actions for injunctions.

Amended by Laws 1991, Ch. 283, § 1.

Historical and Statutory Notes

The 1991 amendment rewrote subsec. C.

Law Review Commentaries

Enforcement of environmental laws in Arizona.
James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

§ 49–143. Abatement of environmental nuisances

Cross References

Underground storage tank tax, partial coverage for corrective action costs, see § 49–1052.

ARTICLE 4. INTERAGENCY COMMITTEE ON ENVIRONMENTAL EDUCATION

Article 4, consisting of § 49–161, was added by Laws 1990, Ch. 266, § 8, effective September 27, 1990.

§ 49–161. Interagency committee on environmental education; appointment; meetings; duties

A. The interagency committee on environmental education is established consisting of sixteen members. The head of each agency listed in subsection B of this section shall appoint one employee of that agency to serve on the interagency committee on environmental education. The members serve at the pleasure of the head of each agency listed in subsection B of this section.

B. The committee shall be composed of persons with experience in environmental education and the members shall consist of:

1. An employee in an administrative or managerial capacity with the department of transportation.

2. An employee in an administrative or managerial capacity with the department of water resources.

3. An employee in an administrative or managerial capacity with the department of environmental quality.

4. An employee in an administrative or managerial capacity with the state land department.

5. An employee in an administrative or managerial capacity with the state parks.

6. An employee in an administrative or managerial capacity with the office of tourism.

7. An employee in an administrative or managerial capacity with the department of education.

8. An employee in an administrative or managerial capacity with the commission on the Arizona environment.

9. An employee in an administrative or managerial capacity with the Arizona geological survey.

10. An employee in an administrative or managerial capacity with the energy office.

11. An employee in an administrative or managerial capacity with the solar energy advisory council.

12. An employee in an administrative or managerial capacity with the Arizona game and fish department.

13. An employee in an administrative or managerial capacity with the department of agriculture.

14. An employee in an administrative or managerial capacity with the state mine inspector.

15. An employee in an administrative or managerial capacity with the department of health services.

16. An employee in an administrative or managerial capacity with the office of the attorney general.

C. The governor shall appoint the chairperson of the committee.

D. The committee shall meet at least four times a year.

E. Members of the committee are not eligible to receive compensation and are not eligible for reimbursement of expenses from the committee.

F. The committee shall:

1. Encourage the coordination of interagency activities regarding environmental education to promote the efficient distribution of information and to facilitate the planning and development of educational materials.

2. Develop and maintain a memorandum of understanding to specify methods by which the agencies can share their resources to benefit environmental education in this state.

3. Recommend action by agencies regarding the improvement of environmental education programs and the implementation of the memorandum of understanding.

4. Assess each agency's capability to mandate environmental education programs.

5. Assess each agency's current environmental education public awareness programs.

6. Assist in the integration of statewide environmental education.

7. Provide a link between this state and federal and local agencies and departments relating to environmental education.

8. Keep a written record of the proceedings of each meeting. These records shall be kept on file by an agency selected by the committee.

Added by Laws 1990, Ch. 266, § 8.

CHAPTER 2

WATER QUALITY CONTROL

ARTICLE 1. GENERAL PROVISIONS

Section

49–209. Industrial discharges to community sewer systems; registration; fee.

ARTICLE 3. AQUIFER PROTECTION PERMITS

49–241.01. Groundwater protection permit facilities; schedule; definition.

49–241.02. Maximum payment for aquifer protection permit fees; definition.

ARTICLE 5. REMEDIAL ACTIONS

49–282.01. Maximum annual payments of fees and taxes by mines to water quality assurance revolving fund; definitions.

49–282.02. Water quality assurance revolving fund; emergency response use; definition.

49–285. Liability for remedial actions costs; limitation of actions.

49–288. Information gathering and access; enforcement; civil penalties.

49–289. Fund financed remedial actions.

49–290. Exemption from permit requirements; definition.

49–290.01. Applicability of requirements; Arizona department of water resources.

Section

49–291. Notice and settlement; recovery of costs.

49–292. Settlement; authority and effect.

49–293. De minimis settlements.

49–294. Use of monies obtained through consent decrees or litigation.

49–295. Environmental liens.

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ARTICLE 11. WASTEWATER FACILITIES FINANCING

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49–379. Wastewater treatment bonds as legal investments.

49–380. Agreement of state.

49–381. Annual audit and report.

ARTICLE 12. LOCAL WATER PRETREATMENT

49–391. Local enforcement of water pretreatment requirements; civil penalties.

ARTICLE 1. GENERAL PROVISIONS

§ 49–201. Definitions

In this chapter, unless the context otherwise requires:

1. "Administrator" means the administrator of the United States environmental protection agency.

2. "Aquifer" means a geologic unit that contains sufficient saturated permeable material to yield usable quantities of water to a well or spring.

3. "Best management practices" means those methods, measures or practices to prevent or reduce discharges and includes structural and nonstructural controls and operation and maintenance procedures. Best management practices may be applied before, during and after discharges to reduce or eliminate the introduction of pollutants into receiving waters. Economic, institutional and technical factors shall be considered in developing best management practices.

4. "CERCLA" means the comprehensive environmental response, compensation, and liability act of 1980, as amended (P.L. 96–510; 94 Stat. 2767; 42 United States Code §§ 9601 through 9657), commonly known as "superfund".

5. "Clean water act" means the federal water pollution control act amendments of 1972, as amended (P.L. 92–500; 86 Stat. 816; 33 United States Code §§ 1251 through 1376).

6. "Closed facility" means a facility that ceased operation before January 1, 1986, that is not, on August 13, 1986, engaged in the activity for which the facility was designed and that was previously operated and for which there is no intent to resume operation.

7. "Concentrated animal feeding operation" means an animal feeding operation that meets the criteria prescribed in 40 Code of Federal Regulations part 122, appendix B for determining a concentrated animal feeding operation for purposes of 40 Code of Federal Regulations §§ 122.23 and 122.24, appendix c.

8. "Department" means the department of environmental quality.

9. "Director" means the director of environmental quality or the director's designee.

10. "Discharge" means the direct or indirect addition of any pollutant to the waters of the state from a facility. For purposes of the aquifer protection permit program prescribed by article 3 [1] of this chapter, discharge means the addition of a pollutant from a facility either directly to an aquifer or to the land surface or the vadose zone in such a manner that there is a reasonable probability that the pollutant will reach an aquifer.

11. "Discharge impact area" means the potential areal extent of pollutant migration, as projected on the land surface, as the result of a discharge from a facility.

12. "Discharge limitation" means any restriction, prohibition, limitation or criteria established by the director, through a rule, permit or order, on quantities, rates, concentrations, combinations, toxicity and characteristics of pollutants.

13. "Environment" means navigable waters, any other surface waters, groundwater, drinking water supply, land surface or subsurface strata or ambient air, within or bordering on this state.

14. "Existing facility" means a facility on which construction began before August 13, 1986 and which is neither a new facility nor a closed facility. For purposes of this definition construction on a facility has begun if the facility owner or operator has either:

(a) Begun, or caused to begin, as part of a continuous on-site construction program any placement, assembly or installation of a building, structure or equipment.

(b) Entered a binding contractual obligation to purchase a building, structure or equipment which is intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility engineering and design studies, do not constitute a contractual obligation for purposes of this definition.

15. "Facility" means any land, building, installation, structure, equipment, device, conveyance, area, source, activity or practice from which there is, or with reasonable probability may be, a discharge.

16. "Hazardous substance" means:

(a) Any substance designated pursuant to §§ 311(b)(2)(a) and 307(a) of the clean water act.

(b) Any element, compound, mixture, solution or substance designated pursuant to § 102 of CERCLA.

(c) Any hazardous waste having the characteristics identified under or listed pursuant to § 49–922.

(d) Any hazardous air pollutant listed under § 112 of the federal clean air act (42 United States Code § 7412).

(e) Any imminently hazardous chemical substance or mixture with respect to which the administrator has taken action pursuant to § 7 of the federal toxic substances control act (15 United States Code § 2606).

(f) Any substance which the director, by rule, either designates as a hazardous substance following the designation of the substance by the administrator under the authority described in subdivisions (a) through (e) of this paragraph or designates as a hazardous substance on the basis of a determination that such substance represents an imminent and substantial endangerment to public health.

17. "Navigable waters" means the waters of the United States as defined by § 502(7) of the clean water act (33 United States Code § 1362(7)).

18. "New facility" means a previously closed facility that resumes operation or a facility on which construction was begun after August 13, 1986 on a site at which no other facility is located or to totally replace the process or production equipment that causes the discharge from an existing facility. A major modification to an existing facility is deemed a new facility to the extent that the criteria in § 49–243, subsection B, paragraph 1 can be practicably applied to such modification. The following constitute major modifications:

(a) A physical change in an existing facility or change in its method of operation that results in a significant alteration in the characteristics or volume of the pollutants discharged.

(b) The addition of a process or major piece of production equipment, building or structure that is physically separated from the existing operation and that causes a discharge. For purposes of this definition construction on a facility has begun if the facility owner or operator has either:

(i) Begun, or caused to begin as part of a continuous on-site construction program, any placement, assembly or installation of a building, structure or equipment.

(ii) Entered a binding contractual obligation to purchase a building, structure or equipment which is intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility engineering and design studies, do not constitute a contractual obligation for purposes of this definition.

19. "Nonpoint source" means any conveyance which is not a point source from which pollutants are or may be discharged to navigable waters.

20. "Permit" means a written authorization issued by the director stating the conditions and restrictions governing a discharge or governing the construction, operation or modification of a facility.

21. "Person" means an individual, employee, officer, managing body, trust, firm, joint stock company, consortium, public or private corporation, including a government corporation, partnership, association, state, a political subdivision of this state, or commission or the United States government or a federal facility, interstate body or other entity.

22. "Point source" means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged to navigable waters. Point source does not include return flows from irrigated agriculture.

23. "Pollutant" means fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances.

24. "Regulated agricultural activity" means the application of nitrogen fertilizer or a concentrated animal feeding operation.

25. "Safe drinking water act" means the federal safe drinking water act, as amended (P.L. 93–523; 88 Stat. 1660; 95–190; 91 Stat. 1393).[2]

26. "Standards" means water quality standards, pretreatment standards and toxicity standards established pursuant to this chapter.

27. "Standards of performance" means performance standards, design standards, best management practices, technologically based standards and other standards, limitations or restrictions established by the director by rule or by permit condition.

28. "Toxic pollutant" means a substance that will cause significant adverse reactions if ingested in drinking water. Significant adverse reactions are reactions that may indicate a

tendency of a substance or mixture to cause long lasting or irreversible damage to human health.

29. "Trade secret" means information to which all of the following apply:

(a) A person has taken reasonable measures to protect from disclosure and the person intends to continue to take such measures.

(b) The information is not, and has not been, reasonably obtainable without the person's consent by other persons, other than governmental bodies, by use of legitimate means, other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding.

(c) No statute specifically requires disclosure of the information to the public.

(d) The person has satisfactorily shown that disclosure of the information is likely to cause substantial harm to the business's competitive position.

30. "Vadose zone" means the zone between the ground surface and any aquifer.

31. "Waters of the state" means all waters within the jurisdiction of this state including all perennial or intermittent streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, aquifers, springs, irrigation systems, drainage systems and other bodies or accumulations of surface, underground, natural, artificial, public or private water situated wholly or partly in or bordering on the state.

32. "Well" means a bored, drilled or driven shaft, pit or hole whose depth is greater than its largest surface dimension.

Amended by Laws 1993, Ch. 31, § 2.

[1] Section 49–241 et seq.
[2] 42 U.S.C.A. §§ 201, 300f to 300j–9.

Cross References

Management of special waste, see § 49–851 et seq.
Used oil fuel, prohibited practices, see § 49–803.

Administrative Code References

Public and semipublic water supply systems, see A.A.C. R. 18–4–201 et seq.

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

Notes of Decisions

In general 1
Approval programs 3
Grants 2
Permit programs 4

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

Water quality control council must adopt water quality standards for all waters of the state, including underground waters; council should take immediate action to adopt groundwater standards or, if sufficient data is not available to enable to adopt such standards, council should act formally and on the record stating the reasons for not adopting such standards and directing the staff of the department of health services or other appropriate persons to immediately commence a study to acquire the necessary information. Op.Atty.Gen. No. 77–102, p. 144, 1976–77.

2. Grants

If grant agreement, whereby state department of health allocated funds appropriated by the legislature to political subdivisions or other eligible applicants for construction of water pollution control facilities, was signed subsequent to June 30, 1974, funds proffered in the agreement, and any other funds remaining unexpended or unencumbered after such date, had to revert to the state general fund. Op.Atty.Gen. No. R76–118, p. 87, 1976–77.

Appropriation to state department of health for allocation of state grants to political subdivisions or other eligible applicants for construction of water pollution control facilities would remain both unexpended and unencumbered until such time—prior to June 30, 1974, as grant agreements were accepted and signed by political subdivisions and other eligible applicants; but, upon signing of the grant agreements, the funds would become a state grant to the various eligible agencies and would be removed from the special legislative reversion mandate, and state could not thereafter revoke its own grants, even though construction had not begun on the water pollution control facilities, and though the money had not in fact been expended or paid out by the various grantees. Op.Atty.Gen. No. R76–118, p. 87, 1976–77.

3. Approval programs

Authority to administer an approval program to regulate the discharge of wastes and construction of disposal systems affecting groundwater from non-point sources is vested in the water quality control council. Op.Atty.Gen. No. I83–110.

4. Permit programs

Director of department of health services has authority to regulate groundwater pollution from point source discharges under a permit program. Op.Atty.Gen. No. I83–110.

§ 49–203. Powers and duties of the director

A. The director shall:

1. Adopt, by rule, water quality standards in the form and subject to the considerations prescribed by article 2 of this chapter.[1]

2. Adopt, by rule, a permit program for the point source discharge of any pollutant or combination of pollutants into navigable waters. The program and the rules shall be sufficient to enable this state to administer the permit program described in the Clean Water Act.[2]

3. Adopt, by rule, a program to control nonpoint source discharges of any pollutant or combination of pollutants into navigable waters.

4. Adopt, by rule, an aquifer protection permit program to control discharges of any pollutant or combination of pollutants which are reaching or may with a reasonable probability reach an aquifer. The permit program shall be as prescribed by article 3 of this chapter.[3]

5. Adopt, by rule, the permit program for underground injection control described in the Safe Drinking Water Act.[4]

6. Adopt, by rule or as permit conditions, such discharge limitations, best management practice standards, new source performance standards, toxic and pretreatment standards and such other standards and conditions as are reasonable and necessary to carry out the permit programs and regulatory duties described in paragraphs 2 through 5 of this subsection.

7. Assess and collect fees to cover, as necessary, reasonable costs to revoke, issue, deny, modify or suspend permits issued pursuant to this chapter and to process permit applications. The director may also assess and collect costs reasonably necessary if the director must conduct sampling or monitoring relating to a facility because the owner or operator of the facility has refused or failed to do so on order by the director. The director shall set fees which are reasonably related to the department's costs of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this chapter. Monies collected from aquifer protection permit fees shall be transmitted to the state treasurer for deposit in the water quality assurance revolving fund established in § 49–282. Monies from other permit fees shall be transmitted to the state treasurer for deposit in the state general fund unless otherwise provided by law. Monies collected from all other fees shall be transmitted to the state treasurer for deposit in the water quality assurance revolving fund established pursuant to § 49–282.

8. Adopt, modify, repeal and enforce other rules which are reasonably necessary to carry out his functions under this chapter.

9. Require monitoring at an appropriate point of compliance for any organic or inorganic pollutant listed under § 49–243, subsection D if the director has reason to suspect the presence of the pollutant in a discharge.

B. The director may:

1. On presentation of credentials, enter into, on or through any public or private property from which a discharge has occurred, is occurring or may occur, as is reasonably necessary to

ensure compliance with this chapter. The director or a department employee may take samples, inspect and copy records required to be maintained pursuant to this chapter, inspect equipment, activities, facilities and monitoring equipment or methods of monitoring, take photographs and take other action reasonably necessary to determine the application of, or compliance with, this chapter. The owner or managing agent of the property shall be afforded the opportunity to accompany the director or department employee during inspections and investigations, but prior notice of entry to the owner or managing agent is not required if reasonable grounds exist to believe that such notice would frustrate the enforcement of this chapter. If the director or department employee obtains any samples before leaving the premises, he shall give the owner or managing agent a receipt describing the samples obtained and a portion of each sample equal in volume or weight to the portion retained. If an analysis is made of samples, or monitoring and testing are performed, a copy of the results shall be furnished promptly to the owner or managing agent.

2. Require any person who has discharged, is discharging or may discharge into the waters of the state to establish and maintain records, including photographs, relating to the discharge and to install, use and maintain sampling and monitoring equipment to determine the absence or presence and nature of the discharge.

3. Administer state or federal grants, including grants to political subdivisions of this state, for the construction and installation of publicly and privately owned pollutant treatment works and pollutant control devices and establish grant application priorities.

4. Develop, implement and administer a water quality planning process, including a ranking system for applicant eligibility, wherein appropriated state monies and available federal monies are awarded to political subdivisions of this state to support or assist regional water quality planning programs and activities.

5. Enter into contracts and agreements with the federal government to implement federal environmental statutes and programs.

6. Enter into intergovernmental agreements pursuant to title 11, chapter 7, article 3[5] if the agreement is necessary to more effectively administer the powers and duties described in this chapter.

7. Participate in, conduct and contract for studies, investigations, research and demonstrations relating to the causes, minimization, prevention, correction, abatement, mitigation, elimination, control and remedy of discharges and collect and disseminate information relating to discharges.

8. File bonds or other security as required by a court in any enforcement actions under article 4 of this chapter.[6]

C. The director shall integrate all of the programs authorized in this section and such other programs affording water quality protection which are administered by the department for purposes of administration and enforcement and shall avoid duplication and dual permitting to the maximum extent practicable.

Amended by Laws 1992, Ch. 126, § 1, eff. June 2, 1992, retroactively effective to July 1, 1991.

[1] Section 49–221 et seq.
[2] 33 U.S.C.A. § 1251 et seq.
[3] Section 49–241 et seq.
[4] 42 U.S.C.A. §§ 201, 300f to 300j–9.
[5] Section 11–901 et seq.
[6] Section 49–261 et seq.

Historical and Statutory Notes

Laws 1992, Ch. 126, § 5, effective June 2, 1992, provides:

"Sec. 5. **Retroactivity**

"Section 1 of this act is effective retroactively to July 1, 1991."

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

Notes of Decisions

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Approval programs 4
Hazardous waste 3
Hearings 5
Waste waters 2

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

2. Waste waters

Jurisdiction to establish rules and regulations for use of reclaimed waste water resides in the water quality control council and not the state board of health. Op.Atty.Gen. No. 72–5–L.

There is no authority to establish a permit system requiring prior approval for use of reclaimed waste water as outlined in the proposed reuse regulations. Op.Atty.Gen. No. 72–5–L.

3. Hazardous waste

Department of health services has sufficient statutory authority to implement a hazardous waste management program eligible for full federal authorization under the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901, 6903, 6924, and 6926. Op.Atty.Gen. No. I79–42.

4. Approval programs

Authority to administer an approval program to regulate the discharge of wastes and construction of disposal systems affecting groundwater from non-point sources is vested in the water quality control council. Op.Atty.Gen. No. I83–110.

5. Hearings

In regard to the administration and implementation of Arizona's Water Pollution Control Act, § 36–1851 et seq. (see, now, § 49–201, et seq.), water quality control council and director of department of health services is each authorized to establish applicable hearing procedures within the respective sphere of authority of each. Op.Atty. Gen. No. I83–110.

§ 49–204. Water quality advisory council

Termination Under Sunset Law

The water quality advisory council shall terminate on July 1, 1997, unless continued. See §§ 41–2997.01 and 41–2955.

Section 49–204 is repealed on January 1, 1998 by § 41–2997.01.

Notes of Decisions

In general 1
Approval programs 4
Expenses 5
Salinity standards 3
Waste water 2

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C. § 1256, are identified. Op. Atty.Gen. No. 78–63.

Water quality control council must adopt water quality standards for all waters of the state, including underground waters; council should take immediate action to adopt groundwater standards or, if sufficient data is not available to enable to adopt such standards, council should act formally and on the record stating the reasons for not adopting such standards and directing the staff of the department of health services or other appropriate persons to immediately commence a study to acquire the necessary information. Op.Atty.Gen. No. 77–102, p. 144, 1976–77.

2. Waste water

Jurisdiction to establish rules and regulations for use of reclaimed waste water resides in the water quality control council and not the state board of health. Op.Atty.Gen. No. 75–5–L.

There is no authority to establish a permit system requiring prior approval for use of reclaimed waste water as outlined in the proposed reuse regulations. Op.Atty.Gen. No. 75–5–L.

3. Salinity standards

Water quality control council could adopt, reject, or modify Colorado River basin salinity control forum's recommended water quality standards for salinity and plan of implementation for salinity control, and council could deem it appropriate to extend the same or similar standards to other waters of Arizona, but, in adopting any water quality standards under § 36–1857, council would have to consider factors set forth in subsec. A of the section. Op.Atty.Gen. No. R75–310, p. 122, 1975–76.

Water quality control council had jurisdiction to set salinity standards on Arizona waters. Op.Atty. Gen No. R75–310, p. 122, 1975–76.

4. Approval programs

Authority to administer an approval program to regulate the discharge of wastes and construction of disposal systems affecting groundwater from non-point sources is vested in the water quality control council. Op.Atty.Gen. No. I83–110.

5. Expenses

Travel expenses are not allowable to members of state air pollution control advisory council, state water quality control council, state board of property tax appeals, and state board of podiatry examiners when incurred from places of residence or private business to and from board meetings. Op. Atty.Gen. No. 67–18.

§ 49–208. Public participation

Notes of Decisions

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

§ 49–209. Industrial discharges to community sewer systems; registration; fee

A. Each person that is required to obtain a permit for discharges into a community sewer system under federal categorical industrial pretreatment regulations and standards shall register each year with the director and pay an annual registration fee of two hundred fifty dollars.

B. On or before January 31 each year each public or private entity that issues a permit for discharges into a community sewer system shall transmit to the director a list of current permittees and their addresses. The director shall prescribe a procedure for notifying permittees of the registration requirements of this section and collecting the prescribed fee.

C. The director shall deposit all monies collected under this section in the water quality assurance revolving fund established by § 49–282 and may authorize expenditures from the fund, pursuant to § 49–282, subsection C, paragraph 6, to pay the reasonable and necessary costs of administering the registration program.

Added by Laws 1990, Ch. 230, § 10.

Historical and Statutory Notes

Laws 1990, Ch. 230, § 22, as amended by Laws 1991, Ch. 184, § 8, effective June 3, 1991, provides:

"Sec. 22. Applicability of fees to facilities operating pursuant to notices of disposal and groundwater quality protection permits

"Pending the issuance of individual aquifer protection permits, the fees established pursuant to §§ 49–209, 49–242 and 49–747, Arizona Revised Statutes, as added by Laws 1990, chapter 230, apply to owners of facilities which, on September 27, 1990, are operating pursuant to the filing of a notice of disposal or a groundwater quality protection permit issued under title 36, Arizona Revised Statutes."

1990 Reviser's Note:

Pursuant to authority of § 41–1304.02, in the section heading "discharges" was substituted for "dischargers".

Cross References

Water quality assurance revolving fund, monetary composition, see § 49–282.

ARTICLE 2. WATER QUALITY STANDARDS

§ 49–221. Water quality standards in general

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

Notes of Decisions

In general 1
Approval programs 3
Salinity standards 2

1. In general

Arizona Legislature has plenary authority to establish water quality standards for Arizona's surface waters, and it did, by section 2 of House Bill 2238, Laws 1990 (2d Reg.Sess.) Ch. 300, § 2, establish a narrative standard restricting the discharge of phenol compounds into Arizona's surface waters; furthermore, said standard was duly adopted in accordance with applicable state legal requirements. Op.Atty.Gen. No. I91–009.

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

Water quality control council must adopt water quality standards for all waters of the state, including underground waters; council should take immediate action to adopt groundwater standards or, if sufficient data is not available to enable to adopt such standards, council should act formally and on the record stating the reasons for not adopting such standards and directing the staff of the department of health services or other appropriate persons to immediately commence a study to acquire the necessary information. Op.Atty.Gen. No. 77–102, p. 144, 1976–77.

2. Salinity standards

Water quality control council could adopt, reject, or modify Colorado River basin salinity control forum's recommended water quality standards for salinity and plan of implementation for salinity control, and council could deem it appropriate to extend the same or similar standards to other waters of Arizona, but, in adopting any water quality standards under this section, council would have to consider factors set forth in subsec. A of this section. Op.Atty.Gen. No. R75–310, p. 122, 1975–76.

3. Approval programs

Authority to administer an approval program to regulate the discharge of wastes and construction of disposal systems affecting groundwater from non-point sources is vested in the water quality control council. Op.Atty.Gen. No. I83–110.

§ 49–222. Water quality standards for navigable waters

Historical and Statutory Notes

Laws 1991, Ch. 283, § 17 provides:

"Sec. 17. Effective date

"Sections 49–422 and 49–476.01, Arizona Revised Statutes, as amended by this act, are effective from and after June 30, 1992."

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–223. Aquifer water quality standards

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–224. Aquifer identification, classification and reclassification

Administrative Code References

Petition for reclassification, see A.A.C. R. 18–11–503.

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–225. Water quality monitoring

A. The director shall, with the advice and cooperation of the Arizona department of agriculture and the director of water resources, conduct ongoing monitoring of the waters of the state including the state's navigable waters and aquifers to detect the presence of new and existing pollutants, determine compliance with applicable water quality standards, the effectiveness of best management practices, agricultural best management practices and best available demonstrated control technologies, evaluate the effects of pollutants on public health or the environment and determine water quality trends.

B. The director shall maintain a statewide data base of groundwater and soils sampled for pollutants. All agencies shall submit to the director, in a timely manner, the results of any groundwater or soils sampling for pollutants and the results of any groundwater or soils sampling that detect any pollutants.

C. The director shall establish minimum requirements and schedules for groundwater and soils sampling that will ensure precise and accurate results. The requirements shall be distributed to all agencies that conduct sampling. All sampling conducted shall meet the minimum requirements established pursuant to this subsection.

D. The director shall annually report the following information to the governor, the president of the senate, the speaker of the house of representatives, the Arizona department of agriculture and the director of water resources for the preceding calendar year:

1. The number of wells sampled for pollutants, the location of the wells from which the samples were taken, the well numbers, if available, and the agencies responsible for drawing and analyzing the samples.

2. The number of samples with detectable levels of pollutants, the location of the wells from which the samples were taken, the well numbers, if available, and the agencies responsible for drawing and analyzing the samples.

3. The number, type and outcomes, by category, of enforcement actions taken.

Amended by Laws 1990, Ch. 374, § 437, eff. Jan. 1, 1991.

ARTICLE 3. AQUIFER PROTECTION PERMITS

Cross References

Annual storage and recovery projects, see § 45–881 et seq.

Aquifer replenishment project permit, see § 45–672.

Administrative Code References

Aquifer protection permits, see A.A.C. R 18–9–101 et seq.

§ 49–241. Permit required to discharge

A. Unless otherwise provided by this article, any person who discharges or who owns or operates a facility that discharges shall obtain an aquifer protection permit from the director.

B. Unless exempted under § 49–250 or subsection E of this section, the following are considered to be discharging facilities and shall be operated pursuant to either an individual permit or general permit, including agricultural general permits, under this article:

1. Surface impoundments including holding, storage settling, treatment or disposal pits, ponds and lagoons.

2. Solid waste disposal facilities.

3. Injection wells.

4. Land treatment facilities.

5. Facilities which add a pollutant to a salt dome formation, salt bed formation, dry well or underground cave or mine.

6. Mine tailings piles and ponds.

7. Mine leaching operations.

8. Septic tank systems with a capacity of greater than two thousand gallons per day.

9. Groundwater recharge projects and underground storage and recovery projects.

10. Point source discharges to navigable waters.

11. Sewage or sludge ponds and wastewater treatment facilities.

C. Not later than January 1, 1992, the director shall publish a list of the names and locations of existing facilities that are required to obtain an aquifer protection permit. The list shall contain deadlines for the submittal of applications for aquifer protection permits, based on the degree of risk to the public health and welfare and the environment and based on a work plan of the director designed to process all applications for an aquifer protection permit no later than January 1, 2001.

D. Beginning January 1, 1993, the director shall publish annually the fee schedule for aquifer protection permit applications and a list of the names and locations of the facilities that have filed applications for aquifer protection permits, with a description of the status of each application.

E. Owners and operators of existing solid waste disposal facilities are exempt from obtaining an aquifer protection permit if the facility complies with all of the following:

1. A closure plan is submitted to the director by October 9, 1996, with a closure date of not later than October 9, 1998. The closure plan shall include appropriate site specific groundwater quality monitoring.

2. The facility receives less than twenty tons per day of solid waste on an annual average.

3. There is no evidence of existing groundwater contamination from the facility.

4. Either of the following applies:

(a) The facility serves a community that experiences annually an interruption in surface transportation for at least three consecutive months that prevents access to a regional solid waste management facility.

(b) The facility serves a community that has no practicable waste management alternative and the facility is located in an area that receives twenty-five inches or less of precipitation annually.

F. If the director has reasonable cause to believe that groundwater contamination is occurring from a solid waste facility that is closed pursuant to subsection E of this section, the director may require the owner or operator to investigate and, if necessary, remediate the contamination in accordance with a plan approved by the director. If an owner or operator of such a facility discovers information indicating that groundwater contamination is discharging from the facility the information shall be immediately submitted to the director.

G. The director shall prescribe the procedures for aquifer protection permit applications and fee collection under this section. The director shall transmit all monies collected under this section to the state treasurer for deposit in a separate account of the water quality assurance revolving fund established by § 49–282 and may authorize expenditures from the account, subject to legislative appropriation, pursuant to § 49–282, subsection C, paragraph 8, to pay reasonable and necessary costs of processing and issuing permits and administering the registration program.

Amended by Laws 1991, Ch. 280, § 2; Laws 1992, Ch. 291, § 6; Laws 1992, Ch. 300, § 3; Laws 1993, Ch. 165, § 1.

Historical and Statutory Notes

Laws 1991, Ch. 280, § 5, as amended by Laws 1992, Ch. 126, §3, effective June 2, 1992, provides:

"Sec. 5. **Fee schedule; cost recovery**

"The director of environmental quality may amend any existing rule or enact a new rule for fees for aquifer protection permit applications and modifications in order to fully recover the state's reasonable costs of processing, reviewing and approving or denying the applications. Such cost recovery shall include reasonable direct costs but shall not include indirect costs."

For purpose of Laws 1991, Ch. 280, see Historical and Statutory Notes following § 49–288.

Reviser's Notes:

1992 Note: Prior to the 1993 amendment, this section contained the amendments made by Laws 1992, Ch. 291, sec. 6 and Ch. 300, sec. 3 that were blended together pursuant to authority of § 41–1304.03.

1993 Note: Pursuant to authority of § 41–1304.02, in subsection E, paragraph 1, second sentence the spelling of "site specific" was corrected.

Law Review Commentaries

Avoiding environmental liabilities: A primer for business. Steven M. Wheeler & Edward Z. Fox, 23 Ariz.St.L.J. 483 (1991).

Tug-of-war between RCRA and CERCLA at contaminated hazardous waste facilities. J. Stanton Curry, James J. Hamula & Todd W. Rallison, 23 Ariz.St.L.J. 359 (1991).

Notes of Decisions

In general 1
Approval programs 2
Permit programs 3
Sewage 4

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

2. Approval programs

Authority to administer an approval program to regulate the discharge of wastes and construction of disposal systems affecting groundwater from non-point sources is vested in the water quality control council. Op.Atty.Gen. No. I83–110.

3. Permit programs

Director of department of health services has authority to regulate groundwater pollution from point source discharges under a permit program. Op.Atty.Gen. No. I83–110.

4. Sewage

Sewage treatment plant's effluent delivered by city for use in copper leaching was not same as "water" provided by water utility for its service area, and, thus, city was not illegally competing with utility. Arizona Water Co. v. City of Bisbee (App.1991) 172 Ariz. 176, 836 P.2d 389.

§ 49–241.01. Groundwater protection permit facilities; schedule; definition

A. The director shall complete the issuance or denial of aquifer protection permits for all groundwater protection permit facilities on the following schedule:

1. By January 1, 1995, at least one-third of all groundwater protection permit facilities.

2. By January 1, 1998, at least two-thirds of all groundwater protection permit facilities.

3. By January 1, 2001, all groundwater protection permit facilities.

B. The failure by the director to issue or deny an aquifer protection permit for a groundwater protection permit facility within the time prescribed by this section does not excuse a person from continuing to comply with all statutory and regulatory requirements applicable to that person's facility.

C. For purposes of this section, "groundwater protection permit facility" means either of the following:

1. A facility for which a groundwater quality protection permit was issued pursuant to the Arizona administrative code and for which an aquifer protection permit has never been issued.

2. A facility for which a notice of disposal was filed pursuant to the Arizona administrative code and for which an aquifer protection permit has never been issued.

Added by Laws 1991, Ch. 280, § 3.

Historical and Statutory Notes

For purpose of Laws 1991, Ch. 280, see Historical and Statutory Notes following § 49–288.

§ 49–241.02. Maximum payment for aquifer protection permit fees; definition

A. Notwithstanding any other law, a person is not required to pay application, modification, transfer or other fees for aquifer protection permits pursuant to § 49–241 in excess of the lesser of:

1. Sixteen thousand dollars per permit.

2. Twenty-five thousand dollars per individual site.

B. A person who pays these fees for permits or individual sites in the amount specified in subsection A of this section may submit evidence of this payment to the appropriate entity in lieu of paying additional fees for that permit or individual site.

C. If an individual site is owned or operated by more than one person, the payment of fees or the compliance with this section for the permit or individual site by one person constitutes compliance by other owners and operators.

D. For purposes of this section, "individual site" means a facility or activity or group of activities or facilities that are located in a contiguous geographical area and that are owned or operated by the same person.

Added by Laws 1992, Ch. 126, § 2, eff. June 2, 1992.

§ 49–242. Procedural requirements for individual permits; annual registration of permittees; fee

A. The director shall prescribe, by rule, requirements for issuing, denying, suspending or modifying individual permits, including requirements for submitting notices, permit applications and any additional information necessary to determine whether an individual permit should be issued, and shall prescribe conditions and requirements for individual permits.

B. Each owner of an injection well, a land treatment facility, a dry well, a septic tank system with a capacity of more than two thousand gallons per day or a facility which discharges to navigable waters to whom an individual permit is issued shall register the permit with the director each year and pay an annual registration fee based on the daily discharge of pollutants pursuant to subsection D of this section.

C. Each owner of a surface impoundment, a facility which adds a pollutant to a salt dome formation, salt bed formation, underground cave or mine, a mine tailings pile or pond, a mine leaching operation, a sewage or sludge pond or a wastewater treatment facility to whom an individual permit is issued shall register the permit with the director each year and pay an annual registration fee based on the daily influent of pollutants pursuant to subsection D of this section.

D. The annual registration fee shall be determined as follows:

Discharge or influent per day under the permit

(In gallons)	Annual Fee
2,000 to 9,999	$ 25
10,000 to 99,999	100
100,000 to 999,999	1,000
1,000,000 to 9,999,999	3,000
10,000,000 or more	5,000

E. The director shall prescribe the procedures to register the permit and collect the fee under this section. The director shall deposit all monies collected under this section in the water quality assurance revolving fund established by § 49–282 and may authorize expenditures from the fund, pursuant to § 49–282, subsection C, paragraph 8, to pay the reasonable and necessary costs of administering the registration program.

Amended by Laws 1990, Ch. 230, § 11; Laws 1992, Ch. 291, § 7.

Historical and Statutory Notes

Laws 1990, Ch. 230, § 22, as amended by Laws 1991, Ch. 184, § 8, effective June 3, 1991, provides:

"Sec. 22. **Applicability of fees to facilities operating pursuant to notices of disposal and groundwater quality protection permits**

"Pending the issuance of individual aquifer protection permits, the fees established pursuant to §§ 49–209, 49–242 and 49–747, Arizona Revised Statutes, as added by Laws 1990, chapter 230, apply to owners of facilities which, on September 27, 1990, are operating pursuant to the filing of a notice of disposal or a groundwater quality protection permit issued under title 36, Arizona Revised Statutes."

Cross References

Water quality assurance revolving fund, monetary composition, see § 49–282.

§ 49–243. Information and criteria for issuing individual permit

A. The director shall consider, and the applicant for an individual permit may be required to furnish with the application, the following information:

1. The design of the discharge facility.

2. A description of how the facility will be operated.

3. Existing and proposed pollutant control measures.

4. A hydrogeologic study defining and characterizing the discharge impact area, including the vadose zone.

5. The use of water from aquifers in the discharge impact area.

6. The existing quality of the water in the aquifers in the discharge impact area.

7. The characteristics of the pollutants discharged by the facility.

8. Any other relevant federal or state permits issued to the applicant.

9. Any other relevant information the director may require.

B. The director shall issue a permit to a person for a facility other than a recharge project or an underground storage and recovery project if the person demonstrates that either paragraphs 1 and 2 or paragraphs 1 and 3 of this subsection will be met:

1. That the facility will be so designed, constructed and operated as to ensure the greatest degree of discharge reduction achievable through application of the best available demonstrated control technology, processes, operating methods or other alternatives, including, where practicable, a technology permitting no discharge of pollutants. In determining best available demonstrated control technology, processes, operating methods or other alternatives the director shall take into account site specific hydrologic and geologic characteristics and other environmental factors, the opportunity for water conservation or augmentation and economic impacts of the use of alternative technologies, processes or operating methods on an industry-wide basis. However, a discharge reduction to an aquifer achievable solely by means of site specific characteristics does not, in itself, constitute compliance with this paragraph. In addition, the director shall consider the following factors for existing facilities:

(a) Toxicity, concentrations and quantities of discharge likely to reach an aquifer from various types of control technologies.

(b) The total costs of the application of the technology in relation to the discharge reduction to be achieved from such application.

(c) The age of equipment and facilities involved.

(d) The industrial and control process employed.

(e) The engineering aspects of the application of various types of control techniques.

(f) Process changes.

(g) Non-water quality environmental impacts.

(h) The extent to which water available for beneficial uses will be conserved by a particular type of control technology.

2. That pollutants discharged will in no event cause or contribute to a violation of aquifer water quality standards at the applicable point of compliance for the facility.

3. That no pollutants discharged will further degrade, at the applicable point of compliance, the quality of any aquifer that already violates the aquifer quality standard for that pollutant.

C. The director shall issue a permit to a person for a recharge project or an underground storage and recovery project proposed under title 45, chapter 2, article 13 or title 45, chapter 3[1] if the person demonstrates that the facility will be so designed, constructed and operated as to ensure that the project will not cause or contribute to the violation of any standard adopted pursuant to § 49–223 at the applicable point of compliance for the facility.

D. With respect to the following pollutants, the permit applicant for a new facility must meet the criteria of subsection B, paragraph 1 of this section to limit discharges to the maximum extent practicable regardless of cost:

1. Any organic substance listed by the secretary of the department of health and human services pursuant to 42 United States Code § 241(b)(4),[2] as known to be carcinogens or reasonably anticipated to be carcinogens.

2. Any organic substance listed in 40 code of federal regulations § 261.33(e), regardless of whether the substance is a waste subject to regulation under the resource conservation recovery act (P.L. 94–580; 90 Stat. 2795).[3]

3. Any organic toxic pollutant that the director lists by rule after determining that minute amounts of that pollutant in drinking water will present a substantial short-term or long-term human health threat.

E. The director may, by rule, prescribe requirements for issuing a single permit applicable to all similar facilities under common ownership and located in a contiguous geographic area in lieu of an individual permit for each facility.

F. The director shall prescribe in the permit the following terms and conditions:

1. Monitoring requirements.

2. Record keeping and reporting requirements.

3. Contingency plan requirements.

4. Discharge limitations.

5. Compliance schedule requirements.

6. Post-closure plan.

7. Alert levels which, when exceeded, may require adjustments of permit conditions or appropriate actions as are required by the contingency plans.

8. Such other terms and conditions as the director deems necessary.

G. The director may include in an aquifer protection permit for an existing facility the requirement that the owner or operator of the facility undertake a remedial action, as defined in § 49–281, to prevent, minimize or mitigate damage to the public health or welfare or to the waters of the state resulting from a discharge that occurred before August 13, 1986, if the following conditions are met:

1. The selection of remedial action including the level and extent of cleanup was determined according to the criteria in § 49–282, subsection E and the rules adopted pursuant to that subsection.

2. The pollutant that was discharged constituted a hazardous substance.

H. The director may include in an aquifer protection permit as a condition the mitigation measures described in an order issued under § 49–286.

I. The director may deny a permit for a facility if he determines that the applicant is incapable of fully carrying out the terms and conditions of the permit, including any conditions that require monitoring or installing and maintaining discharge control measures. The director may require the applicant to furnish information, such as past performance, including compliance with or violations of similar laws or rules, and technical and financial competence, relevant to its capability to comply with the permit terms and conditions. A demonstration of financial responsibility made for a facility as prescribed by § 49–770 shall suffice, in whole or in part, for any demonstration of financial responsibility prescribed by this section. A demonstration of financial assurance or competence required under this section or § 49–770 for a facility shall not be required prior to completion of construction but shall be

required before the department issues approval to operate. Financial information required to be supplied under this subsection is confidential.

J. The director shall require an applicant for an individual permit to submit evidence that the discharging facility complies with applicable municipal or county zoning ordinances and regulations. The director shall not issue the permit unless it appears from the evidence submitted by the applicant that the facility complies with the applicable zoning ordinances and regulations.

Amended by Laws 1990, Ch. 230, § 12; Laws 1992, Ch. 300, § 4.

[1] Sections 45–651 et seq. and 45–801 et seq.
[2] 42 U.S.C.A. § 241(b)(4).
[3] 42 U.S.C.A. § 6901 et seq.

Historical and Statutory Notes

The 1990 amendment, in subsec. G, substituted "August 13, 1986" for "the effective date of this article" in the introductory paragraph and substituted "§ 49–282, subsection E" for "§ 49–282, subsection D" in par. 1.

The 1992 amendment inserted, in subsec. I, the third and fourth sentences, relating to demonstration of financial responsibility.

Administrative Code References

Individual permits: application requirements, see A.A.C. R18–9–108 et seq.

§ 49–245. Criteria for issuing general permit

Administrative Code References

General permits: general provisions, see A.A.C. R18–9–125 et seq.

§ 49–247. Agricultural general permits; best management practices for regulated agricultural activities

A. The director shall adopt by rule pursuant to the requirements of this section, agricultural general permits consisting of best management practices for regulated agricultural activities. Agricultural general permits are not subject to § 49–245 or 49–246. Except as provided in subsection G of this section, a person is not required to obtain an individual permit for a regulated agricultural activity.

B. The terms and conditions of agricultural general permits adopted pursuant to this section shall be agricultural best management practices which have been determined by the director to be the most practical and effective means of reducing or preventing the discharge of pollutants by regulated agricultural activities. Agricultural best management practices may vary within the state, according to regional and hydrogeologic conditions. The director may waive the use of best management practices in a designated region if he determines that existing regulated agricultural activities will not cause or contribute to a violation of the adopted water quality standards.

C. Not later than July 1, 1989, the director shall adopt, by rule, agricultural best management practices, and in doing so shall consider any recommendation of the agricultural best management practices advisory committees established under § 49–248.

D. In adopting agricultural best management practices, the director shall consider:

1. The availability, the effectiveness and the economic and institutional considerations of alternative technologies.

2. The potential nature and severity of discharges from regulated agricultural activities and their effect on public health and the environment.

E. In adopting best management practices for regulated agricultural activities, the director shall require the application of all economically feasible best management practices which have been determined by the director to be the most practical and effective means of

reducing or preventing the discharge of pollutants by regulated agricultural activities but shall not require application of more stringent practices if such a requirement would result in cessation of the regulated activity.

F. Compliance with best management practices adopted pursuant to this section constitutes compliance with this article.

G. If the director, after providing a person with notice and an opportunity for a hearing determines that the person has violated the applicable best management practices, the director may revoke the agricultural general permit for that person and require that the person obtain a permit pursuant to § 49–241.

H. The director may periodically reexamine, evaluate and propose any modification to or waiver of agricultural best management practices necessary to meet the requirements of this article after considering any recommendation submitted by the advisory committees established under § 49–248.

Amended by Laws 1989, Ch. 263, § 1.

Cross References

Management of special waste, see § 49–851 et seq.

Pollution prevention, see § 49–961 et seq.

§ 49–248. Agricultural best management practices advisory committees

A. Two agricultural best management practices advisory committees are established, one to develop and recommend best management practices for applying nitrogen fertilizer and the other to develop and recommend best management practices for concentrated animal feeding operations. The directors, or the directors' designees, from the department of environmental quality, the Arizona department of agriculture and the department of water resources and the dean of the college of agriculture of the university of Arizona, or the dean's designee shall serve on both advisory committees.

B. The governor shall appoint seven members to the advisory committee on nitrogen fertilizer as follows:

1. One person actively engaged in the production of citrus.
2. One person actively engaged in the production of vegetables.
3. One person actively engaged in the production of cotton.
4. One person actively engaged in the production of alfalfa.
5. One person actively engaged in the production of grain.
6. One hydrologist from the university of Arizona college of agriculture.
7. One person representing an irrigation district.

C. The governor shall appoint eight members to the advisory committee on concentrated animal feeding operations as follows:

1. Two persons actively engaged in dairying.
2. Two persons actively engaged in commercial livestock operations.
3. One person actively engaged in the production of swine.
4. One person actively engaged in the production of poultry.
5. One hydrologist from the university of Arizona college of agriculture.
6. One person actively engaged in the aquaculture industry.

D. Appointive members shall be appointed to terms of six years and may be reappointed to one additional term. No more than four appointive members of each advisory committee may belong to the same political party. Members are not entitled to compensation for their services as such but are entitled to reimbursement for expenses as provided by law for travel on, and attending, official business. Each committee shall elect a chairman from among the appointive members to serve a two year term as chairman. The chairman may be reelected.

Each committee shall meet on the call of its chairman or at the request of a majority of its appointive members. The department of environmental quality, the Arizona department of agriculture, the department of water resources and the college of agriculture of the university of Arizona shall cooperate with, provide technical and expert assistance and supply data and other necessary information to the advisory committees. The department of environmental quality shall furnish necessary staff support and meeting facilities to the advisory committees.

E. The advisory committees shall develop and recommend to the director best management practices for discharges from a regulated agricultural activity considering the requirements of § 49–247.

F. The advisory committees may appear or be represented at any administrative proceeding for adopting the agricultural best management practices.

G. The advisory committees shall periodically reexamine, evaluate and propose any modification to agricultural best management practices necessary to meet the requirements of this article. An advisory committee may recommend modifications to agricultural best management practices at any time on its own initiative.

Amended by Laws 1990, Ch. 374, § 438, eff. Jan. 1, 1991; Laws 1993, Ch. 31, § 3.

Termination Under Sunset Law

The agricultural best management practices advisory committee shall terminate on July 1, 1997, unless continued. See §§ 41–2997.02 and 41–2955.

Section 49–248 is repealed on January 1, 1998 by § 41–2997.02.

Historical and Statutory Notes

Laws 1993, Ch. 31, § 4, provides:

"Sec. 4. **Term of member**

"Notwithstanding § 49–248, subsection D, Arizona Revised Statutes, the governor shall appoint the representative of the aquaculture industry to the advisory committee on concentrated animal feeding operations to a term expiring January 18, 1999."

§ 49–250. Exemptions

A. The director may, by rule, exempt specifically described classes or categories of facilities from the aquifer protection permit requirements of this article on a finding either that there is no reasonable probability of degradation of the aquifer or that aquifer water quality will be maintained and protected because the discharges from such facilities are regulated under other federal or state programs that provide the same or greater aquifer water quality protection as provided by this article.

B. The following are exempt from the aquifer protection permit requirement of this article:

1. Household and domestic activities.
2. Household gardening, lawn watering, lawn care, landscape maintenance and related activities.
3. The noncommercial use of consumer products generally available to and used by the public.
4. Ponds used for watering livestock and wildlife.
5. Mining overburden returned to the excavation site, including any common material which has been excavated and removed from the excavation site and has not been subjected to any chemical or leaching agent or process of any kind.
6. Facilities used solely for surface transportation or storage of surface water for beneficial use or groundwater. This exemption does not apply if effluent from any waste treatment facility that is regulated pursuant to §§ 49–361 and 49–362 is added to the water after its original point of diversion.
7. Discharge to a community sewer system.

8. Facilities which are defined and required to obtain a permit to reuse reclaimed wastewater.

9. Leachate resulting from the direct, natural infiltration of precipitation through undisturbed regolith or bedrock if pollutants are not added to the leachate as a result of any material or activity placed or conducted by man on the ground surface.

10. Surface impoundments used solely to contain storm runoff.

11. Closed facilities. However, if the facility ever resumes operation the facility shall obtain an aquifer protection permit and the facility shall be treated as a new facility for purposes of § 49–243.

12. Facilities for the recharge, replenishment, underground storage and recovery or annual storage and recovery of water transported or stored in a facility which is exempt pursuant to paragraph 6 of this subsection.

13. Facilities using central Arizona project water for underground storage and recovery projects under title 45, chapter 3, article 2.[1]

14. Indirect groundwater storage and recovery projects permitted under title 45, chapter 3, article 3.[2]

15. Application of water from any source, including groundwater, surface water or wastewater, to grow agricultural crops or for landscaping purposes, except as provided in § 49–247.

16. Discharges to a facility that is exempt pursuant to paragraph 6 of this subsection if those discharges are regulated pursuant to 33 United States Code § 1342.[3]

Amended by Laws 1990, Ch. 176, § 15; Laws 1990, Ch. 385, § 7; Laws 1990, Ch. 388, § 5; Laws 1991, Ch. 211, § 29; Laws 1992, Ch. 250, § 1; Laws 1992, Ch. 270, § 22.

[1] Section 45–831 et seq.
[2] Section 45–851 et seq.
[3] 33 U.S.C.A. § 1342.

Historical and Statutory Notes

Laws 1990, Ch. 176 added provisions comprising par. 14 of subsec. B.

Laws 1990, Ch. 385 added provisions comprising par. 13 of subsec. B.

Laws 1990, Ch. 388 added provisions comprising pars. 12 and 15 of subsec. B.

Laws 1991, Ch. 211, § 37, provides:

"Sec. 37. **Conditional enactment**

"This act is not effective unless S.B. 1055 is enacted by the fortieth legislature, first regular session, relating to groundwater transportation [S.B. 1055 was enacted as Ch. 212]."

Reviser's Notes:

1990 Note. Prior to the 1991 amendment, this section contained the amendments made by Laws 1990, Ch. 176, § 15, Ch. 385, § 7 and Ch. 388, § 5 which were blended together pursuant to authority of § 41–1304.03. Pursuant to authority of § 41–1304.02, in subsection B, paragraph 14 the reference to "article 3" was substituted for the reference to "article 2" to conform to the reviser's renumbering of that article.

1992 Note. This section contains the amendments made by Laws 1992, Ch. 250, sec. 1 and Ch. 270, sec. 22 that were blended together as shown above pursuant to authority of § 41–1304.03.

Cross References

Aquifer replenishment project permit, see § 45–672.
Recharge project permits, see § 45–652 et seq.
Underground storage and recovery project permits, see § 45–804 et seq.
Underground water storage, annual storage and recovery projects, see § 45–881 et seq.

Administrative Code References

Class exemptions, see A.A.C. R18–9–105.

Law Review Commentaries

Avoiding environmental liabilities: A primer for business. Steven M. Wheeler & Edward Z. Fox, 23 Ariz.St.L.J. 483 (1991).

ARTICLE 4. ENFORCEMENT

§ 49–261. Compliance orders; appeal; enforcement

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–262. Injunctive relief; civil penalties; recovery of litigation costs

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

United States Supreme Court

Federal installations discharging water pollutants, state permits, see E.P.A. v. Cal. ex rel. St. Water Res. Control Bd., 1976, 96 S.Ct. 2022, 426 U.S. 200, 48 L.Ed.2d 578, on remand 583 F.2d 290.

Notes of Decisions

1. In general

Arizona has sufficient legal authority to qualify for Phase I of Interim Authorization under the Federal Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901 to 6987 and enforcement authority for program violations under state provisions. Op.Atty.Gen. No. I80–143.

§ 49–263. Criminal violations; classification; definition

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

Environmental crime now means prison time. Kenneth A. Hodson & James D. Vieregg, 29 Ariz. Atty. 22 (Dec. 1992).

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

Notes of Decisions

1. In general

Deficiencies in Arizona statutes and regulations with respect to administration of a discharge permit program under the federal Water Pollution Control Act, 33 U.S.C.A. § 1256, are identified. Op.Atty.Gen. No. 78–63.

Water quality control council must adopt water quality standards for all waters of the state, including underground waters; council should take immediate action to adopt groundwater standards or, if sufficient date is not available to enable to adopt such standards, council should act formally and on the record stating the reasons for not adopting such standards and directing the staff of the department of health services or other appropriate persons to immediately commence a study to acquire the necessary information. Op.Atty.Gen. No. 77–102, p. 144, 1976–77.

§ 49–264. Private right of action; citizen suits

Cross References

Remedial actions in response to hazardous substance releases potentially affecting state waters, court actions by persons adversely affected, see § 49–289.

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

§ 49–265. Venue

Law Review Commentaries

Enforcement of environmental laws in Arizona. James D. Vieregg, 26 Ariz.Atty. 17 (April 1990).

ARTICLE 5. REMEDIAL ACTIONS

Cross References

Groundwater replenishment districts, exclusions from replenishment tax, see § 48–4502.

Replenishment obligation of district members, see § 48–4463.

Administrative Code References

Remedial action rules, see A.A.C. R18–7–101 et seq.

Law Review Commentaries

Cost of Ignorance—assessing liability for potential environmental hazards in real estate transactions. Jennele M. Morris, 24 Ariz.B.J. 12 (June–July 1988).

Liability insurance in environmental litigation: An overview of selected issues in developing Arizona law. Nicholas J. Walwork, Lucas J. Narducci and Troy B. Froderman, 22 Ariz.St.L.J. 367 (1990).

§ 49–281. Definitions

In this article, unless the context otherwise requires:

1. "Dispose" means the deposit, injection, dumping, spilling, leaking or placing of any pollutant into or on any land or water so that the pollutant or any constituent of the pollutant may enter the environment or be discharged into any waters, including aquifers.

2. "Fund" means the water quality assurance revolving fund established by § 49–282.

3. "Hazardous substance" has the same meaning as prescribed in § 49–201, but does not include petroleum as defined in § 49–1001.

4. "Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, but excludes:

(a) Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons.

(b) Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine.

(c) Release of source, by-product or special nuclear material, as those terms are defined in § 30–651, resulting from the operation of a production or utilization facility as defined in the atomic energy act of 1954, as amended (68 Stat. 919),[1] which is subject to the regulatory authority of the United States nuclear regulatory commission as specified in that act, and the agreement, dated March 30, 1967, entered into between the governor of this state and the United States atomic energy commission pursuant to § 30–656 and § 274 of the atomic energy act of 1954, as amended.

(d) The normal application of fertilizer.

5. "Remedial actions" means those actions the director determines are reasonable and necessary in the event of the release or threat of release of hazardous substances into the environment such that the waters of the state are or may be affected, such actions as may be necessary to monitor, assess and evaluate such release or threat of release, actions of remediation, removal or disposal of hazardous substances or taking such other actions as may

be necessary to prevent, minimize or mitigate damage to the public health or welfare or to the waters of the state which may otherwise result from a release or threat of release of a hazardous substance that will or may affect the waters of the state. Remedial actions may include community information and participation costs and providing an alternative drinking water supply.

Amended by Laws 1989, Ch. 201, § 1; Laws 1992, Ch. 245, § 5, eff. June 17, 1992.

[1] 42 U.S.C.A. § 2011 et seq.

Cross References

Underground release of petroleum substances, powers of director, see § 49–1017.

Law Review Commentaries

Trespassing pollutants: Use of trespass in environmental litigation. Ralph D. Harris, 29 Ariz. Atty. 13 (Dec. 1992).

§ 49–282. Water quality assurance revolving fund; uses; remedial action criteria

A. A water quality assurance revolving fund is established in the state treasury to be administered by the director. The fund consists of monies from the following sources:

1. Monies appropriated by the legislature including monies appropriated pursuant to § 42–1341, subsection C, paragraph 3, subdivision (d).

2. Fertilizer license fees allocated under § 3–272, subsection B, paragraph 2.

3. Pesticide registration fees allocated under § 3–351, subsection D, paragraph 2.

4. The tax on water use pursuant to § 42–1552.

5. Water quality assurance fees collected under § 45–616.

6. Industrial discharge registration fees collected under § 49–209.

7. Aquifer protection permit application fees and individual permit annual registration fees collected under §§ 49–241 and 49–242.

8. Solid waste landfill registration fees pursuant to § 49–747.

9. Manifest resubmittal fees collected under § 49–922.01.

10. Hazardous waste facility registration fees collected under § 49–929.

11. Hazardous waste resource recovery facility registration fees collected under § 49–930.

12. Monies obtained as civil or criminal penalties imposed under this chapter.

13. Monies recovered from responsible parties as remedial action costs.

14. Monies received as costs for a review of remedial actions at the request of a person other than the state as prescribed by § 49–285, subsection B.

B. Monies in the fund are exempt from lapsing under § 35–190. Interest earned on monies in the fund shall be credited to the fund. Any amount remaining in the fund on June 30 of each year exceeding twenty-five million dollars shall be deposited in the state general fund.

C. Monies from the water quality assurance revolving fund shall be used for the following purposes:

1. To provide state matching monies or to meet such other obligations as are prescribed by § 104 of CERCLA.[1]

2. For all reasonable and necessary costs incurred in remedial actions if a responsible party cannot be determined or identified by the director.

3. For all reasonable and necessary costs incurred in remedial actions if a responsible party has failed or refused to undertake a remedial action after being ordered to do so by the director.

4. For the reasonable and necessary costs of monitoring, assessing, identifying, locating and evaluating the degradation, destruction, loss of or threat to the waters of the state resulting from a release of a hazardous substance to the environment.

5. For the reasonable and necessary costs of conducting site investigations, feasibility studies, health effect studies and risk assessments related to the release of a hazardous substance to the environment that has posed or may pose a threat to the waters of the state.

6. For the reasonable and necessary costs of administering the fund.

7. For the costs of the water quality monitoring program described in § 49–225.

8. For the reasonable and necessary costs of processing and issuing permits and administering the registration programs described in §§ 49–241 and 49–242.

9. For emergency response use as prescribed in § 49–282.02.

D. Remedial actions shall:

1. Assure the protection of public health and welfare and the environment.

2. To the extent practicable, provide for the control, management or cleanup of the hazardous substances so as to allow the maximum beneficial use of the waters of the state.

3. Be cost effective over the period of potential exposure to such substances.

E. The director shall adopt rules governing the uses of monies from the fund, the determination of priorities among cleanup sites and the selection of remedial actions to be undertaken either under the fund or by a responsible party, including the level and extent of cleanup. The director may adopt CERCLA rules, guidelines or procedures by reference. In adopting the rules required by this subsection and in selecting remedial actions the director shall consider the following factors:

1. Population, environmental and welfare concerns at risk.

2. Routes of exposure.

3. Amount, concentration, hazardous properties, environmental fate, such as the ability to bio-accumulate, persistence and probability of reaching the waters of the state, and the form of the substance present.

4. Physical factors affecting human exposure such as hydrogeology, climate and the extent of previous and expected migration.

5. The extent to which a responsible party can be identified and the ability of that party to reimburse the fund for remedial action costs.

6. The extent to which the amount of water available for beneficial uses will be preserved by a particular type of remedial action.

7. The technical practicality and cost effectiveness of remedial actions applicable to a site.

8. The availability of other appropriate federal or state remedial action and enforcement mechanisms, including funding sources established under CERCLA, to respond to the release.

F. Remedial actions required by this article shall be consistent with the requirements of title 45, chapter 2.[2]

G. Any political subdivision of this state which uses, used or may use waters of the state for drinking water purposes or any state agency, regardless of whether the political subdivision or state agency is a responsible party, may apply to the director for monies from the fund to be used for remedial action. An application to the fund for remedial action costs shall not be treated as an admission that a political subdivision or an agency of the state is a responsible party, but a political subdivision or a state agency that is a responsible party is liable for remedial action costs in the same manner, including reimbursement of the fund, as any other responsible party. No political subdivision may receive more than two hundred fifty thousand dollars or one-half of the monies available in the fund, whichever is greater.

The political subdivision shall commit a local matching amount at least equal to the amount sought from the fund.

Amended by Laws 1990, Ch. 230, § 13; Laws 1990, 3rd S.S., Ch. 7, § 5; Laws 1991, Ch. 184, § 4, eff. June 3, 1991; Laws 1992. Ch. 245, § 6, eff. June 17, 1992; Laws 1992, Ch. 290, § 10; Laws 1992, Ch. 291, § 8; Laws 1992, Ch. 300, § 5, eff. July 2, 1993; Laws 1993, Ch. 77, § 22, eff. July 17, 1993, retroactively effective to July 2, 1993.

[1] Section 42 U.S.C.A. § 9604.
[2] Section 45–401 et seq.

Historical and Statutory Notes

Laws 1989, Ch. 312, § 25, subsec. B provides:

"**B.** Sections 1, 2, 3, 18 and 19 of this act apply retroactively to from and after June 30, 1989.

Laws 1986, Ch. 368, § 148, is repealed by Laws 1989, Ch. 312, § 18.

Laws 1986, Ch. 368, § 149, as amended by Laws 1989, Ch. 312, § 19, relating to transfers from the state general fund, was repealed by Laws 1990, Ch. 230, § 21.

Laws 1986, Ch. 368, § 150, was repealed by Laws 1990, Ch. 230, § 21.

The 1990 amendments rewrote the section.

The amendment of this section by Laws 1990, 3rd S.S., Ch. 7, § 5, effective July 5, 1990, was repealed by Laws 1991, Ch. 184, § 5, subsec. B, effective June 3, 1991.

For provisions of Laws 1991, Ch. 184, relating to study and reports by the department of environmental quality, see Historical and Statutory Notes following § 42–1141.

The 1992 amendment of this section by Ch. 290 explicitly amended the 1992 amendment of this section by Ch. 245.

The 1992 amendment of this section by Ch. 291 explicitly amended the 1992 amendment of this section by Ch. 245.

The 1992 amendment of this section by Ch. 300 explicitly amended the 1992 amendment of this section by Ch. 245.

Laws 1992, Ch. 300, § 19, provides:

"Sec. 19. **Delayed effective date**

"Section 49–282, Arizona Revised Statutes, as amended by § 5 of this act is effective from and after July 1, 1993."

Laws 1993, Ch. 77, §§ 1, par. 14, and 31, subsec. B, provide:

"Section 1. **Purpose**"

"14. Section 49–282, Arizona Revised Statutes, was amended by Laws 1992, chapter 290, § 10, Laws 1992, chapter 291, § 8 and Laws 1992, chapter 300, § 5. The chapter 300 version could not be blended because of its delayed effective date. In order to combine these versions, this act amends the 1992 blended version of § 49–282, Arizona Revised Statutes, to incorporate the amendments made by Laws 1992, chapter 300 and the chapter 300 version is repealed."

"Sec. 31. **Retroactivity**"

"**B.** Section 22 of this act is effective retroactively to from and after July 1, 1993."

The 1993 amendment of this section by Ch. 77 explicitly amended the 1992 amendment of this section by Chs. 290 and 291.

The amendment of this section by Laws 1992, Ch. 300, § 5, effective July 2, 1993, was repealed by Laws 1993, Ch. 77, § 23.

1992 Reviser's Notes:

The independent and valid amendment of this section by Laws 1992, Ch. 290, sec. 10 and Ch. 291, sec. 8 and Ch. 300, sec. 5 could not be blended because of the delayed effective date of Ch. 300.

Prior to the 1993 amendment, this section contained the amendments made by Laws 1992, Ch. 290, sec. 10 and Ch. 291, sec. 8 that were blended together pursuant to authority of § 41–1304.03. The amendment of this section by Laws 1992, Ch. 290 did not contain a duly enacted emergency clause and therefore took effect on September 30, 1992.

Cross References

Commercial fertilizers, license fee deposits, see § 3–272.

Deposits and expenditures, see § 49–242.

Environmentally hazardous products license and fee, see § 42–1141 et seq.

Hazardous waste manifest fees, disposition of monies, see § 49–922.01.

Hazardous waste resource recovery facilities, disposition of fee revenues, see § 49–930.

Hazardous waste treatment, storage and disposal facilities, disposition of fee revenues, see § 49–929.

Industrial dischargers to community sewer systems permit fees, deposit of fees collected, see § 49–209.

Municipal water delivery system levy and payment of taxes, see § 42–1552.

Pesticides, registration fee deposits, see § 3–351.

Solid waste landfills, registration fee deposit, see § 49–747.

Water quality assurance fee, remittance and deposit, see § 45–616.

Water use tax, disposition of revenues collected, see § 42–1554.

Administrative Code References

Groundwater protection, findings and determinations, remedial actions, see A.A.C. R18–6–302.

§ 49–282.01. Maximum annual payments of fees and taxes by mines to water quality assurance revolving fund; definitions

A. Notwithstanding any other law, a person engaging in mining is not required to pay fees and taxes listed in § 49–282, subsection A, paragraphs 2 through 12 in excess of the lesser of:

1. Ten thousand dollars in a calendar year per individual mining site.

2. Twenty-five thousand dollars in a calendar year per mining entity.

B. A person who pays such fees and taxes for mining facilities or activities in the amount specified in subsection A of this section may submit evidence of such payment to the appropriate entity in lieu of paying additional fees and taxes for that calendar year for mining facilities or activities.

C. If a mining facility or activity is owned or operated by more than one person, the payment of fees or the compliance with this section for the facility or activity by one person constitutes compliance by all other owners and operators.

D. For purposes of this section:

1. "Individual mining site" means a mining facility or activity or group of mining activities or facilities located in a contiguous geographical area and owned or operated by the same person.

2. "Mining" means the exploration, extraction, beneficiation and processing, including smelting and refining, of ores and minerals and all incidental activities.

3. "Mining entity" means a person who owns or operates more than one individual mining site in this state.

Added by Laws 1992, Ch. 300, § 6, eff. Sept. 30, 1992, retroactively effective to June 18, 1992.

Historical and Statutory Notes

Laws 1992, Ch. 300, § 20, provides:

"Sec. 20. **Retroactive effective date**

"Section 6 of this act is effective retroactively to from and after June 17, 1992."

Former § 49–282.01, as added by Laws 1990, Ch. 230, § 14, which related to the same subject matter, was repealed by Laws 1992, Ch. 245, § 7, effective June 17, 1992.

1992 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection A after "fees" the spelling of "and" was corrected.

§ 49–282.02. Water quality assurance revolving fund; emergency response use; definition

A. Notwithstanding any other statute, monies from the water quality assurance revolving fund may be used for all reasonable costs incurred in remedial actions taken in response to a release or threat of a release of a hazardous substance or pollutant that presents an emergency to the public health or the environment. Within ten days of the date that the first remedial action costs are incurred, the director shall make a written determination that an emergency exists or that an emergency existed at the time the remedial action costs were incurred. A remedial action funded as an emergency response shall be completed within one year of the director's written determination that an emergency exists.

B. Any reasonable remedial action costs incurred by the director pursuant to this section in response to a release or a threat of a release of a hazardous substance may be recovered in a civil action brought by the attorney general against any responsible party as prescribed by § 49–285, subsection A. This subsection does not preclude the department from initiating actions under other provisions of state or federal law. With respect to any reasonable and necessary remedial action costs incurred by the director pursuant to this section in responding to a release or a threat of a release of a pollutant, the attorney general may recover those

costs in a civil action against a person only to the extent otherwise permitted by statute or the common law and not pursuant to this article.

C. For purposes of this section, "remedial actions" means those actions necessary to prevent, minimize or mitigate significant damage to public health or the environment that may result from a release or a threat of release, based on an evaluation of the factors prescribed in 40 code of federal regulations § 300.415(b)(2) as amended on January 1, 1992. Remedial actions include those actions consistent with appropriate removal action prescribed by 40 code of federal regulations § 300.415(d) as amended on January 1, 1992.

Added by Laws 1992, Ch. 245, § 8, eff. June 17, 1992.

§ 49–283. Responsible party

A. For purposes of imposing liability under this article, and except as provided in subsections B, C, D, E, F and G, a person is deemed the party responsible for the release or threatened release of a hazardous substance if the person:

1. Owned or operated the facility:

(a) When the hazardous substance was placed or came to be located in or on the facility.

(b) When the hazardous substance was located in or on the facility but before the release.

(c) During the time of the release or threatened release.

2. Owned or possessed the hazardous substance and arranged, by contract, agreement or otherwise, for the disposal, treatment or transport for disposal or treatment of the hazardous substance.

3. Accepted for transport to a disposal or treatment facility waste that contained a hazardous substance and either selected the facility to which it was transported or disposed of it in a manner contrary to law.

B. Notwithstanding the provisions of subsection A, a person that owns real property is not a responsible party if there is a release or threatened release of a hazardous substance from a facility in or on the property unless one or more of the following applies to that person:

1. Was engaged in the business of generating, transporting, storing, treating or disposing of a hazardous substance at the facility or disposing of waste at the facility, or knowingly permitted others to engage in such a business at the facility.

2. Permitted any person to use the facility for disposal of a hazardous substance.

3. Knew or reasonably should have known that a hazardous substance was located in or on the facility at the time right, title or interest in the property was first acquired by the person and engaged in conduct by which he associated himself with the release. For the purpose of this paragraph, a written warranty, representation or undertaking, which is set forth in an instrument conveying any right, title or interest in the real property and which is executed by the person conveying the right, title or interest, or which is set forth in any memorandum of any such instrument executed for the purpose of recording, is admissible as evidence of whether the person acquiring any right, title or interest in the real property knew or reasonably should have known that a hazardous substance was located in or on the facility.

4. Took action which significantly contributed to the release after he knew or reasonably should have known that a hazardous substance was located in or on the facility.

C. Any liability which accrues to an owner of real property under this section does not accrue to any other person who is not an owner of the real property merely because the other person holds some right, title or interest in the real property. An owner of real property on which a public utility easement is located is not a responsible party with respect to any release caused by any act or omission of the public utility which holds the easement in carrying out the specific use for which the easement was granted.

D. A person otherwise deemed a responsible party is not liable under this article if he can establish by a preponderance of the evidence that the release or threat of release of a hazardous substance and the resulting damages were caused solely by:

1. An act of God.

2. An act of war.

3. An act or omission of a third party other than an employee or agent of that person or other than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with that person, unless the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail, if that person establishes by a preponderance of the evidence that:

(a) He exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of the hazardous substance in light of all relevant facts and circumstances.

(b) He took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions.

4. A release or threatened release which was subject to limits or conditions in a federal permit or a state permit relating to the protection of public health or the environment and the operation of the releasing facility has been and is in compliance with applicable limits or conditions.

5. The application of a pesticide product registered under the federal insecticide, fungicide, and rodenticide act (61 Stat. 163)[1] and applied according to label requirements.

6. Liability has been assumed by the federal postclosure liability fund established under 42 United States Code § 9607(k).

7. Any combination of paragraphs 1 through 6 of this subsection.

E. A person is not a responsible party with respect to a hazardous substance that is located on or beneath property that is owned or occupied by that person if the hazardous substance is present solely because it migrated from property that is not owned or occupied by that person and that person is not otherwise a responsible party as prescribed by subsection A, paragraph 2 or 3.

F. A person is not liable for costs or damages incurred solely as a result of an action taken or omitted while rendering care, assistance or advice that is consistent with rules adopted by the director, is consistent with the national contingency plan or is under the direction of an on-scene coordinator appointed pursuant to the national contingency plan and that is rendered with respect to a release or a threat of a release of a hazardous substance that creates a danger to public health or the environment. This subsection does not preclude liability for costs or damages that result from that person's negligence.

G. A state or local government is not liable for costs or damages incurred as a result of an action taken in response to an emergency created by the release or threatened release of a hazardous substance that is generated by or from a facility owned by another person. This subsection does not preclude liability for costs or damages that result from gross negligence or intentional misconduct by this state or local government. For purposes of this subsection, reckless, willful or wanton misconduct constitutes gross negligence.

H. Subsections F and G shall not be construed to affect the liability of any person who is otherwise liable with respect to the release or threat of release pursuant to this section.

Amended by Laws 1992, Ch. 245, § 9, eff. June 17, 1992.

[1] 7 U.S.C.A. § 135 et seq.

Historical and Statutory Notes

The 1992 amendment added subsec. E relating to migrating substances; added subsec. F relating to actions consistent with adopted rules; added subsec. G relating to governmental immunity; added subsec. H relating to statutory construction; and made a nonsubstantive change.

§ 49–285. Liability for remedial actions costs; limitation of actions

A. Except as otherwise provided in subsection C of this section and § 49–283, a person who is a responsible party shall be strictly, jointly and severally liable for such hazardous substance remedial action costs as are incurred by this state, a political subdivision of this

state or any other person in a manner consistent with the rules and procedures adopted under § 49–282, subsection E. A responsible party may be held liable for remedial action costs for a release of a hazardous substance even though the conduct that resulted in the release or the release itself occurred before August 13, 1986.

B. In order to preserve any right to recover remedial action costs from responsible parties, remedial actions conducted by this state, a political subdivision of this state or any other person shall when evaluated as a whole be in substantial compliance with the rules and procedures adopted pursuant to § 49–282, subsection E. The director's approval of a remedial action that is conducted by a person other than the state is not required to preserve any right to recover remedial action costs from potentially responsible parties. Any person other than the state who undertakes a remedial action may request that the director approve the remedial action at any time before, during or after the remedial action. Any remedial action so approved by the director shall be deemed to be in substantial compliance with the rules and procedures adopted pursuant to § 49–282, subsection E. Any person who requests the director's approval of a remedial action shall reimburse the department for the total reasonable cost to the department for the review of the remedial action unless the director waives all or a part of the reimbursement. These monies shall be deposited in the water quality assurance revolving fund established by § 49–282. Costs that are reimbursed to the department by a party that obtains the director's approval of remedial actions pursuant to this subsection constitute remedial action costs that may be recovered from responsible parties.

C. Any person who is a defendant in an enforcement proceeding brought under § 49–287 may join in the action of any other person who is or may be a responsible party. Following adjudication of liability and recovery of remedial action costs in an action brought under this article, any person held liable for such costs may bring a separate action to require any other person who is or may be a responsible party to contribute to the payment of such costs.

D. If any person in an action brought under this article establishes by a preponderance of the evidence that the release or threatened release referred to in this article is divisible, the person is liable only for his portion of the release.

E. This article does not affect or modify in any way the obligations or liability of any person, by reason of subrogation or otherwise, under any other provision of state or federal law, including common law, for damages, injury or loss resulting from a release of any hazardous substance or for remedial action costs, except that any person who receives compensation for remedial action costs pursuant to this article is precluded from recovering compensation for the same remedial action costs pursuant to any other federal or state law. Any person who receives compensation for remedial action costs pursuant to any other federal or state law is precluded from receiving compensation for the same remedial action costs as provided in this article.

F. This article shall not be construed to affect the equitable powers of apportionment of any court following adjudication of liability. In exercising its powers of apportionment a court shall consider the following:

1. The ability of responsible parties to demonstrate that their contribution to a release or threat of release of the hazardous substance can be distinguished.

2. The amount of the hazardous substance involved.

3. The degree of toxicity of the hazardous substance involved.

4. The degree of involvement by the responsible parties in the generation, transportation, treatment, storage or disposal of the hazardous substance.

5. The degree of care exercised by the parties with respect to the hazardous substance concerned, taking into account the characteristics of the hazardous substance.

6. The degree of cooperation by the responsible parties with federal, state or local officials to prevent any harm to the public health or the environment.

G. An action brought by a person other than the state to recover remedial action costs from a responsible party shall be brought within three years of the completion of the remedial

action or within six years of the initiation of on-site physical construction activities for the remediation, removal or disposal of hazardous substances, whichever is earlier.

Amended by Laws 1990, Ch. 230, § 15; Laws 1992, Ch. 245, § 10, eff. June 17, 1992.

Historical and Statutory Notes

The 1990 amendment, in subsec. A, substituted "August 13, 1986" for "the effective date of this section", and "§ 49–282, subsection E" for "§ 49–282, subsection D".

The 1992 amendment inserted, in subsec. A, in the first sentence, inserted "hazardous substance", and deleted the third sentence, which read, "Remedial action costs incurred by a person other than this state are deemed to be in accordance with the rules and procedures adopted under § 49–282, subsection E if the remedial actions that resulted in such costs were approved in advance by the director; inserted subsec. B relating to preservation of rights to recover costs; redesignated subsecs. B, C, D and E as subsecs. C, D, E and F; added subsec. G relating to limitation of actions; and made nonsubstantive changes throughout.

§ 49–287. Enforcement; use of fund; inspections and information gathering

A. Except as provided in § 49–286, the provisions of this article are independent of and are not subject to the enforcement remedies of article 4 of this chapter[1] and § 49–264.

B. This section does not preclude the department from initiating actions pursuant to §§ 107 (a) and 107 (f) of CERCLA,[2] § 7002 of the resource conservation and recovery act,[3] § 505 of the clean water act[4] and § 1449 of the safe drinking water act.[5]

C. Judicial actions initiated pursuant to this section have precedence over all other civil proceedings.

D. If there is a release or the threat of a release of a hazardous substance which may present an imminent and substantial danger to the public health or welfare:

1. The director may take such remedial action as he deems necessary to protect the public health or welfare or the environment.

2. The attorney general may request a temporary restraining order, a preliminary injunction, a permanent injunction or any other relief necessary to protect the public health or welfare or the environment from the release.

3. The director may issue an order requiring abatement of such release or threat of a release and appropriate remedial action if the action is consistent with the criteria listed in and rules adopted pursuant to § 49–282 and before taking such action the director provides written notice to the responsible party, if known, and the owner of the real property where the facility is located if the owner is not a responsible party. The notice shall include:

(a) The reasons for the remedial action.

(b) A reasonable time for beginning and completing the actions, taking into account the urgency of the actions for protecting public health or welfare or the waters of the state.

(c) The steps taken to comply with the criteria listed in and rules adopted pursuant to § 49–282.

(d) The intention of this state or a political subdivision to take remedial action and the possible liability of the responsible party for the costs of such actions if that action is not taken by the responsible party.

4. The director may initiate the notification and settlement process established pursuant to § 49–291.

E. A remedial action order issued under subsection D of this section becomes final and enforceable in the superior court for purposes of subsections H and I of this section unless, within thirty days after the receipt of the order, the recipient moves to quash or modify the order in the superior court. If the motion to quash or modify the order raises issues of fact, the recipient of the order and the state are entitled to conduct expedited discovery on application to the court and are entitled to a priority for trial. A party who undertakes the actions prescribed in a remedial action order issued pursuant to this section may obtain a court order to recover from the fund the reasonable and necessary costs of the actions if the party demonstrates to the court that the actions required by the order were arbitrary and

capricious or otherwise were not in accordance with law or that the party is not a responsible party as prescribed by § 49–283.

F. If there is a release or the threat of a release of any pollutant which may present an imminent and substantial danger to the public health or welfare, the director may take such remedial action as he deems necessary to protect the public health or welfare or the environment.

G. Any remedial action costs incurred by the director pursuant to the procedures in subsection D of this section may be recovered in a civil action brought by the attorney general against any responsible party.

H. A responsible party who wilfully violates or fails or refuses to comply with any order of the director under subsection D, paragraph 3 of this section may, in an action brought in the superior court in the appropriate county to enforce such order, be assessed a civil penalty of not more than five thousand dollars for each day in which the violation occurs or the failure to comply continues.

I. A responsible party who fails, without sufficient cause, to properly provide remedial action on order of the director pursuant to subsection D, paragraph 3 of this section may be liable to this state for punitive damages in an amount up to three times the amount of any costs incurred by the director as a result of the failure to take proper action. The attorney general may commence a civil action against the responsible party to recover the punitive damages. Any monies received by this state pursuant to this subsection shall be deposited in the water quality assurance revolving fund. The director's failure to comply with the requirements of § 49–282 is a defense to an action for punitive damages and the amount of the punitive damages requested may be reduced, in full or in part.

J. If the director may act pursuant to this section, he may undertake such investigations, monitoring, surveys, testing and other information gathering as he may deem necessary or appropriate to identify the existence and extent of the release or threat of a release, the source and nature of the hazardous substances and the extent of danger to the public health or welfare or to the environment. In addition, the director may undertake such planning, legal, fiscal, economic, engineering, architectural and other studies or investigations as he may deem necessary or appropriate to plan and direct response actions, to recover the costs of response actions and to enforce this article.

Amended by Laws 1991, Ch. 283, § 2; Laws 1992, Ch. 245, § 11, eff. June 17, 1992 .

[1] Section 49–261 et seq.
[2] 42 U.S.C.A. § 9607(a, f).
[3] 46 U.S.C.A. § 6901 et seq.
[4] 33 U.S.C.A. §§ 1251 to 1376.
[5] 42 U.S.C.A. §§ 201, 300f to 300j–9.

Historical and Statutory Notes

The 1991 amendment deleted subsec. K.

The 1992 amendment inserted subsec. D, par. 4, relating to initiation of process; and rewrote subsec. E, which read:

"A remedial action order issued under subsection D of this section becomes final and enforceable in the superior court unless, within thirty days after the receipt of the order, the recipient requests a hearing before an administrative law judge appointed by the department of administration."

Cross References

Private rights of action, see § 49–264.

§ 49–288. Information gathering and access; enforcement; civil penalties

A. The director may take an action authorized under subsection B or C of this section to determine the need for, to select or to undertake any remedial action pursuant to this article or to otherwise enforce the provisions of this article or a rule adopted pursuant to this article. Any such action taken regarding the release or threatened release of a pollutant shall not require a person to create information or documents not then in existence.

B. The director may make a request to require a person who has or may have information relevant to a release or threatened release of a hazardous substance, or pollutant as identified

by the director in the request, including information relating to the ability of a person to pay for or to undertake remedial actions pursuant to this article, to furnish, after reasonable notice, information or documents relating to such release or threatened release or to grant access at all reasonable times, after reasonable notice, to a facility or other place owned or operated by the person to inspect and copy all documents or records relating to such release or threatened release. At the option of the person, the person may copy and furnish, at the person's expense, all such documents or records to the director.

C. The director or an agent designated by the director with appropriate documentation that identifies the person who has been given authority from the director, after reasonable notice, may enter a facility or other place at reasonable times under any of the following circumstances:

1. Where a hazardous substance or a regulated substance as defined in § 49–1001 may be or has been generated, stored, treated, disposed of or transported from and which may be related to a release or threatened release of a hazardous substance or regulated substance.

2. From which or to which a hazardous substance or a regulated substance as defined in § 49–1001 has been or may have been released or where such release is or may be threatened.

3. Where entry is needed to determine the need for remedial actions or the appropriate remedial actions or to effectuate remedial actions pursuant to this article.

4. To inspect and obtain samples of any suspected hazardous substance or a regulated substance as defined in § 49–1001 which has been or may have been released or where such release is or may be threatened, including samples of containers or labeling.

D. If a sample is obtained pursuant to subsection C, paragraph 4 of this section, the director shall, before leaving the premises, give to the owner, operator or other person in control of the facility or other place from which the samples were obtained a receipt describing the sample obtained and, if requested, a portion of each sample. A copy of the results of any analysis made of such samples shall be furnished promptly to the owner, operator or other person in control, if such person can be located. Inspections pursuant to subsection C, paragraph 4 of this section shall be completed with reasonable promptness.

E. If consent is not granted regarding any request made by the director under subsections A through C of this section, then the director may issue an order requiring compliance with the request within a specified time period that the director determines is appropriate under the circumstances. The order shall provide that the time period for compliance shall be extended for good cause shown as determined by the director. The order may not be issued until an opportunity for consultation as is reasonably appropriate under the circumstances has been afforded to the person to whom the request is made.

F. The director may ask the attorney general to commence a civil action to compel compliance with a request made pursuant to subsections A through C of this section or an order issued pursuant to subsection E of this section.

G. The court may assess a civil penalty of not to exceed five thousand dollars for each day of noncompliance against any person who unreasonably fails to comply with an order issued pursuant to subsection E of this section. The attorney general, at the request of the director, may commence an action in superior court to recover civil penalties provided for in this subsection. In determining the amount of a civil penalty under this subsection, the court shall consider:

1. The seriousness of the act of noncompliance under this section.

2. As an aggravating factor only, the economic benefit, if any, resulting from the act of noncompliance under this section.

3. Any history of such violation.

4. Any good faith efforts to comply with the order.

5. The economic impact of the penalty on the person.

6. Such other factors as the court deems relevant.

H. Nothing in this section shall preclude the director from securing access or obtaining information in any other lawful manner.

Added by Laws 1991, Ch. 283, § 3. Amended by Laws 1992, Ch. 245, § 12, eff. June 17, 1992.

Historical and Statutory Notes

The 1992 amendment, in subsec. C, inserted "or an agent designated by the director with appropriate documentation that identifies the person who has been given authority from the director".

Reviser's Notes:

1991 Note. Laws 1991, Ch. 280, sec. 4 added another new § 49–288 that was renumbered as § 49–289 and in subsection C the words "a facility or other place" were transposed to follow "enter", pursuant to authority of § 41–1304.02.

1992 Note. Pursuant to authority of § 41–1304.02, in the chapter version in subsection G, paragraph 5 the stricken text at the beginning was deleted as a correction of a manifest clerical error.

§ 49–289. Fund financed remedial actions; definition

A. The director shall assure that remedial actions taken pursuant to this article are pursued and completed as expeditiously as possible. A remedial action shall not be financed in whole or in part from monies in the water quality assurance revolving fund unless the director has established specific deadlines for completion of a remedial action plan and for initiation and completion of remedial actions.

B. If the director determines during the development and evaluation of a remedial action plan that the remedial action cannot be initiated in three years and completed in ten years, the director shall:

1. Include in the plan a schedule that clearly establishes measurable water quality goals in five year increments.

2. Conduct a health cost and benefit analysis for alternative remedial action schedules that would allow for the completion of the remedial action within ten years.

C. Except as provided in subsection D of this section, the deadlines are as follows:

1. Completion of a remedial action plan, not later than two years from the date of the director's decision to allocate monies from the fund for that remedial action.

2. Initiation of the remedial action, not later than three years from the date of the director's decision to allocate monies from the fund for that remedial action.

3. Completion of the remedial action, not later than ten years from the date of the director's initial decision to allocate monies from the fund.

D. The director may extend the time periods in subsection C of this section if at least six months before the expiration of a deadline the director finds that any of the following applies:

1. Compliance with the deadline is impossible due to circumstances totally beyond the control of the parties involved.

2. Additional time is essential for critically important scientific and technical studies.

3. Compliance with the deadline would require extraordinary and excessive expenditures from the fund and a more protracted schedule would result in a net savings to the fund.

4. Compliance with the deadline would create substantial risks to public health or the environment that far outweigh the benefits of timely remedial action.

E. The director may grant an extension pursuant to subsection D of this section only after public notice and an opportunity for public comment and shall provide a detailed written explanation of the basis for and the length of the extension. An extension shall be for a fixed period of time that does not exceed the amount of time justified by the reason for the extension.

F. A decision by the director pursuant to subsection D of this section is appealable in the manner provided in § 49–321.

G. A person who is or may be adversely affected by a remedial action, plan or deadline may file an action in the superior court against the director and any political subdivision that

has been awarded fund monies in order to enforce the deadlines set by this section. This action shall be filed in the same manner as provided in § 49–264.

H. For purposes of this section, "remedial action" means those activities taken by the director after the other actions necessary to monitor, assess or evaluate a release or threat of a release of a hazardous substance that will or may affect the waters of the state.

Added as § 49–288 by Laws 1991, Ch. 280, § 4. Renumbered as § 49–289.

Historical and Statutory Notes

Laws 1991, Ch. 280, § 1, provides:

"Section 1. Purpose

"A. The legislature finds that many of this state's solid waste landfills are operated by county and local governments. The legislature is committed to the principle that government should provide leadership and set the example for sound public health policy by requiring facilities that are managed by government to provide strong environmental protection and to operate well within the boundaries of the laws that protect the air, land and water resources of the community and this state.

"B. It is the purpose of this legislation to require that all solid waste recycling and disposal facilities demonstrate through the environmental health laws that regulate aquifer protection and solid waste planning that the air, land and water will not be contaminated by existing or new operations."

Laws 1991, Ch. 280, § 6, as amended by Laws 1992, Ch. 126, § 4, effective June 2, 1992, provides:

"Sec. 6. **Transfer of fund monies; purpose**

"A. The use of the water quality assurance revolving fund for preventing the threat of groundwater contamination from existing facilities is within the general legislative intent of the fund. That fund should be used to prevent the release of hazardous substances into the environment and to protect Arizona's drinking water from the threat of contamination.

"B. The director of the department of environmental quality shall transfer or expend the sum of five hundred thousand dollars from the water quality assurance revolving fund established in § 49–282, Arizona Revised Statutes, for the purposes of increasing the staff levels and subsequent training of ten additional full-time employee positions for the processing, reviewing and approving or denying the aquifer protection permit applications for existing facilities.

"C. In order to repay the five hundred thousand dollars expended pursuant to subsection B of this section, the director of the department of environmental quality shall credit at least one hundred fifty thousand dollars each year in aquifer protection permit fees to the water quality assurance revolving fund for the purposes prescribed in § 49–282, Arizona Revised Statutes. These monies shall be credited until the total dollar amount credited equals the five hundred thousand dollars expended for processing aquifer protection permit applications plus annual interest of five per cent per year."

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, this section, added by Laws 1991, Ch. 280, sec. 4 as § 49–288, was renumbered as § 49–289. In addition, in the section heading "; definition" was added after "actions", subsection A was relettered as subsection H and subsections B through H were relettered as subsections A through G, respectively, in relettered subsection C the reference to "subsection D" was substituted for the reference to "subsection E", in relettered subsection D the reference to "subsection C" was substituted for the reference to "subsection D" and in relettered subsections E and F the reference to "subsection D" was substituted for the reference to "subsection E" to conform to the reviser's relettering of those subsections and in relettered subsection H the spelling of "affect" was corrected.

§ 49–290. Exemption from permit requirements; definition

A. Notwithstanding any other statute, a person who performs a portion of a remedial action that has been approved by the department, where that portion is entirely on site and is conducted in compliance with this article is not subject to any requirement to obtain any permit or approval that may otherwise be required by the department.

B. Except as prescribed in subsection C, a person who conducts a portion of a remedial action, where that portion is entirely on site and is conducted in compliance with this article, may be exempted from a requirement to obtain any other state or local permit or approval, other than any requirement of title 45, at the written request of the person conducting the remedial action. The written request shall identify the specific permit to be exempted and the reasons the exemption is requested. The permit may be exempted if the director finds both of the following:

1. The requirement does not arise out of any permit or regulatory program that is required pursuant to the laws of the United States.

2. The requirement presents a substantial impediment to effective performance of the remedial action selected by the department.

C. Discharge of wastewater to off-site publicly owned treatment works and sewer systems does not constitute an activity conducted entirely on site for purposes of subsection B.

D. The director shall give written notice of any request for exemption made pursuant to subsection B to the remedial action coordinator designated pursuant to subsection F by the governmental entity whose permit requirements is the subject of the request. Prior to making any finding pursuant to subsection B, the director or the director's designee shall meet and confer with the remedial action coordinator and the person conducting the remedial action to identify alternatives to exemption.

E. Any finding made by the director pursuant to subsection B shall be in writing. The governmental entity whose permit requirement is preempted as a result of such finding is not liable for property damage, personal injury damage or violations of state or local law resulting from the exemption. The director shall notify the affected governmental entity of any finding made pursuant to subsection B. A finding of the director made pursuant to subsection B shall be a final decision of the department, and shall be subject to review in accordance with the provisions of title 12, chapter 7, article 6.

F. Each city, town and county shall designate a remedial action coordinator who shall have responsibility for monitoring and facilitating any remedial actions conducted within its jurisdiction. The designated remedial action coordinator shall:

1. Regularly consult, as needed, with the department and the person conducting a remedial action throughout the duration of the remedial action.

2. Expedite the processing and issuance of permits, approvals or other authorizations required by the governmental entity represented by the remedial action coordinator, to facilitate the prompt conduct of a remedial action.

3. Provide information to the department and the person conducting the remedial action regarding applicable requirements of the governmental entity represented by the remedial action coordinator and the potential for waiver of such requirements.

G. For purposes of this section, "on site" means the areal extent of contamination and all suitable areas in close proximity to the contamination that are reasonably necessary for implementation of the remedial action.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

Historical and Statutory Notes

1992 Reviser's Note:

Pursuant to authority of § 41–1304.02, in the section heading "; definition" was added, the last sentence of subsection A was set forth as a new subsection G and in subsection C the spelling of "on site" was corrected.

§ 49–290.01. Applicability of requirements; Arizona department of water resources

A. Notwithstanding § 49–290, any person conducting a remedial action shall obtain and comply with applicable permits, approvals or other authorizations required by the Arizona department of water resources. The Arizona department of water resources shall expedite the processing and issuance of permits, approvals or authorizations to facilitate the prompt conduct of approved remedial actions. If the Arizona department of water resources fails to issue or deny a permit within one hundred twenty days of the date of receipt of a complete application for a permit, approval or authorization required for the remedial action or subsequent implementing work plan approved by the department, the department may authorize the party conducting the approved remedial action to proceed with that action and that person shall not be subject to any penalties for failure to obtain the permit, approval or authorization from the department of water resources, but shall be required to comply with the substantive requirements of such permit, approval or authorization. The determination of whether an application for a permit is complete shall be made by the Arizona department of water resources. The person conducting the approved remedial action who uses groundwater withdrawn in an active management area as part of an approved remedial action shall

continue to pay the groundwater withdrawal fee for the groundwater the person withdrew and used or received and used.

B. The director of environmental quality and the director of the Arizona department of water resources shall enter into a memorandum of understanding which establishes a procedure for expediting the review and issuance of permits issued under title 45 when the director of environmental quality has made a determination that a delay in the issuance of a permit required by title 45 will result in the continuance of an imminent and substantial endangerment to the public health, welfare or the environment.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

§ 49–291. Notice and settlement; recovery of costs

A. The director may issue to potentially responsible parties including owners or operators and other persons described in § 49–283 a notice letter that requires abatement of the release or threat of a release and appropriate remedial action consistent with the criteria listed in the rules adopted pursuant to § 49–282. The notice letter shall be transmitted to the potentially responsible parties by return receipt requested mail or by hand delivery and shall include all of the following:

1. The reasons for the remedial action.

2. A reasonable time for beginning the remedial action, taking into account the urgency of protecting public health or welfare, the waters of this state or the environment.

3. The steps necessary to comply with the criteria listed in the rules adopted pursuant to § 49–282.

4. The intention of the director to take remedial action and the possible liability of the potentially responsible party for the costs of that action if the remedial actions set forth in the notice letter are not taken by the potentially responsible party.

B. A potentially responsible party who receives a notice letter pursuant to this section has ninety days from the date of receipt of the notice letter to present to the director a written, good faith offer to voluntarily conduct all or a portion of those remedial actions set forth in the notice letter. The director has sole discretion to determine whether to accept an offer, and this decision of the director is not subject to judicial review.

C. On receipt of an offer pursuant to subsection B of this section, the director may enter into negotiations with the potentially responsible party. A decision by the director not to enter into settlement negotiations or a decision not to settle under this section is not subject to judicial review. If the director decides not to enter into settlement negotiations pursuant to this section, the director shall provide to the party seeking settlement a written statement that contains the reasons for this decision within sixty days of receipt of the offer. Within one hundred eighty days after the director's decision to negotiate following receipt of a good faith offer made as prescribed by subsection A of this section, the director shall determine whether negotiations should continue. If the director determines that negotiations should not continue, the director shall inform the potentially responsible parties in writing. The director may then issue an order pursuant to § 49–287, subsection D or take remedial action pursuant to this article. A decision of the director that negotiations should not continue is not subject to judicial review. A written statement provided by the director pursuant to this subsection is not admissible as evidence in any action to determine status as a responsible party or liability for remedial action costs.

D. If a potentially responsible party does not submit an offer in response to a notice letter, the attorney general at the request of the director may seek to have the potentially responsible party perform the remedial actions set forth in the notice letter by issuing a remedial action order pursuant to § 49–287, subsection D or by filing an action in the superior court in Maricopa county. In the alternative and at the discretion of the director, the director may perform the remedial actions set forth in the notice letter issued pursuant to subsection A of this section. At the request of the director, the attorney general also shall file an action in the superior court in Maricopa county to recover all reasonable and necessary costs

incurred by the director in the performance of the remedial actions set forth in the notice letter.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

Historical and Statutory Notes

1992 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection A, last sentence the spelling of "hand delivery" was corrected.

§ 49–292. Settlement; authority and effect

A. The director may enter into a settlement agreement or consent decree with a potentially responsible party pursuant to § 49–291 without making an express finding in the agreement regarding an imminent and substantial endangerment to the public health or welfare, the waters of this state or the environment.

B. In any settlement agreement or consent decree entered into pursuant to subsection A of this section, the director may provide any potentially responsible party with a covenant not to sue concerning any liability to the state under this article or under CERCLA including future liability that may result from a release or threat of a release of a hazardous substance addressed by a remedial action whether that action is on site or off site. A covenant not to sue takes effect when the settlement agreement or consent decree becomes final. A covenant not to sue with respect to future liability shall include an exception that allows the director to sue the responsible party concerning future liability from the release or threatened release that is the subject of the covenant if the liability arises out of conditions that are unknown to the director at the time the director enters into the covenant. A covenant not to sue does not preclude the director from suing the potentially responsible party for failure to comply with the terms of the settlement agreement or consent decree in which the covenant was included.

C. A potentially responsible party who has resolved its liability to the state that arises from this article or from CERCLA in a judicially approved consent decree is not liable for claims for contribution or cost recovery regarding matters addressed in the consent decree. Any such judicially approved consent decree does not discharge other potentially responsible parties unless its terms so provide, but such a settlement does reduce the potential liability of other potentially responsible parties by the amount of the settlement.

D. If the state has obtained less than complete relief from a potentially responsible party who has resolved its liability to the state, the state may bring an action against any other potentially responsible party who has not so resolved its liability.

E. A potentially responsible party who has resolved its liability to the state may seek contribution for matters addressed in the settlement from any person who is not a party to a settlement entered into under this section and § 49–291.

F. In any action under this section and § 49–291, the rights of any potentially responsible party who has resolved its liability to the state in a judicially approved consent decree or a settlement agreement are subordinate to the rights of the state for matters addressed in the settlement agreement or consent decree, unless otherwise provided in the settlement agreement or consent decree. If a potentially responsible party who has resolved its liability to the state in a settlement agreement or a consent decree provides written notice to the department that it has initiated a lawsuit to recover some or all of its remedial action costs from other potentially responsible parties, the department within thirty days shall provide written notice to the party filing the lawsuit of the department's intent to assert any superior claims the department may have against the other potentially responsible parties. If practicable, the written notice shall include the anticipated dollar amount of the department's claims against each party.

G. The court shall not approve a consent decree entered into pursuant to this section and § 49–291 for a period of thirty days after the date that notice of the terms of the consent decree is provided to the public to allow for public comment. Any comment shall be filed

with the court. After the expiration of the thirty day public comment period, the director through the attorney general may petition the court for entry of the consent order.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

§ 49–293. De minimis settlements

A. If the director determines that it is in the public interest and not inconsistent with equitable apportionment and the factors prescribed in § 49–285, subsection F, the director may settle with any party who may be a responsible party under § 49–283, subsection A, paragraphs 1, 2 or 3 if that settlement involves only a minor portion of the total remedial action costs at the facility and, in the judgment of the director, if both:

1. The amount of the hazardous substances contributed by that party to the facility is minimal in comparison to the amount of other hazardous substances at the facility.

2. The toxic or other hazardous effects of the hazardous substances contributed by that party to the facility are minimal in comparison to the toxic or other hazardous effects of other hazardous substances at the facility.

B. A decision by the director not to enter into a de minimis settlement with a responsible party is not subject to judicial review.

C. The director may provide a covenant not to sue concerning any liability to the state under this article or under CERCLA to any party who has settled with the state under this section unless a covenant would be contrary to the public interest.

D. The provisions of § 49–292, subsection C apply to settlements reached pursuant to this section.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

§ 49–294. Use of monies obtained through consent decrees or litigation

A. All monies obtained by the director as the result of a settlement entered into pursuant to § 49–291, 49–292 or 49–293 or through filing an action in state or federal court under this article or under CERCLA shall be transmitted to the state treasurer. Monies recovered pursuant to this section for the department's remedial action costs that are incurred before the date of a settlement or a court judgment shall be deposited in the water quality assurance revolving fund. Monies recovered pursuant to this section for the department's remedial action costs that are to be incurred after the date of a settlement or court judgment may be deposited in separate accounts, and any interest earned on monies in these accounts shall be credited to those accounts for use as prescribed by subsection B of this section. Monies in those separate accounts and interest earned on those monies shall not be included in the dollar limitation prescribed in § 49–282, subsection B.

B. All monies obtained by the director pursuant to this section shall be used for remedial actions at the specific site or facility from which the monies were generated, including reasonable and necessary costs, and legal costs for administration of the account for that site or facility. If a specific site's or facility's account contains monies at the completion of the remedial action, the director may use these excess monies in the manner and for the purposes prescribed in § 49–282.

C. This section and §§ 49–291, 49–292, 49–293, 49–295 and 49–296 shall not be construed to limit the authority of the director to take any action under federal law or under other provisions of this title.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

§ 49–295. Environmental liens

A. In addition to other rights or remedies available to this state, and in order to protect the state's interest in recovering monies expended by the state for remedial action, all remedial action costs for which a person is liable to the state under this article constitute a lien in favor of the state against only the property that is a facility subject to or affected by that remedial action and in which the person who is liable has an ownership interest.

B. The director may request the attorney general to file an action in the superior court in the county in which the property is located for an order establishing an environmental lien. The application for an environmental lien may be filed and recorded pursuant to subsection H of this section. The application for an environmental lien shall include the following information:

1. The name of the record owner of the real property on which the environmental lien is requested, the name of the person purportedly liable, if different, and the person's ownership interest.

2. The legal description of the real property where the environmental lien attaches.

3. The amount and an itemization of remedial action costs that have been incurred by this state as of the time the application is filed.

4. A statement of the evidence demonstrating that the person is liable for remedial action costs incurred by the state under this article.

C. On the filing of an application for an environmental lien, the court shall set a hearing date at least thirty but not more than forty-five days from the date the application is filed with the court. The hearing may be rescheduled if all parties agree to a different date. Service of the application and notice of the hearing date on the purportedly liable person and the record owner of the subject real property, if different, shall be in the manner prescribed in the Arizona rules of civil procedure.

D. On a showing by the state of probable cause that the person is liable for remedial action costs incurred by the state under this article and the amount of the remedial action costs and that the person has an ownership interest in the real property that is the subject of the application for an environmental lien, the court may issue an order establishing an environmental lien in favor of the state.

E. The order establishing an environmental lien shall be filed and recorded as provided in subsection H of this section. If the state records the application for an environmental lien as provided in subsection H of this section, the environmental lien shall be deemed to attach as of the date of recording of the application for the environmental lien, once the order establishing the environmental lien is filed and recorded. If the state does not record the application for the environmental lien, the environmental lien attaches only on the recording of the order establishing the lien as provided in subsection H of this section.

F. If after establishment of an environmental lien the state incurs additional remedial action costs for which the person is liable under this article, the state may seek to amend the existing lien to include in the amount of the lien the additional remedial action costs incurred. The state shall file a statement itemizing the costs incurred with the court, with service as prescribed in subsection C of this section. On a showing by the state of probable cause with respect to the amount of those additional remedial action costs, the court may increase the amount of the environmental lien by the amount of those additional remedial action costs.

G. Any person that has been determined liable for remedial action costs in a probable cause hearing for purposes of establishing a lien and that owns an interest in real property that is the subject of an environmental lien established under this section shall notify the state in writing at least sixty days before alienating the interest. If the state believes that it will incur future remedial action costs at the facility, the state may within thirty days of receipt of the notification request a probable cause hearing pursuant to subsection C of this section. The court shall schedule the requested hearing before expiration of the sixty day period beginning on the date the state received notice that the person intends to alienate its interest, unless the parties agree to a continuance. Unless the person giving notice to the state withdraws that notice before the scheduled date of the hearing, the court shall conduct a hearing to estimate the state's future remedial action costs and may issue an order amending the lien to include total future remedial action costs that the state appears reasonably likely to incur. Any order increasing the amount of an existing lien pursuant to this subsection may be filed and recorded as provided in subsection H of this section. Any person having an ownership interest in the property that may be adversely affected by the order increasing the environmental lien may challenge the increased lien amount by filing a motion to quash pursuant to subsection I of this section. If the state fails to request a probable cause hearing with respect to estimated future remedial action costs within thirty days of receipt of the

notification, any person subsequently purchasing an interest in real property that is subject to an environmental lien takes that interest subject only to existing, unsatisfied liens, and that person is liable to the state for future remedial action costs only to the extent it is liable for those costs because it is a responsible party under section 49–283 or because it is otherwise liable under other federal, state or common law.

H. Any application, order, lien, release or other document required to be recorded under this section shall be recorded in the office of the county recorder of the county where the real property is located. A filing fee or other charge is not required for filing any document pursuant to this section. The filing or mailing of any document pursuant to this section is the responsibility of the director or the director's designee. A copy of an environmental lien shall also be sent by certified mail to any other person including an owner, purchaser, holder of a mortgage or security interest or judgment lien creditor whose interest was perfected and recorded before an application for an environmental lien was recorded.

I. If a court issues an order establishing an environmental lien, any person having an interest in the real property that may be adversely affected by establishment of the lien may file a motion to quash the lien. The court retains jurisdiction to resolve any issue of fact or law raised by the motion to quash. If the motion to quash raises issues of fact, the person challenging the lien and the state are entitled to conduct expedited discovery on application to the court and are entitled to a priority for trial.

J. At any time after the lien is recorded any person having an ownership interest in real property subject to an environmental lien may move the court to substitute other security for the lien. The court shall retain jurisdiction to determine the sufficiency of the substituted security. On approval of the substituted security, the environmental lien shall be released.

K. Notwithstanding any other provision of this section, an environmental lien does not apply to real property that is used primarily for or that is under construction for use in single or multi-family housing at the time the environmental lien is recorded.

L. The director shall release an environmental lien if the lien or a claim or judgement for the remedial action costs is satisfied. If the lien or a claim or judgement for the remedial action costs has been partially but not wholly satisfied, the director on request of any person having an ownership interest in the property shall reduce the amount of the lien by the amount satisfied. The director may release an environmental lien if the director determines that the lien is not in the best interest of the state.

M. If the court refuses to issue an order establishing an environmental lien, any person having an interest in the property against which an environmental lien was sought is not entitled to attorney fees or damages against the state if the court determines that there was reasonable cause for the application.

N. Any determination of any issue by the court in a hearing held pursuant to this section shall not be considered binding in any future judicial or administrative proceeding except that any issue litigated in a motion to quash filed pursuant to this section shall not be litigated again in any subsequent motion to quash filed pursuant to this section that is filed by the same party.

O. An environmental lien is subject to any other lien that is perfected and recorded before the attachment date of the environmental lien as determined pursuant to subsection E of this section.

P. On entry of a final judgment in favor of the state for remedial action costs, an environmental lien may be foreclosed in the manner provided for foreclosure of mortgages pursuant to title 33, chapter 6, article 2. The state may combine an action to recover remedial action costs with an action to foreclose an environmental lien established under this section.

Q. This section does not preclude the state from initiating other actions under this title or under federal law.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

§ 49–296. Nonbinding allocation of responsibility; mixed funding

A. On request of a potentially responsible party or on the director's own initiative, the director may prepare a nonbinding preliminary allocation of responsibility for a site for which there is more than one potentially responsible party. This preliminary allocation shall be based on the factors prescribed in § 49–285, subsection F. The preliminary allocation shall allocate total remedial action costs or any portion of those costs among potentially responsible parties at that site. If requested by a potentially responsible party, the director's costs in preparing the preliminary allocation constitute remedial actions costs that may be recovered from responsible parties. The preliminary allocation is not subject to judicial review and is not admissible as evidence in any proceeding relating to status as a responsible party or liability for remedial action costs. The preliminary allocation does not constitute an apportionment or other statement on divisibility of harm or causation. The director's decision not to prepare a preliminary allocation of responsibility is not subject to judicial review.

B. A settlement agreement made pursuant to this article may provide that the director shall reimburse a party to the agreement from the fund for the costs of specific remedial actions that the party has agreed to perform. In appropriate cases, the director may make reasonable efforts pursuant to this article to recover any fund expenditures from responsible parties who are not involved in the settlement agreement. A decision by the director not to reimburse a party from the fund for the costs of conducting a remedial action that is contained in a settlement agreement is not subject to judicial review.

Added by Laws 1992, Ch. 245, § 13, eff. June 17, 1992.

ARTICLE 6. PESTICIDE CONTAMINATION PREVENTION

Administrative Code References

Dispute resolution, see A.A.C. R18–6–201.
Numeric values and information submittal, see A.A.C., R 18–6–101 et seq.

§ 49–302. Information submittal

A. Not later than December 1, 1987, except as provided in subsection G of this section, a person that has registered a pesticide in this state for agricultural use shall submit to the director the following information for each active ingredient in each pesticide registered:

1. Water solubility.
2. Vapor pressure.
3. Octanol-water partition coefficient.
4. Soil adsorption coefficient.
5. Henry's law constant.
6. Dissipation studies, including hydrolysis, photolysis, aerobic and anaerobic soil metabolism, and field dissipation, under conditions in this state or similar environmental use conditions, if that information exists in studies and conclusions from other states or the United States government. If that information does not exist, the product shall be placed on the groundwater protection list pursuant to § 49–305 and is subject to monitoring and testing under § 49–307.
7. The director may by rule require such additional information as is required by the United States environmental protection agency for environmental fate parameters necessary to gain full registration under federal law.

B. The director may also require the information prescribed in subsection A of this section for other specified ingredients and degradation products of an active ingredient in any pesticide.

C. All information submitted pursuant to subsection A of this section shall be presented in English and summarized in tabular form on no more than three sheets of paper with the actual studies, including methods and protocols, attached. All information, at a minimum,

eligible to receive compensation and the committee is an advisory committee for purposes of title 38, chapter 3, article 3.1.[1]

Added as § 49–807 by Laws 1990, Ch. 378, § 10. Renumbered as § 49–837. Amended by Laws 1992, Ch. 130, § 11.

[1] Section 38–431 et seq.

Historical and Statutory Notes

Reviser's Notes:

1990 Note. Pursuant to authority of § 41–1304.02, in subsection A, second sentence the reference to "§ 49–836" was substituted for the reference to "§ 49–806" to conform to the reviser's renumbering of that section.

1992 Note. Pursuant to authority of § 41–1304.02, in subsection B, paragraph 5, first sentence the words "may be allocated" were transposed to follow "five per cent".

ARTICLE 9. MANAGEMENT OF SPECIAL WASTE

Article 9, consisting of §§ 49–851 to 49–868, was added by Laws 1991, Ch. 315, § 20, effective July 3, 1991.

Historical and Statutory Notes

Laws 1992, Ch. 233, § 1, eff. June 15, 1992, provides:

"Section 1. **Intent**

"For the purposes of transportation, a special waste regulated pursuant to title 49, chapter 4, article 9, Arizona Revised Statutes, that is defined as a hazardous material, hazardous substance, or hazardous waste pursuant to 49 code of federal regulations part 171 and 40 code of federal regulations, is subject to the applicable state and federal motor carrier safety provisions."

§ 49–851. Definitions; applicability

A. In this article, unless the context otherwise requires:

1. "Asbestos" or "asbestos containing materials" means friable asbestos material containing more than one per cent asbestos by weight and that hand pressure can crumble, pulverize or reduce to powder when dry.

2. "Best management practices" means a method or combination of methods that is used in the treatment, storage and disposal of a special waste and that achieves the maximum practical cost effective protection of public health or the environment.

3. "On site" means at or on the same or geographically contiguous property that may be divided by public or private right-of-way, provided the entrance and exit between the properties are at a crossroads intersection and access is by crossing as opposed to travel along the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way that that person controls and to which the public does not have access are also on-site property.

4. "Petroleum contaminated soils" means soils excavated for storage, treatment or disposal containing total petroleum hydrocarbons in concentrations determined by the director through the best management practices process to present a threat to the public health or the environment.

5. "Petroleum refining wastes" means waste from petroleum refining facilities including wastes from the storage, production and conveyance of petroleum products.

6. "Septic system waste" means the liquid and solid materials that are pumped from any cesspool, septic tank or other similar liquid waste treatment or pretreatment devices and that are hauled to another location for further treatment or disposal.

7. "Shipper" means a person who offers a hazardous waste, hazardous substance or hazardous material for motor vehicle transportation in commerce.

8. "Sludges from the pretreatment of categorical industrial wastewaters" means those sludges that result from the pretreatment of wastewaters from industrial categories subject to 40 Code of Federal Regulations part 403.

9. "Special waste" means a solid waste as defined in § 49–701, other than a hazardous waste, that requires special handling and management to protect public health or the environment and that is listed in § 49–852 or in rules adopted pursuant to § 49–855. Special waste does not include return flows from irrigated agriculture, medical waste, used oil or by-products of a regulated agricultural activity, as defined in § 49–201, that are subject to best management practices under § 49–247, by-products of livestock, range livestock and poultry as defined in § 3–1201, pesticide containers regulated pursuant to title 3, chapter 2, article 6[1] or waste that contains radioactive materials that are subject to a permit or regulation under the atomic energy act of 1954 (42 United States Code § 2011; 68 Stat. 919),[2] as amended, or title 30, chapter 4.[3]

10. "Storage" means the holding of special waste for a period of not more than one year unless a lesser period of time is designated by the director pursuant to best management practices rules. The director shall not designate a storage time of less than ninety days.

B. Defining or categorizing any material as a special waste under this article shall not affect the duty of care or breach of that duty for a cause of action for personal injury or for a workers' compensation claim arising from the handling of any materials.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 4; Laws 1992, Ch. 233, § 11, eff. June 15, 1992.

[1] Section 3–361 et seq.
[2] 42 U.S.C.A. § 2011.
[3] Section 30–651 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1992 Reviser's Note:

This section contains the amendments made by Laws 1992, Ch. 201, sec. 4 and Ch. 233, sec. 11 that were blended together as shown above pursuant to authority of § 41–1304.03.

§ 49–852. Statutory list of special wastes; best management practices rules; applicability of hazardous waste designation

A. The advisory committee established in § 49–853 shall recommend best management practices for the following special wastes unless those wastes are classified as hazardous pursuant to the resource conservation and recovery act of 1976 (P.L. 94–580), as amended, or § 49–921 or 49–922:

1. Asbestos or materials containing asbestos.

2. Waste from shredding motor vehicles.

B. The director shall establish rules for best management practices for these special wastes pursuant to § 49–855.

C. Notwithstanding § 49–856, the wastes listed pursuant to subsection A of this section are required to comply with those manifest requirements within three months of the adoption of the best management practices.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991; Laws 1993, Ch. 205, § 1, eff. April 21, 1993.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

Cross References

Management of special waste, see § 49–851 et seq.

§ 49–853. Special waste best management practices advisory committee; membership; terms of office; meetings

A. A special waste best management practices advisory committee is established that may advise and make recommendations to the director regarding:

1. The designation of wastes as special wastes.

2. Best management practices for the treatment, storage, disposal of special wastes.

B. The governor shall appoint fifteen members who have demonstrated interest or expertise relating to waste management, environmental health or the operation and impact of solid and hazardous waste programs to the special waste best management practices advisory committee as follows:

1. One representative of a county health department.

2. Two representatives of a state university who teach in an area or have an advanced degree related to toxicology, risk management, natural resources protection or environmental health engineering and who derive no more than ten per cent of their income from individuals or entities that are regulated by this chapter and chapter 5 of this title [1] except for income derived from teaching at a university.

3. One representative of a generator of wastes listed pursuant to § 49–854 in the private sector who has at least a bachelor's degree from an accredited institution in chemistry, engineering, hydrology, industrial hygiene, medicine or a related field or who has at least five years' experience in a related field.

4. One person who is actively engaged in the transportation of wastes listed pursuant to § 49–854, who has at least a bachelor's degree from an accredited institution in chemistry, engineering, hydrology, industrial hygiene, medicine or a related field or who has at least five years' experience in a related field.

5. One person who is actively engaged in the treatment or recycling of wastes listed pursuant to § 49–854, who has at least a bachelor's degree from an accredited institution in chemistry, engineering, hydrology, industrial hygiene, medicine or a related field or who has at least five years' experience in a related field.

6. One person who is actively engaged in the disposal of wastes listed pursuant to § 49–854, who has at least a bachelor's degree from an accredited institution in chemistry, engineering, hydrology, industrial hygiene, medicine or a related field or who has at least five years' experience in a related field.

7. An industrial hygienist.

8. Two public members who do not qualify for membership under any other category.

9. One representative each of a municipal and county government engaged in solid waste disposal.

10. One representative of a government entity who is engaged in wastewater management.

11. Two representatives of nonprofit environmental advocacy groups.

C. Members shall be appointed to terms of four years and may be reappointed to one additional term. Members shall be residents of this state and in the year prior to appointment shall not have been employed by the department. Members are not eligible to receive compensation for their services but are eligible for reimbursement of expenses from the department for travel pursuant to title 38, chapter 4, article 2.[2] Members are subject to title 38, chapter 3, article 8.[3] The committee shall elect a chairperson from among its members to serve a two year term. The chairperson may be reelected for an additional term as chairperson.

D. The committee shall meet at the call of the chairperson or at the request of a majority of the members as required.

E. The department shall furnish necessary support staff and meeting facilities. The departments of environmental quality, water resources and health services and the industrial

commission shall cooperate with, provide technical and expert assistance to and supply data and other necessary information to the committee.

F. Any person who is registered pursuant to § 32–121 and who serves as a committee member without compensation is exempt from § 32–125, subsection B with respect to that service.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991; Laws 1993, Ch. 205, § 2, eff. April 21, 1993.

[1] Section 49–901 et seq.
[2] Section 38–621 et seq.
[3] Section 38–501 et seq.

Historical and Statutory Notes

Laws 1991, Ch. 315, § 33, effective July 3, 1991, provides:

"**Sec. 33. Initial terms of members; special waste best management practices committee**

"A. Notwithstanding § 49–853, Arizona Revised Statutes, as added by this act, the initial terms of members of the special waste best management practices committee are:

"1. Five terms ending January 1, 1993.

"2. Five terms ending January 1, 1994.

"3. Five terms ending January 1, 1995.

"B. The subsequent appointments shall be made as prescribed by statute."

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–854. Schedule for designation of wastes; designation

A. By January 1, 1995, the director, after consulting with the advisory committee, shall determine whether or not to designate any of the following wastes as special wastes:

1. Waste that contains petroleum contaminated soils.

2. Incinerator ash.

3. Sludges from the pretreatment of categorical industrial wastewaters.

4. Septic system waste transported from commercial or industrial sources but excluding solids and effluent discharged from publicly or privately owned wastewater treatment plants.

5. Petroleum refining wastes.

6. Used antifreeze.

7. Waste that contains slag and refractory materials.

8. Waste that contains industrial sands excluding waste material produced in connection with a mining or mineral processing operation.

9. Waste that contains uranium ore tailings.

10. Waste produced from the demolition or dismantling of contaminated process equipment.

11. Waste from precious metals recycling.

12. Sludges that are transported from wastewater treatment facilities for treatment, storage or disposal and that are not otherwise regulated by permits under § 402 or 307(b) of the clean water act (P.L. 92–500), as amended,[1] or by regulations adopted under §§ 1008(a)(3), 4004(a) or 4010 of the resource conservation and recovery act (P.L. 94–580).[2]

13. Waste that contains catalysts from industrial processes.

14. Waste that contains other industrial sludges.

15. Aluminum dross and its processing techniques.

B. By July 1, 1995 and annually thereafter, the director shall prepare a list of wastes that have been designated as hazardous or special wastes by statute or rule in another state and are not designated as hazardous, special or medical wastes in this state. The director shall give public notice pursuant to title 41, chapter 6 [3] of the decision to formally study a waste for possible designation as a special waste pursuant to the criteria established in subsection F of this section.

C. The director, after consulting with the advisory committee, may designate as special wastes those wastes on the list compiled pursuant to subsection B of this section.

D. If the director or the advisory committee has studied a waste for possible designation as a special waste and the waste was not designated as a special waste, the director may reexamine that waste for possible designation as a special waste if the director determines that either of the following has occurred since the waste was last studied:

1. There is a change in the waste stream in this state which creates potential adverse effects on public health or the environment from the treatment, storage, transportation or disposal of the waste in this state, or

2. There is newly identified scientifically reliable evidence which demonstrates that there are potential adverse effects of the waste on the public health or the environment from the treatment, storage, transportation or disposal of the waste in this state.

E. If the director determines that a waste should be reexamined for possible designation as a special waste, the director shall include in the public notice required pursuant to subsection B of this section the change or changes justifying the reexamination of the waste.

F. In determining whether a waste shall be designated as a special waste, the director and the advisory committee shall consider the potential adverse effects on public health or the environment from the treatment, storage, transportation or disposal of each waste based upon:

1. The acute and chronic toxicity for those wastes including the human or animal data for the following exposures:

(a) Aquatic.

(b) Dermal.

(c) Inhalation.

(d) Oral.

2. The carcinogenic, mutagenic or teratogenic effects of those wastes on humans or other life forms.

3. The degree to which the wastes or degradation products of those wastes are persistent or bioaccumulative in the environment.

4. Information and studies from other states and the federal government if the committee or director finds them to be derived from standard protocols.

5. Other appropriate scientific data, environmental testing or analytical data.

G. The director shall give public notice pursuant to title 41, chapter 6 of the decision to designate or not to designate a waste as a special waste.

H. The director shall by rule, designate a waste as a special waste and adopt best management practices concerning the special waste pursuant to § 49–855 within eighteen months after giving public notice pursuant to subsection E of this section that a waste will be designated as a special waste.

I. The designation of a waste as a special waste and the adoption of best management practices pursuant to § 49–855 shall occur in the same rule making process.

Added by Laws 1993, Ch. 205, § 4, eff. April 21, 1993.

[1] 33 U.S.C.A. §§ 1342 and 1311.
[2] 42 U.S.C.A. §§ 6907, 6944, and 6949a.
[3] Section 41–1001 et seq.

Historical and Statutory Notes

Source:

A.R.S. former § 49–854.
Laws 1991, Ch. 315, § 20.
Laws 1992, Ch. 54, § 2.

Laws 1993, Ch. 205, § 9, eff. April 21, 1993, provides:

"Sec. 9. **Special waste best management practices advisory committee recommendations; transition**

"A. In designating special wastes and adopting best management practices pursuant to §§ 49–854 and 49–855, Arizona Revised Statutes, the director of the department of environmental quality shall consider the recommended designations and best management practices submitted by the special waste best management practices advisory committee before the effective date of this act in lieu of consulting with the special waste best management practices advisory committee.

"B. Within the thirty days of the effective date of this act, the director shall publish a list of the wastes studied by the special waste best management practices advisory committee. The list shall include the solid, special or hazardous waste classification for each waste as recommended by the special waste best management practices advisory committee and as adopted by the director of the department of environmental quality."

Former § 49–854, added by Laws 1991, Ch. 315, § 20, amended by Laws 1992, Ch. 54, § 2, relating to similar subject matter, was repealed by Laws 1993, Ch. 205, § 3, eff. April, 21, 1993.

§ 49–855. Best management practices; criteria

A. After consulting with the advisory committee, the director shall adopt, by rule, best management practices for the treatment, storage and disposal of each waste to be designated as a special waste pursuant to this article.

B. In adopting best management practices for a special waste, the director shall consider:

1. The availability, effectiveness, economic feasibility and technical feasibility of alternative handling or management technologies and practice.

2. The potential nature and severity of the effect on public health and the environment resulting from the special waste.

3. Circumstances under which the practices shall be applied including climatological, geological and hydrogeological conditions.

4. Consistency with other federal and state laws and rules in an effort to avoid practices or requirements that duplicate, are inconsistent with or result in dual regulation under other federal and state laws, rules and regulations.

C. The best management practices adopted by the director shall contain procedures necessary for the protection of public health and the environment for the transportation, treatment, storage and disposal of special wastes. Additional items to be contained in the best management practices shall include at least:

1. A designated time of not less than ninety days beyond which a waste may not be stored.

2. A fee for each special waste of not more than two dollars per ton for special waste that is transported to a facility in this state for treatment, storage or disposal.

D. The director may adopt special waste best management practices that apply to the treatment, storage or disposal of those wastes that are not regulated as hazardous wastes under federal laws or regulations.

E. The director may enact special waste best management practices that are more stringent than federal laws or regulations that govern polychlorinated biphenyls pursuant to the toxic substances control act (15 United States code § 2605) if the director determines in writing that:

1. The additional regulation is necessary to protect public health or the environment.

2. There is a scientific basis for the additional regulation based upon appropriate environment testing and analytical data.

3. The additional regulation is technically feasible.

F. Nothing in this section shall preclude the director from adopting best management practices under this article which incorporate management practices applicable to the treatment, storage or disposal of those wastes that are not regulated as hazardous wastes under federal laws or regulations.

Added by Laws 1993, Ch. 205, § 4, eff. April 21, 1993.

[1] 15 U.S.C.A. § 2605.

Historical and Statutory Notes

Source:

A.R.S. former § 49–855.
Laws 1991, Ch. 315, § 20.

Laws 1993, Ch. 205, § 9, eff. April 21, 1993, provides:

"Sec. 9. **Special waste best management practices advisory committee recommendations; transition**

"A. In designating special wastes and adopting best management practices pursuant to §§ 49–854 and 49–855, Arizona Revised Statutes, the director of the department of environmental quality shall consider the recommended designations and best management practices submitted by the special waste best management practices advisory committee before the effective date of this act in lieu of consulting with the special waste best management practices advisory committee.

"B. Within the thirty days of the effective date of this act, the director shall publish a list of the wastes studied by the special waste best management practices advisory committee. The list shall include the solid, special or hazardous waste classification for each waste as recommended by the special waste best management practices advisory committee and as adopted by the director of the department of environmental quality."

Former § 49–855, added by Laws 1991, Ch. 315, § 20, relating to similar subject matter, was repealed by Laws 1993, Ch. 205, § 3, eff. April 21, 1993,

1993 Reviser's Note:

Pursuant to authority of § 41–1304.02, in the section heading "; director" was deleted.

Cross References

Management of special waste, see § 49–851 et seq.

§ 49–856. Special waste handling requirements; manifest; exemption

A. The director shall adopt rules by September 1, 1993 that include an Arizona special waste manifest form designed to implement the provisions of this article.

B. Within three months of the adoption of best management practices for a special waste pursuant to § 49–855:

1. A person who generates, transports, offers for transportation or receives special waste for off-site treatment, recycling, storage or disposal shall comply with the rules adopted pursuant to subsection A of this section.

2. A person who transports a special waste that is defined as a hazardous material, hazardous substance or hazardous waste in 49 Code of Federal Regulations part 171 shall do so in accordance with the applicable motor carrier safety provisions of 49 United States Code appendix sections 1801 through 1819[1] and title 28, chapter 19.[2]

3. A person who arranges for the treatment, storage or disposal of a special waste shall do so only at a facility approved by the director pursuant to § 49–857 or 49–858.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 233, § 12, eff. June 15, 1992; Laws 1993, Ch. 205, § 5, eff. April 21, 1993.

[1] 49 U.S.C.A. app. §§ 1801 to 1819.
[2] Section 28–2401 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–857. Special waste management plans; director; approval; fee

A. Except as provided in § 49–858, a facility that plans to manage special waste for treatment, storage or disposal shall apply for and obtain approval of the director.

B. The application shall include all of the following:

1. A complete solid waste facility plan pursuant to § 49–762 that includes a special waste management plan component that complies with best management practices adopted pursuant to § 49–855 for each special waste for that portion of the facility that is engaged in the treatment, storage or disposal of special waste.

2. Evidence of compliance with permit filing requirements pursuant to this title.

C. The director shall collect from the applicant a reasonable fee based on the state's total costs in processing the plan. The director may amend an existing rule or adopt a new rule to establish criteria for those costs.

D. A facility at which the treatment, storage or disposal of special waste occurs only as a result of an episodic release at that facility shall not be subject to the special waste management plan requirements of this section. The special waste shall be managed pursuant to applicable best management practices.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 5; Laws 1993, Ch. 205, § 6, eff. April 21, 1993.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection C, third sentence the spelling of "rule making" was corrected.

§ 49–857.01. Plan; approval; deadline; judicial review

A. Within ninety days of receipt of the complete plan and other information prescribed by § 49–857, subsection B, the director shall approve in writing any plan or portion of a plan that complies with this article or shall deny in writing any plan or portion of a plan that does not comply with this article.

B. If the director denies a plan or a portion of a plan, the director shall notify the applicant in writing of the specific reasons for denial within ten days. The applicant has an additional ninety days from receipt of the written denial to file a modified plan addressing the specific deficiencies.

C. Within ninety days of receipt of a modified plan, the director shall approve or disapprove in writing the modified plan. The director may issue a compliance order to any applicant who has failed to submit a modified plan when required as prescribed by subsection B of this section or whose modified plan has been disapproved.

D. Any major modification from an approved plan is subject to review and approval by the director before implementation.

E. If the director fails to approve or disapprove the plan as prescribed by this section, the plan is deemed approved. The director's disapproval of a modified plan is subject to judicial review pursuant to title 12, chapter 7, article 6.[1]

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

[1] Section 12–901 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–858. Interim use facilities; special waste

A. A facility that is in operation on July 3, 1991 and that manages wastes designated as special waste pursuant to this article for treatment, storage or disposal may continue to manage special waste for treatment, storage or disposal if all of the following conditions are met:

1. The facility submits a notice to the director by October 1, 1991 that contains the following information:

(a) Facility name and mailing address.

(b) Legal description by township, range and section.

(c) Major design features.

(d) Type and volume of waste handled.

(e) Methods of waste management.

(f) Measures taken to protect the environment and measures taken to protect public health.

(g) A summary of permits from city, county, state and federal agencies.

2. The facility files an application containing the information required in § 49–857, subsection B within one hundred eighty days of the adoption of best management practices.

B. A generator may treat, store or dispose of special waste at a facility that is managed or operated by that generator and that is in operation on July 3, 1991 if the same conditions prescribed in subsection A of this section are met.

C. A facility or generator in operation after July 3, 1991 but prior to the adoption of best management practices pursuant to § 49–855 and that manages wastes designated as special waste pursuant to this article may treat, store or dispose of special waste if the same conditions prescribed in subsection A, paragraph 1 of this section are met within sixty days of the adoption of best management practices and the facility or generator complies with the requirements of subsection A, paragraph 2 of this section.

D. The process for plan approval and disapproval shall conform to § 49–857.01.

E. The director shall collect from the applicant a reasonable fee based on the state's total costs in processing the application. The director may amend an existing rule or adopt a new rule to establish criteria for those costs.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 6; Laws 1993, Ch. 205, § 7, eff. April 21, 1993.

Historical and Statutory Notes

Laws 1991, Ch. 315, § 37, effective July 3, 1991, as amended by Laws 1992, Ch. 300, § 15, provides:

"Sec. 37. **Solid waste facilities; interim rules**

"For solid waste facilities that are not open to the public on September 21, 1991 as prescribed in § 49–761, Arizona Revised Statutes, as amended by Laws 1991, chapter 315, § 12, the following apply:

"1. Unless the facility submitted an adequate notice pursuant to this section by October 1, 1991, the facility shall submit a notice to the director of the department of environmental quality by October 31, 1992 that contains the information prescribed in § 49–858, subsection A, paragraph 1, Arizona Revised Statutes. Notices filed pursuant to this section by October 1, 1991, shall be deemed to be adequate unless the solid waste facility is otherwise notified by the director by October 1, 1992.

"2. By July 1, 1993, the director of the department of environmental quality shall adopt rules for those facilities.

"3. By January 1, 1994, those facilities shall submit a solid waste facility plan to the department of environmental quality."

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection E, third sentence the spelling of "rule making" was corrected.

§ 49–859. Application to water quality permits

A. Neither the classification of a particular type of waste as a special waste nor the adoption or revision of the best management practices criteria constitutes a major modification to a facility with a groundwater quality protection permit or an aquifer protection permit unless that action otherwise meets the requirements of § 49–201, paragraph 18.

B. The director's approval of a special waste management plan either before or after the adoption of best management practices criteria does not constitute a major modification of a facility with a groundwater quality protection permit or an aquifer protection permit unless that action otherwise meets the requirements of § 49–201, paragraph 18.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–860. Annual reporting requirements; inspections

A. A shipper required to comply with the special waste manifesting procedures of this article shall report the following information to the department on or before March 1 of each year:

1. A shipping description of the special waste shipped during the preceding year.

2. The volume or weights of each type of special waste shipped during the preceding year.

3. The facility to which the special waste was shipped, identified by name, address, location and groundwater quality protection permit number or aquifer protection permit number, if applicable.

B. A facility or person that receives from off site a special waste for treatment, storage or disposal shall report the following information to the department on or before March 1 of each year:

1. The shipping descriptions of each special waste received during the preceding year.

2. The volume or weight of each type of special waste received during the preceding year.

3. For each special waste type, the identity by generator name, address, location, telephone number and amount of that special waste sent to the facility during the preceding year.

4. For each special waste type received, a description of the methods and practices used by the receiving facility or person to treat, store or dispose of the special waste.

C. Generators who treat, store or dispose of special waste shall keep records of the volume or weights of each type of special waste handled. Generators who treat, store or dispose of special waste shall report to the department on or before March 1 of each year for each facility:

1. The volume or weight of each type of special waste treated, stored or disposed of on site for the preceding year.

2. The volume or weight of each type of special waste treated, stored or disposed of off site for the preceding year.

3. For each type of special waste disposed, a description of the methods and practices used to minimize the amount or toxicity of the waste before disposal or reuse that constitutes disposal.

4. The volume or weight of waste received pursuant to § 49–863, subsection G.

D. The department may conduct inspections of facilities and records in order to enforce this section.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 7; Laws 1992, Ch. 233, § 13, eff. June 15, 1992.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1992 Reviser's Note:

This section contains the amendments made by Laws 1992, Ch. 201, sec. 7 and Ch. 233, sec. 13 that were blended together as shown above pursuant to authority of § 41–1304.03.

Cross References

Transportation of hazardous and special waste, licensing, see § 28–2421 et seq.

§ 49–861. Violation; classification; civil penalty

A. Beginning January 1, 1993 a person who knowingly violates this article is guilty of a class 6 felony.

B. A person who violates any provision of this article or a rule or order adopted or issued pursuant to this article is subject to a civil penalty of not more than ten thousand dollars per day for each violation. In issuing any final order in any civil action brought under this section, the court may award costs of litigation including reasonable attorney and expert witness fees to any substantially prevailing party if the court determines that an award is appropriate.

C. The attorney general, at the request of the director, shall file an action in superior court to recover civil penalties provided by this section.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–862. Compliance orders; injunctive relief

A. Beginning January 1, 1993 if the director has reasonable cause to believe that a person is violating this article or a rule adopted pursuant to this article, the director may serve on the person an order requiring compliance with that provision or rule. The order shall state with reasonable particularity the nature of the violation and shall specify either immediate compliance or a time period for compliance that the director determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable legal requirements. The alleged violator has thirty days from the date of issuance of the order within which to request a hearing pursuant to title 41, chapter 6.[1]

B. If the director has reasonable cause to believe that an order issued pursuant to this section is being violated or that a person is engaging in an act or practice that constitutes a violation for which he is authorized to issue an order pursuant to this section, the attorney general, at the request of the director, may apply to the superior court in the county in which the violation is occurring or in which the department has an office for a temporary restraining order, preliminary injunction or permanent injunction.

C. If the director has reasonable cause to believe that a person is engaging in an act or practice in violation of this article that causes an imminent and substantial endangerment to the public health or environment, whether or not the person has requested a hearing, the attorney general, at the request of the director, may apply to the superior court in the county in which the violation is occurring or in which the department has an office for a temporary restraining order, preliminary injunction or permanent injunction.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

[1] Section 41–1001.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–863. Special waste management fee; exemption

A. The director shall collect the fee established by § 49–855, subsection C from the special waste treatment, storage or disposal facility that first receives the waste. Any government entity that is required to collect a fee pursuant to this section may establish fees to recover the costs of collection and administration.

B. A generator who ships special waste for purposes of treatment, storage or disposal to a facility in this state that is not regulated by the department shall retain for three years

accurate records of the special waste transported to a facility and shall pay a fee to the department at the same rate and in the same manner as provided in subsection A of this section.

C. Each operator or person who is required to pay a special waste management fee shall make the fee payment quarterly in each calendar year. The fee shall be paid to the department on or before April 20, July 20, October 20 and January 20 for the preceding three months.

D. Each fee payment shall be accompanied by a form furnished by the department and completed by the operator. The form shall state the total volume or weight of the special waste transported to or disposed at that facility during the payment period and shall provide any other information deemed necessary by the department. The operator shall sign the form.

E. If an operator or person fails to pay the fee as provided in subsection C of this section, that operator or person is additionally liable for interest on the unpaid amount at a rate prescribed by § 44–1201.

F. Monies collected pursuant to this section shall be deposited in the special waste management fund established pursuant to § 49–864.

G. A generator who ships special waste for purposes of treatment, recycling, storage or disposal from a facility that is managed or operated by that generator to another facility that is managed or operated by that generator is exempt from the fee collected pursuant to this section.

H. A generator who treats, recycles, stores or disposes of special waste on site at a facility that is managed or operated by the generator is exempt from the fee collected pursuant to this section.

I. State agencies, including state universities, are not exempt from the fees prescribed in this section.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 8; Laws 1992, Ch. 233, § 14, eff. June 15, 1992; Laws 1993, Ch. 205, § 8, eff. April 21, 1993.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1992 Reviser's Note:

This section contains the amendments made by Laws 1992, Ch. 201, sec. 8 and Ch. 233, sec. 14 that were blended together as shown above pursuant to authority of § 41–1304.03.

§ 49–864. Special waste management fund

A. A special waste management fund is established in the state treasury to be administered by the director. The fund consists of monies appropriated by the legislature and special waste management fees collected pursuant to § 49–863. On notice from the director, the state treasurer shall invest and divest monies in the fund as provided in § 35–313, and monies earned from investment shall be credited to the fund. Monies deposited in the fund are exempt from the provisions of § 35–190 relating to lapsing of appropriations.

B. Monies deposited in the fund are subject to legislative appropriations and shall be used for the following purposes:

1. Informing, educating and training the general public, generators, transporters and special waste disposal facilities of the requirements and obligations of this article.

2. Supporting statewide special waste planning and program development activities.

3. Compliance monitoring, investigation and enforcement activities pertaining to generating, transporting, storing, treating and disposing of special waste under this article.

4. Administering the provisions of this article relating to special waste.

5. Reimbursement of appropriations received for fiscal year 1991–1992 to the state general fund as provided by law.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 9.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–865. Inspections

The department may conduct such inspections of facilities that manage special waste, including premises and equipment, as are necessary. The department shall give the management agency or the owner or operator of the facility the opportunity to have its representative accompany the inspector. Within thirty days after the date of the inspection, the department shall provide to the facility owner or operator a copy of any inspection report produced as a result of an inspection of that facility that occurs as prescribed by this section.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 10.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–866. Orders; monitoring; pollution control devices

A. Except as otherwise provided in §§ 49–422 and chapter 3, article 3 of this title,[1] the director may require by order the installation of necessary monitoring and pollution control devices at a special waste facility if the requirements of subsection B of this section have been met.

B. Before issuing an order pursuant to subsection A of this section, the director shall determine in writing that all of the following conditions are met:

1. The special waste facility may adversely affect public health or the environment.

2. A monitoring, sampling or quantification method or a pollution control device is technically feasible for the subject contaminant and the special waste disposal facility.

3. An adequate scientific basis for the monitoring, sampling or quantification method or the pollution control device exists.

4. The monitoring, sampling or quantification method is reasonably accurate or the pollution control device is reasonably effective.

5. The cost of the method or device is reasonable in light of the use to be made of the data or the device.

6. The director has considered the relative cost and the relative accuracy or effectiveness of any alternative method or device that may be reasonable under the circumstances.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

[1] Section 49–471 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–867. Importation of special waste

A facility owned by this state, a political subdivision of this state or a municipality shall not accept for treatment, storage or disposal special waste generated outside this state.

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–868. Agency orders; appeal

Any final agency order issued pursuant to this article is appealable pursuant to title 12, chapter 7, article 6.[1]

Added by Laws 1991, Ch. 315, § 20, eff. July 3, 1991.

[1] Section 12–901 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

CHAPTER 5

HAZARDOUS WASTE DISPOSAL

ARTICLE 2. HAZARDOUS WASTE MANAGEMENT

Section

49–922.01. Hazardous waste manifest errors; penalty; disposition of monies.
49–928. Availability of information to the public.
49–929. Annual registration of hazardous waste treatment, storage and disposal facilities, transporters and generators; fee; disposition of revenue.
49–930. Annual registration of hazardous waste resource recovery facilities; fee; maximum annual payment of fees and taxes; disposition of revenue; definition.
49–931. Hazardous waste fees; definitions.
49–932. Hazardous waste fuel penalty; disposition of revenue.

Section

ARTICLE 4. POLLUTION PREVENTION

49–961. Definitions.
49–962. Toxic data report; progress report; exemption.
49–963. Pollution prevention plan; progress report; exemption.
49–964. Review of reports and plans; enforcement; contempt.
49–965. Pollution prevention technical assistance program.
49–966. Annual report by department.
49–967. Availability of information to the public.

ARTICLE 5. POLLUTION PREVENTION FOR STATE AGENCIES

49–971. Pollution prevention reports; state agencies.
49–972. Pollution prevention plan for state agencies.
49–973. Toxic data report; progress report.

Historical and Statutory Notes

Laws 1991, Ch. 282, §§ 1 through 3 and 6, provide:

"Section 1. Sale of public property; determination; procedures

"A. The director of the department of administration shall proceed in order to effectuate the provisions of this act, within ninety days after the effective date of this act, or as soon thereafter as it can be practically accomplished, with the sale of one or more items of public real or personal property or interest therein or any combination thereof with an aggregate fair market value equal to or greater than forty-four million six hundred thirty-four thousand five hundred dollars but not greater than fifty-five million dollars and shall deposit the net proceeds of the sale in the state general fund.

"B. The property may be sold at a public sale held for that purpose or by negotiated sale. In either case, the property shall be sold for a price that is not less than the fair market value of the property as determined by the director of the department of administration, based on an independent appraisal performed by a qualified appraiser appointed by the director of the department of administration. If the director of the department of administration determines that the price bid or the price to be paid pursuant to a negotiated sale is not less than the fair market value for the property, and that the highest responsible bidder or the purchaser has complied with all of the conditions and terms of the public or negotiated sale, the director shall convey title to the property to the highest responsible bidder or

the purchaser, notwithstanding any other provision of law.

"Sec. 2. **Lease-purchase of property; determination; procedures; exemption**

"A. The director of the department of administration may proceed with the immediate reacquisition by lease-purchase agreement of the property sold in accordance with § 1 of this act, if the director determines that such action is in the best interests of this state. The provisions of § 41–791.02, Arizona Revised Statutes, as it relates to lease-purchase agreements apply, except that the joint committee on capital review shall review the lease-purchase agreement and related financing prior to October 1, 1991, but committee approval of the lease-purchase agreement and related financing is not required.

"B. If the director of the department of administration makes the determination that the lease-purchase is in the best interests of this state in accordance with subsection A of this section, the director shall proceed with the lease-purchase of the property notwithstanding any other provision of law.

"Sec. 3. **Exemption**

"Any agreements determined by the director of the department of administration to be necessary to comply with the requirements of this act or to accomplish any sale of the lease-purchase agreement or interests therein undertaken in connection therewith are exempt from the provisions of title 41, chapter 23, Arizona Revised Statutes."

"Sec. 6. **Authority for actions**

"The authority conferred by this act shall be in addition and supplemental to the powers conferred by any other law, general or special, and shall be full authority for the actions authorized by this act including entering agreements in connection therewith without regard to the requirements of any other such law."

Cross References

State air pollution control, installation permits, see § 49–426.

Transportation of hazardous and special waste, licensing, see § 28–2421 et seq.

ARTICLE 1. HAZARDOUS WASTE DISPOSAL AT STATE SITES

§ 49–901. Definitions

In this chapter, unless the context otherwise requires:

1. "Hazardous waste" means hazardous waste as defined in § 49–921.

2. "Hazardous waste disposal facility" means a hazardous waste disposal facility contracted for or operated by this state.

Amended by Laws 1991, Ch. 315, § 21, eff. July 3, 1991.

Historical and Statutory Notes

Laws 1991, Ch. 315, § 34, effective July 3, 1991, providing for the establishment of a hazardous waste disposal committee, was repealed by Laws 1992, Ch. 70, § 2, subsec. F, effective October 1, 1992, as amended by Laws 1993, Ch. 174, § 4.

Laws 1991, Ch. 315, § 34, was also amended by Laws 1992, Ch. 125, § 1, eff. June 2, 1992.

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

Executive Order

Executive Order No. 90–13, dated July 11, 1990, created the Governor's Hazardous Waste Technical Advisory Committee.

§ 49–902. Acquisition of site; powers and duties of director; criteria applicable to future sites

A. The director shall acquire clear title in the name of this state to a site consisting of one square mile located in Maricopa county which legal description is § 32, township 4 south, range 1 west, Gila and Salt river base and meridian for a hazardous waste disposal facility for the disposal, storage, recovery and treatment of hazardous wastes.

B. The director shall lease in the name of this state a buffer zone consisting of at least one-half mile surrounding the site acquired pursuant to subsection A of this section.

C. The director shall obtain such public easements as are necessary for ingress or egress to the site acquired pursuant to subsection A of this section.

D. The director may obtain lands for purposes of this article by purchase, lease, grant, condemnation or other lawful means.

E. When a hazardous waste disposal facility becomes operational, no new facility for the permanent disposal of hazardous waste operating away from the source of generation of the waste may be located within:

1. A one hundred year floodplain, as defined in § 48–3601.

2. An area so close to public roads, residences, public and private water wells and water supplies as to constitute a threat to human health or the environment.

3. An area where up to one mile from the perimeter of the site the depth to groundwater level is less than one hundred fifty feet.

4. An area where the surrounding land use for one square mile may impede proper long-term site maintenance.

5. An area where the hydrology and geology are incompatible with such use.

6. An area where subsidence has occurred or is likely to occur.

F. Notwithstanding any other statute, on the effective date of this section all duties relating to the administration of a lease and management of any contract with a person who has contracted for a hazardous waste disposal facility pursuant to § 49–903 shall be performed by the director of the department of administration.

Amended by Laws 1993, Ch. 47, § 2.

Historical and Statutory Notes

1993 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection F "section" was substituted for "act".

§ 49–903. Development of facility

A. The director of the department of administration may contract with one or more persons for the development of a hazardous waste disposal facility. The person developing the facility is solely responsible for compliance with all federal, state and local environmental laws, ordinances and rules. In no event shall the director of the department of administration be responsible for such compliance.

B. Hazardous wastes disposed of at any facility established pursuant to this article shall not include special nuclear or by-product materials, or any radioactive waste material whose storage, transportation, treatment and disposal are regulated by the federal nuclear regulatory commission, or its successor agency, or the Arizona radiation regulatory agency, or its successor agency.

C. A facility established pursuant to this article shall not incinerate hazardous waste.

D. A facility established pursuant to this article shall not accept for purposes of storage, treatment or disposal any waste that is generated outside this state and that is classified as hazardous under the laws of its state or country of origin unless the legislature does either of the following:

1. Approves an interstate or regional agreement for the safe treatment, storage or disposal of hazardous waste as prescribed by the comprehensive environmental response, compensation, and liability act of 1980 (P.L. 96–510), as amended.

2. Finds that the prohibition on importation is no longer in the best interests of this state due to a finding that this state is in violation of its capacity assurance plan requirements prescribed by the comprehensive environmental response, compensation, and liability act of 1980 (P.L. 96–510), as amended.

E. The director of the department of environmental quality shall determine those wastes that have been classified as hazardous by another state or country as of July 3, 1991. The director shall publish a list of those wastes by December 31, 1992.

Amended by Laws 1991, Ch. 315, § 22, eff. July 3, 1991; Laws 1993, Ch. 47, § 3.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–904. State facility trust fund; fees

A. The director of the department of administration may assess reasonable fees for use of any facility established pursuant to this article.

B. All monies collected or appropriated pursuant to this article shall be remitted to the state treasurer and placed in a special fund denominated the state facility trust fund which shall be administered by the director of the department of administration for the following purposes:

1. Reimbursing a contractor for the costs of site acquisition, design, financing and construction of a hazardous waste disposal facility.

2. Paying a contractor for operating a hazardous waste disposal facility.

3. Funding this state's risk management program to cover the state's liability risks relating to hazardous waste disposal facilities.

4. Administrative expenses incurred by the department of administration to carry out this article.

C. Upon written request from the director of the department of environmental quality, the department of administration shall transfer funds to the department of environmental quality for the following purposes:

1. Monitoring the operation and environmental impact of hazardous waste sites and facilities established pursuant to this article.

2. Mitigating or abating any imminent and substantial threat to public health or environmental quality that may be caused or created by any hazardous waste site or facility established pursuant to this article.

3. Adopting rules pursuant to § 49–905.

Amended by Laws 1993, Ch. 47, § 4.

Historical and Statutory Notes

1993 Reviser's Note:

Pursuant to authority of § 41–1304.02, subsection B, paragraph 5 was relettered as subsection C and subdivisions (a), (b) and (c) were renumbered as paragraphs 1, 2 and 3.

Cross References

Hazardous waste disposal facility, fee assessments, see § 49–929.

§ 49–905. Rules; duty of director

The director of the department of environmental quality shall adopt rules governing hazardous waste disposal facilities established pursuant to this article. Rules issued under this section shall include provisions relating to:

1. Travel routes for the transportation of hazardous wastes within this state. The director shall require any person transporting hazardous waste to the hazardous waste disposal facility to approach the facility from the east or west on established public roads and highways.

2. The types and amounts of hazardous wastes to be accepted for disposal by hazardous waste disposal facilities established pursuant to this article.

3. Perpetual care as necessary and post-closure maintenance of hazardous waste disposal facilities established pursuant to this article.

Amended by Laws 1993, Ch. 47, § 5.

Historical and Statutory Notes

1993 Reviser's Note:

Pursuant to authority of § 41–1304.02, in the section heading "and regulations" was deleted.

ARTICLE 2. HAZARDOUS WASTE MANAGEMENT

Administrative Code References

Hazardous wastes, rules, regulations and standards, see A.A.C. R18–8–260 et seq.

§ 49–921. Definitions

Historical and Statutory Notes

For provision of Laws 1991, Ch. 315, relating to definitions of the department of environmental quality for treatment, recycling and disposal applicable to solid waste, hazardous waste, special waste and pollution prevention programs, see Historical and Statutory Notes following § 49–701.

Cross References

Management of special waste, see § 49–851 et seq.

Pollution prevention, see § 49–961 et seq.

Solid waste management, medical waste, see § 49–701.

Law Review Commentaries

Avoiding environmental liabilities: A primer for business. Steven M. Wheeler & Edward Z. Fox, 23 Ariz.St.L.J. 483 (1991).

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–922. Department rules and standards; prohibited permittees

A. The director shall adopt rules to establish a hazardous waste management program equivalent to and consistent with the federal hazardous waste regulations promulgated pursuant to subtitle C of the federal act. The director, however, shall not identify a waste as hazardous, if not so identified in the federal hazardous waste regulations, unless the director finds, based on all the factors in 40 code of federal regulations § 261.11(a)(1), (2), or (3), that the waste may cause or significantly contribute to an increase in serious irreversible, or incapacitating reversible, illness or pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed or otherwise managed. Federal hazardous waste regulations may be adopted by reference.

B. These rules shall establish criteria and standards for the characteristics, identification, listing, generation, transportation, treatment, storage and disposal of hazardous waste within this state. In establishing the standards the director shall, where appropriate, distinguish between new and existing facilities. The criteria and standards shall include requirements respecting:

1. Maintaining records of hazardous waste identified under this article and the manner in which the waste is generated, transported, treated, stored or disposed.

2. Submission of reports, data, manifests and other information necessary to ensure compliance with such standards.

3. The transportation of hazardous waste, including appropriate packaging, labeling and marking requirements and requirements respecting the use of a manifest system, which are consistent with the regulations of the state and United States departments of transportation governing the transportation of hazardous materials.

4. The operation, maintenance, location, design and construction of hazardous waste treatment, storage or disposal facilities, including such additional qualifications as to ownership, continuity of operation, contingency plans, corrective actions and abatement of continu-

ing releases, monitoring and inspection programs, personnel training, closure and postclosure requirements and financial responsibility as may be necessary and appropriate.

5. Requiring a permit for a hazardous waste treatment, storage or disposal facility including the modification and termination of permits, the authority to continue activities and permits existing on July 27, 1983 consistent with the federal hazardous waste regulations, and the payment of a reasonable application fee. The director shall establish and collect a reasonable fee from the applicant to cover the cost of administrative services and other expenses associated with evaluating the application and issuing or denying the permit.

6. Providing the right of entry for inspection and sampling to ensure compliance with the standards.

7. Providing for appropriate public participation in developing, revising, implementing, amending and enforcing any rule, guideline, information or program under this article consistent with the federal hazardous waste program.

C. The director may refuse to issue a permit for a facility for storage, treatment or disposal of hazardous waste to a person if any of the following applies:

1. The person fails to demonstrate sufficient reliability, expertise, integrity and competence to operate a hazardous waste facility.

2. The person has been convicted of, or pled guilty or no contest to, a felony in any state or federal court during the five years before the date of the permit application.

3. In the case of a corporation or business entity, if any of its officers, directors, partners, key employees or persons or business entities holding ten per cent or more of its equity or debt liability has been convicted of, or pled guilty or no contest to, a felony in any state or federal court during the five years before the date of the permit application.

D. Nothing in this article shall affect the validity of any existing rules adopted by the director that are equivalent to and consistent with the federal hazardous waste regulations until new rules for hazardous waste are adopted.

E. Nothing in this article shall authorize the regulation of small quantity generators as defined by 40 code of federal regulations § 261.5 in a manner inconsistent with the federal hazardous waste regulations. However, the director may require reports of any small quantity generator or group of small quantity generators regarding the treatment, storage, transportation, disposal or management of hazardous waste if the hazardous waste of such generator or generators may pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed or otherwise managed.

Amended by Laws 1989, Ch. 286, § 2; Laws 1991, Ch. 315, § 23, eff. July 3, 1991; Laws 1992, Ch. 201, § 11.

Historical and Statutory Notes

The 1989 amendment substituted "adopt" for "promulgate" in subsec. A; deleted "and regulations" following "rules" in subsecs. A, B and D; substituted "Code of Federal Regulations" for "C.F.R." in subsecs. A and E; and raised the maximum application fee from one thousand five hundred dollars to ten thousand dollars in subsec. B, par. 5.

The 1991 amendment rewrote par. 5 of subsec. B; and made other nonsubstantive changes. The rewritten paragraph had provided:

"5. Requiring a permit for a hazardous waste treatment, storage or disposal facility including the modification and termination of permits, the authority to continue activities and permits existing on July 27, 1983 consistent with the federal hazardous waste regulations, and the payment of a reasonable application fee which shall be directly related to the reasonable cost of processing the permit application, but not exceeding ten thousand dollars for each permit application."

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

The 1992 amendment, in subsec. A, in the second sentence, substituted "section" for "part"; and in subsec. B, par. 5, in the second sentence, inserted "the application" and "or denying".

Cross References

Used oil fuel,
Manifest procedures, see § 49–804.
Prohibited practices, see § 49–803.

Administrative Code References

Hazardous waste management systems, see A.A.C. R18–8–260.

Procedures for permit administration, see A.A.C. R18–8–271.

Law Review Commentaries

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–922.01. Hazardous waste manifest errors; penalty; disposition of monies

A. If a manifest for a shipment of hazardous waste required to be submitted to the director is improperly completed, the department may return it to the person who prepared the manifest and require the person to properly complete and resubmit the manifest. The fee for resubmittal of a manifest is twenty dollars.

B. All monies collected pursuant to this section shall be deposited in the water quality assurance revolving fund established by § 49–282.

Added by Laws 1990, Ch. 230, § 18.

Cross References

Water quality assurance revolving fund, monetary composition, see § 49–282.

§ 49–923. Compliance orders; injunctive relief

A. If the director has reasonable cause to believe that a person is violating this article or article 1 of this chapter or a permit or rule issued or adopted pursuant to this article or article 1 of this chapter,[1] the director may serve upon the person an order requiring compliance with such provision, permit or rule. The order shall state with reasonable particularity the nature of the violation and shall specify either immediate compliance or a time period for compliance which the director determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable legal requirements. The alleged violator has thirty days from the date of issuance of the order within which to request a hearing pursuant to title 41, chapter 6.[2]

B. If a violator fails to take corrective action within the time specified in a compliance order issued pursuant to subsection A, the director may issue an order assessing a civil penalty of not more than one thousand dollars for each day of continued noncompliance with the order. The alleged violator has thirty days from the date of issuance of the order within which to request a hearing pursuant to title 41, chapter 6. An attorney or corporate officer or employee of a corporation may represent the corporation at that hearing.

C. Before issuing an order assessing a civil penalty pursuant to subsection B, the director shall give reasonable notice of his intent to issue the order and the circumstances of the case to the attorney general.

D. If the director has reasonable cause to believe that an order issued pursuant to this section is being violated or that a person is engaging in an act or practice which constitutes a violation for which he is authorized to issue an order pursuant to this section, the director or the attorney general may apply to the superior court in the county in which the violation is occurring for a temporary restraining order, preliminary injunction or permanent injunction. Such action has precedence over all other matters pending in the court.

Amended by Laws 1991, Ch. 315, § 24, eff. July 3, 1991.

[1] Section 49–901 et seq.
[2] Section 41–1001 et seq.

Historical and Statutory Notes

The 1991 amendment rewrote the first sentence of subsec. A; inserted new subsecs. B and C; and redesignated the existing subsec. B as subsec. D.

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–924. Violations; civil penalty

A. A person who violates this article or any permit, rule or order issued or adopted pursuant to this article is subject to a civil penalty not exceeding twenty-five thousand dollars for each day of violation.

B. The attorney general shall bring an action to recover penalties under this section in the name of this state in the superior court in the county in which the violation occurred or in a county in which the department maintains an office.

C. The director may suspend or revoke any permit issued to a person who violates this article or any permit, rule or order issued or adopted pursuant to this article, unless the director has previously assessed a civil penalty for the violation pursuant to § 49–923, subsection B.

Amended by Laws 1991, Ch. 315, § 25, eff. July 3, 1991.

Historical and Statutory Notes

The 1991 amendment, in subsec. A, substituted "rule or order issued or adopted" for "rule, regulation or order issued or promulgated" and substituted "twenty-five" for "ten"; and added subsec. C.

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

Notes of Decisions

Settlements 1

1. Settlements

It was not the intent of the Legislature that the Arizona Department of Environmental Quality (DEQ) should enter into settlements providing for civil penalties independently; if DEQ desires to include civil penalties as part of a negotiated settlement of hazardous waste management violations, it must refer the matter to the Attorney General and both agencies must participate in the resulting settlement. Op.Atty.Gen. No. I89–023.

§ 49–925. Violation; classification; definition

A. A person who knowingly does any of the following is guilty of a class 5 felony, a person who recklessly does any of the following is guilty of a class 6 felony and a person who knowingly or recklessly manifests an extreme indifference for human life in doing any of the following is guilty of a class 3 felony:

1. Transports any hazardous waste to a facility not authorized to receive that hazardous waste under this article or under the federal act.

2. Causes or allows any hazardous waste to be transported to a facility not authorized to receive that hazardous waste under this article or under the federal act.

3. Treats, stores, transports or disposes of hazardous waste without appropriate authority under this article or under the federal act.

4. Violates a material permit condition issued pursuant to this article or a material interim status standard adopted pursuant to this article.

B. A person who knowingly does any of the following is guilty of a class 6 felony:

1. Fails to file a hazardous waste manifest required to be filed to comply with this article or the rules adopted pursuant to this article.

2. Transports, or causes to be transported, hazardous waste without a manifest as required under this article or the rules adopted pursuant to this article.

C. The attorney general may enforce the provisions of this section.

Amended by Laws 1990, Ch. 246, § 3; Laws 1991, Ch. 315, § 26, eff. July 3, 1991.

Historical and Statutory Notes

The 1990 amendment rewrote the section.

The 1991 amendment rewrote par. 3 of subsec. A; and designated part of the rewritten provisions as par. 4. Subsection A, paragraph 3, had read:

"Treats, stores, transports or disposes of hazardous waste without appropriate authority under this article or under the federal act or in violation of a permit condition issued pursuant to this article or an interim status standard adopted pursuant to this article and the violation is one which is likely to cause a serious and adverse effect on the public health, public safety or the environment."

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

Law Review Commentaries

Environmental crime now means prison time. Kenneth A. Hodson & James D. Vieregg, 29 Ariz. Atty. 22 (Dec. 1992).

Scope of felony liability under Arizona's environmental laws. Michael J. Lessler, 29 Ariz.Atty. 29 (Dec. 1992).

§ 49–927. Hazardous waste management fund

A. A hazardous waste management fund is established to be administered by the department. The fund consists of monies appropriated by the legislature, monies collected pursuant to § 49–931, monies collected as civil or criminal penalties imposed under this chapter and fees for issuing permits under § 49–922, subsection B, paragraph 5. Monies in the fund are subject to legislative appropriation and are exempt from § 35–190 relating to lapsing of appropriations. On notice from the director, the state treasurer shall invest and divest monies in the fund as provided in § 35–313. Interest earned on monies in the fund shall be credited to the fund.

B. Monies in the hazardous waste management fund shall be used for the following purposes:

1. Informing, educating and training the general public, treatment, storage and disposal facility operators, hazardous waste handlers and others.

2. Supporting statewide hazardous waste planning and program development activities.

3. Processing, issuing and maintaining permits for treatment, storage or disposal facilities.

4. Compliance monitoring, investigation and enforcement activities pertaining to generating, transporting, treating, storing and disposing of hazardous waste under this article.

5. Funding the pollution prevention technical assistance program established in § 49–965 and providing matching funds under section 6605 of the pollution prevention act of 1990 (P.L. 101–508).

6. Administration of the pollution prevention program pursuant to article 4 of this chapter.[1]

7. Reimbursement of appropriations received for fiscal year 1991–1992 to the state general fund as provided by law.

C. Ten per cent of the monies in the fund shall be transmitted to the emergency response fund established pursuant to § 26–352 to be used for staffing local emergency planning committees and equipping local fire departments, fire districts and public safety agencies for the development of hazardous materials emergency response teams.

Amended by Laws 1990, Ch. 230, § 19; Laws 1991, Ch. 315, § 27, eff. July 3, 1991; Laws 1992, Ch. 201, § 12.

[1] Section 49–961 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–928. Availability of information to the public

A. Any record, reports or information obtained from any person pursuant to this chapter, including records, reports or information obtained or prepared by the director or a depart-

ment employee, shall be available to the public, except that the information or a particular part of the information shall be considered confidential on either:

1. Notice from the person, accompanying the information, stating that the information or a particular part of the information, if made public, would divulge the trade secrets of the person as defined in § 49–201 or other information likely to cause substantial harm to the person's competitive position.

2. A determination by the attorney general that disclosure of the information or a particular part of the information would be detrimental to an ongoing criminal investigation or to an ongoing or contemplated civil enforcement action under this title in superior court.

B. If the director, on his own or following a request for disclosure, disagrees with the confidentiality notice, he may request the attorney general to seek a court order authorizing disclosure. If a court order is sought, the person shall be served with a copy of the court filing and shall have twenty business days from the date of service to request a hearing on whether a court order should be issued. The hearing shall be conducted in camera, and any order resulting from the hearing is appealable as provided by law. The director may not disclose the confidential information until a court order authorizing disclosure has been obtained and becomes final. The court may award costs of litigation including reasonable attorney and expert witness fees to the prevailing party.

C. Notwithstanding subsection A of this section, the following information obtained from any person pursuant to this chapter shall be available to the public:

1. The name and address of any permit applicant, permittee, generator or transporter.

2. The types and amounts of any hazardous wastes generated, stored, treated or disposed.

3. The types and amounts of any toxic substances released to the environment.

D. Notwithstanding subsection A of this section, the director may disclose, with accompanying confidentiality notice, any records, reports or information obtained from any person under this article, including records, reports or information obtained by the director or department employees, to:

1. Other state employees concerned with administering this chapter or if the records, reports or information are relevant to any administrative or judicial proceeding under this chapter.[1]

2. Employees of the United States environmental protection agency if such information is necessary or required to administer and implement or comply with federal statutes or regulations.

Added by Laws 1991, Ch. 315, § 29, eff. July 3, 1991.

[1] Section 49–901 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

Former § 49–928 was repealed by Laws 1991, Ch. 315, § 28, effective July 3, 1991.

§ 49–929. Annual registration of hazardous waste treatment, storage and disposal facilities, transporters and generators; fee; disposition of revenue

A. All hazardous waste treatment, storage and disposal facilities, hazardous waste transporters and hazardous waste generators, except hazardous waste resource recovery facilities as defined in § 49–930, shall register annually with the department at the time and in the manner prescribed by the director. The registration is valid for one year from the date of registration.

B. The application for registration shall be accompanied by a registration fee based on the following:

1. Hazardous waste treatment, storage and disposal facilities, one thousand five hundred dollars plus two dollars per ton of hazardous waste received for treatment, storage for more

than ten days or disposal during the preceding calendar year, except that a hazardous waste disposal facility established under title 49, chapter 5, article 1,[1] shall be subject to any fees assessed pursuant to § 49–904, and shall not be subject to the two dollar per ton component of the fee imposed by this section.

2. Hazardous waste transporters, two hundred dollars.

3. Large quantity hazardous waste generators which generate one thousand kilograms per month or more, three hundred dollars.

4. Small quantity hazardous waste generators which generate between one hundred and one thousand kilograms per month, one hundred dollars.

C. All monies collected under this section shall be deposited in the water quality assurance revolving fund established by § 49–282. The director may authorize expenditures from the fund, pursuant to § 49–282, subsection C, paragraph 6, to pay the reasonable and necessary costs of administering the registration program.

Added by Laws 1990, Ch. 230, § 20.

[1] Section 49–901 et seq.

Cross References

Water quality assurance revolving fund, monetary composition, see § 49–282.

§ 49–930. Annual registration of hazardous waste resource recovery facilities; fee; maximum annual payment of fees and taxes; disposition of revenue; definitions

A. All hazardous waste resource recovery facilities shall register annually with the department at the time and in the manner prescribed by the director. The registration is valid for one year from the date of registration.

B. The application for registration shall be accompanied by a registration fee of one thousand five hundred dollars plus two dollars per ton of hazardous waste received for resource recovery during the preceding calendar year, except that a person engaging in hazardous waste resource recovery is not required to pay fees and taxes listed in § 49–282, subsection A, paragraphs 2 through 11 in excess of the lesser of:

1. Ten thousand dollars in a calendar year per individual hazardous waste resource recovery site.

2. Twenty-five thousand dollars in a calendar year per hazardous waste resource recovery entity.

C. A person who pays such fees and taxes for hazardous waste resource recovery facilities in the amount specified in subsection B of this section may submit evidence of such payment to the appropriate entity in lieu of paying additional fees and taxes for that calendar year for hazardous waste resource recovery facilities.

D. If a hazardous waste resource recovery facility is owned or operated by more than one person, the payment of fees or the compliance with this section for the facility by one person constitutes compliance by all other owners and operators.

E. All monies collected under this section shall be deposited in the water quality assurance revolving fund established by § 49–282. The director may authorize expenditures from the fund, pursuant to § 49–282, subsection C, paragraph 6, to pay the reasonable and necessary costs of administering the registration program.

F. For purposes of this section:

1. "Hazardous waste resource recovery entity" means a person who owns or operates more than one individual hazardous waste resource recovery site in this state.

2. "Hazardous waste resource recovery facility" means a facility that receives for recovery of material resources fifty or more tons per year of hazardous waste generated by a facility

owned by a person other than the owner of the facility receiving the hazardous waste for recovery of material resources.

3. "Individual hazardous waste resource recovery site" means a hazardous waste resource recovery facility or group of hazardous waste resource recovery facilities located in a contiguous geographical area and owned or operated by the same person.

Added by Laws 1990, Ch. 230, § 20. Amended by Laws 1992, Ch. 290, § 11.

Historical and Statutory Notes

Reviser's Notes:

1990 Note. Pursuant to authority of § 41–1304.02, in the section heading "maximum annual payment of fees and taxes;" was added after "fee;" and "definitions" was substituted for "definition" and the paragraphs of subsection F were alphabetized.

1992 Note. The amendment of this section by Laws 1992, Ch. 290 did not contain a duly enacted emergency clause and therefore takes effect on September 30, 1992.

Cross References

Mines, maximum annual payments of fees and taxes, water quality assurance revolving fund, see § 49–282.01.

Water quality assurance revolving fund, monetary composition, see § 49–282.

§ 49–931. Hazardous waste fees; definitions

A. Beginning January 1, 1992, the following fees apply:

1. Except as provided in paragraph 4 of this subsection, a person who generates hazardous waste that is shipped off site shall pay ten dollars for each ton of waste generated. Hazardous waste that is shipped off site to a facility that is in this state and that is owned or operated by the same person who generates the waste is exempt from the fees in this paragraph.

2. Except as provided in paragraph 4 of this subsection, an owner or operator of a facility that disposes of hazardous waste shall pay forty dollars for each ton of waste disposed. Hazardous waste that is disposed at a facility that is owned or operated by the same person who generates the waste is exempt from the fee in this paragraph.

3. Except as provided in paragraph 4 of this subsection, a person who generates hazardous waste that is retained on site for disposal or that is shipped off site for disposal to a facility that is owned or operated by that generator shall pay four dollars for each ton of hazardous waste delivered to the disposal facility.

4. In lieu of the fees prescribed in paragraphs 1 and 3 of this subsection, a person who generates hazardous waste and who complies with the pollution prevention planning requirements of article 4 of this chapter [1] shall pay one-half of the prescribed fee for each ton of hazardous waste. In lieu of the fees prescribed in paragraph 2 of this subsection, an owner or operator of a facility that receives hazardous waste from a person who complies with the pollution prevention planning requirements of article 4 of this chapter shall collect and pay one-half of the prescribed fee for each ton of hazardous waste received. These reduced fees apply only if the person submits written certification of that compliance. This certificate of compliance shall be submitted with the manifest that accompanies the hazardous waste transported off site for disposal and shall accompany the copy of the manifest that is filed by the generator with the department.

B. Each operator or person who is required to pay a fee as prescribed by this section shall make the fee payment quarterly in each calendar year. The fee shall be paid to the department on or before April 20, July 20, October 20 and January 20 for the preceding three months.

C. The department shall collect all fees due under this section and shall transmit those fees to the state treasurer for deposit in the hazardous waste management fund established in § 49–927. Each fee payment shall be accompanied by a form furnished by the department and completed by the operator or person. The form shall state the total volume or weight of hazardous waste generated or disposed at that facility during the payment period and shall

provide any other information deemed necessary by the department. The operator or person shall sign the form.

D. If an operator or person fails to pay the fee prescribed by this section, the operator or person is additionally liable for interest on the unpaid amount at the rate prescribed by § 44–1201.

E. State agencies including state universities, are not exempt from the fees prescribed by this section.

F. For purposes of this section:

1. "Generates" means the act or process of producing hazardous waste and includes importing hazardous waste into this state for disposal.

2. "Off site" means any transportation that is not on site as defined in § 49–851.

3. "Person" means an individual, trust, firm, joint stock company, corporation including a government corporation, partnership, association, state, municipality, commission, political subdivision of this state, interstate body or federal facility.

Added by Laws 1991, Ch. 315, § 30, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 13.

[1] Section 49–961 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

1991 Reviser's Note:

Laws 1991, Ch. 220, sec. 12 added another new § 49–931 that was renumbered as § 49–932. Pursuant to authority of § 41–1304.02, in subsection A, paragraph 1, first and second sentences the spelling of "off site" was corrected, in paragraph 3 the spelling of "on site" and "off site" was corrected, in paragraph 4, third sentence the spelling of "off site" was corrected and in subsection D, paragraph 2 the spelling of "off site" was corrected.

Cross References

Pollution prevention, see § 49–961 et seq.

§ 49–932. Hazardous waste fuel penalty; disposition of revenue

A. A hazardous waste fuel penalty of forty cents per gallon is established for hazardous waste fuel and hazardous waste that is burned for energy recovery and that is not generated by the operation of the business of the burner.

B. The director shall collect the penalty established by subsection A of this section from the burner of the hazardous waste fuel or hazardous waste.

C. Monies collected pursuant to subsection B of this section shall be deposited in the hazardous waste management fund established pursuant to § 49–927.

Added as § 49–931 by Laws 1991, Ch. 220, § 12, eff. June 11, 1991. Renumbered as § 49–932.

Historical and Statutory Notes

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, this section, added by Laws 1991, Ch. 220, sec. 12 as § 49–931, was renumbered as § 49–932.

ARTICLE 4. POLLUTION PREVENTION

Article 4, consisting of §§ 49–961 to 49–967, was added by Laws 1991, Ch. 315, § 31, effective July 3, 1991.

§ 49–961. Definitions

In this article, unless the context otherwise requires:

1. "Disposal" means discharging, depositing, injecting, dumping, spilling, leaking or placing a toxic substance or hazardous waste into or on land or water so that the toxic

substance or hazardous waste or any constituent of hazardous waste may enter the environment, be emitted into the air or released into or commingled with any waters, including groundwater.

2. "Facility" means all buildings, equipment, structures and other stationary items located on a single site or on contiguous or adjacent sites and owned or operated by the same person or by any person who controls, is controlled by or is under common control with any person. Facility does not include a household hazardous waste collection facility or a facility that is primarily engaged in receiving waste from off site and that has a permit issued or plan approved under this title for the storage, treatment or disposal of solid, special or hazardous waste.

3. "Generator" means a person who, by virtue of ownership, management or control, is responsible for causing or allowing to be caused the creation of hazardous waste.

4. "Hazardous waste" means hazardous waste as defined in § 49–921.

5. "Person" means an individual, the United States, this state or a public or private corporation, local government unit, public agency, partnership, association, firm, trust or estate or any other legal entity.

6. "Pollution" means the disposal of a toxic substance or hazardous waste into the air, land, surface water or groundwater.

7. "Pollution prevention" means operational procedures and processes and improvements in housekeeping or management techniques that reduce potential or actual releases of pollutants to the environment. Pollution prevention includes any of the following:

(a) Toxics use reduction, source reduction, recycling of wastes or secondary materials, waste minimization, reuse, reclamation, conservation and substitution.

(b) Proportionate changes in the total volume, quantity or toxicity of a particular pollutant as prescribed in this subsection as the release of that pollutant changes as a result of production changes or other business changes.

(c) On-site or off-site treatment if that treatment can be shown to confer a higher degree of protection to the public health and safety and the environment than other technically and economically practicable waste reduction alternatives.

8. "Toxic substance" or "toxics" means any of the following:

(a) An extremely hazardous substance subject to § 302 of the emergency planning and community right-to-know act of 1986 (P.L. 99–499), as amended[1].

(b) A toxic chemical subject to § 313 of the emergency planning and community right-to-know act of 1986 (P.L. 99–499), as amended.[2]

(c) An imminently hazardous chemical substance with respect to which the administrator of the United States environmental protection agency has taken action pursuant to § 7 of the toxic substances control act (P.L. 94–469), as amended.[3]

(d) A hazardous substance as defined in § 49–281.

(e) A substance listed by the secretary of the United States department of health and human services pursuant to 42 United States Code § 241(b)(4)[4] and that is known or reasonably anticipated to be a carcinogen.

(f) A chemical listed pursuant to § 101 or 102 of the comprehensive environmental response, compensation, and liability act of 1980 (P.L. 96–510; 94 Stat. 2767; 42 United States Code § 9601).[5]

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991. Amended by Laws 1992, Ch. 54, § 3.

[1] 42 U.S.C.A. § 11002.
[2] 42 U.S.C.A. § 11023.
[3] 15 U.S.C.A. § 2606.
[4] 42 U.S.C.A. § 241(b)(4).
[5] 42 U.S.C.A. § 9601.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

For provision of Laws 1991, Ch. 315, relating to definitions of the department of environmental quality for treatment, recycling and disposal applicable to solid waste, hazardous waste, special waste and pollution prevention programs, see Historical and Statutory Notes following § 49–701.

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, in paragraph 6 the designations of paragraphs 1, 2, 3, 4, 5 and 6 following "6." were changed to subdivisions (a), (b), (c), (d), (e) and (f) to correct a manifest clerical error, in redesignated subdivisions (a) and (b) the words ", as amended" were transposed to follow "(P.L. 99–499)" and in redesignated subdivision (c) the words ", as amended" were transposed to follow "(P.L. 99–469)".

§ 49–962. Toxic data report; progress report; exemption

A. A person who owns or operates a facility shall file a toxic data report on July 1 for the preceding calendar year if either of the following applies:

1. During the preceding calendar year, the owner or operator was required to file an annual toxic chemical release form for the facility pursuant to § 313 of the superfund amendments and reauthorization act of 1986 (P.L. 99–499).

2. During the preceding calendar year, the facility generated an average of one kilogram per month of acutely hazardous waste as defined in 40 code of federal regulations part 261 or an average of one thousand kilograms per month of hazardous waste in a calendar year, exclusive of an episodic, accidental or remediation related release or occurrence.

B. The owner or operator of a facility shall file the report prescribed in subsection A of this section on July 1 each year for the preceding calendar year until either of the following applies:

1. The facility ceases operation.

2. The facility does not meet the requirements of both:

(a) Subsection A, paragraph 1 of this section.

(b) Subsection A, paragraph 2 of this section, for two consecutive years.

C. The toxic data report required in subsection A of this section shall include both of the following:

1. The report form required by the United States environmental protection agency pursuant to 42 United States Code § 13106.[1]

2. Any annual progress report required to be submitted pursuant to § 49–963.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991.

[1] 42 U.S.C.A. § 13106.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–963. Pollution prevention plan; progress report; exemption

A. A person who owns or operates a facility that meets the reporting requirements prescribed by § 49–962 shall prepare and implement a pollution prevention plan that addresses a reduction in the use of toxic substances and the generation of hazardous wastes. By January 1, 1994, the director shall establish a numeric goal for the state for waste minimization. By January 1, 1999 the director shall establish a numeric goal for the state for toxic use reduction. For purposes of this section, "toxic substance" does not include material used or produced in connection with a mining or metallurgical operation.

B. By December 31, 1992, the following shall file a plan as prescribed by this section:

1. A facility that shipped off site for purposes other than recycling the lesser of:

(a) Twelve thousand or more kilograms cumulative total of hazardous wastes in calendar year 1991.

(b) An average of one thousand kilograms or more per month cumulative total of hazardous waste in calendar year 1991.

2. A facility that shipped off site for purposes other than recycling an average of one kilogram or more per month cumulative total of acutely hazardous wastes, as defined in 40 code of federal regulations part 261, in calendar year 1991.

C. By December 31, 1995, a facility that shipped off site for purposes other than recycling from ten thousand kilograms to twelve thousand kilograms cumulative total of hazardous wastes in calendar year 1994 shall file a plan as prescribed by this section.

D. From and after December 31, 1994, a facility that uses in excess of ten thousand pounds in a calendar year of a toxic substance as defined in § 49–961 shall file a pollution prevention plan by December 31 of the following year covering those toxic substances that exceed the threshold quantity. From and after December 31, 1998, the director may adopt by rule threshold quantities of toxic substances different from those established pursuant to this section if the director determines there is sufficient evidence to establish any one of the following:

1. The chemical is known to cause or can reasonably be anticipated to cause significant acute adverse human health effects at concentration levels that are reasonably likely to exist beyond the boundaries of a facility site as a result of continuous or frequently recurring releases, or to cause or can reasonably be anticipated to cause a significant adverse effect on the environment of sufficient seriousness to warrant inclusion in the pollution planning program because of any of the following:

(a) Its toxicity and persistence in the environment.

(b) Its toxicity and tendency to bioaccumulate in the environment.

2. The chemical is known to cause or can reasonably be anticipated to cause in humans either of the following:

(a) Cancer or teratogenic effects.

(b) Serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutation or other chronic health effects.

E. After December 31, 1992, a facility that meets the quantitative threshold filing requirements prescribed in subsection B of this section and that has not filed a plan with the department shall file a plan no later than December 31 of the following year.

F. Notwithstanding any other provision of law, a person required to file a toxic data report under § 49–962, subsection A, paragraph 1 shall prepare, submit and begin to implement a pollution prevention plan no later than December 31, 1992.

G. A facility required to prepare a pollution prevention plan under this section shall maintain and implement that plan until the facility ceases operation or the facility no longer meets the quantitative threshold filing requirements prescribed in this section.

H. A person who is not required to prepare a pollution prevention plan may voluntarily comply with this section and shall be deemed a generator who may certify compliance as prescribed by § 49–931, subsection A.

I. A person who owns or operates more than one facility that is required to prepare and implement a pollution prevention plan pursuant to subsection A of this section may prepare and implement a single pollution prevention plan that covers more than one facility.

J. The pollution prevention plan required by this section shall include all of the following:

1. The name and location of and principal business activities at the facility.

2. The name, address and telephone number of the owner or operator of the facility and of the senior official with management responsibility at the facility.

3. A certification by the senior official with management responsibility at the facility that he has read the plan and that it is to the best of his knowledge true, accurate and complete.

4. Specific performance goals for the prevention of pollution, including an explanation of the rationale for each performance goal. The plan must include a goal for the facility and may include goals for individual production processes.

5. A written policy setting forth management and corporate support for the pollution prevention plan and a commitment to implement the plan to achieve the plan goals.

6. A statement of the plan's scope and objectives.

7. An analysis identifying pollution prevention opportunities to reduce or eliminate toxic substance releases and hazardous waste generation.

8. An analysis of pollution prevention activities that are already in place and that are consistent with the requirements of this article.

9. Employee awareness and training programs to involve employees in pollution prevention planning and implementation to the maximum extent feasible.

10. Provisions to incorporate the plan into management practices and procedures in order to ensure its institutionalization.

11. A description of the options considered and an explanation of why the options considered were not implemented.

K. The pollution prevention plan, at a minimum, shall cover a two-year time period and may cover a longer time period at the discretion of the facility.

L. Each owner and operator required to prepare and maintain a pollution prevention plan under this section shall file an annual progress report. The annual progress report shall both:

1. Analyze the progress made, if any, in pollution prevention including toxics use reduction, source reduction and hazardous waste minimization relative to each performance goal established and relative to the plan contents prescribed in subsection J, paragraphs 4 through 11 of this section. Pollution prevention achieved under previously implemented activities may also be included.

2. Set forth amendments to the pollution prevention plan and explain the need for the amendments.

M. A facility that causes a one-time event that generates a hazardous waste or an acutely hazardous waste from an unused hazardous substance is exempt from filing a pollution prevention plan and an annual progress report if all of the following conditions are met:

1. The unused hazardous substance cannot lawfully be used due to changes in statute or rule.

2. A toxic data report has been filed for the event as prescribed in § 49–962.

3. The toxic data report is required solely as a result of the one-time generation event.

N. This section does not apply to an episodic, accidental or remediation related release or occurrence.

O. A person who would be required to file a plan as prescribed by subsection A of this section solely due to the storage, supply, application or use of a pesticide as defined in § 3–361 for agricultural application and who is subject to reporting or record keeping requirements pursuant to § 49–305 or rules adopted pursuant to § 3–363 or a person who is issued an agricultural general permit pursuant to § 49–247 is exempt from the plan filing prescribed in subsection A of this section.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991. Amended by Laws 1992, Ch. 201, § 14.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–964. Review of reports and plans; enforcement; contempt

A. The department shall review the submissions required under this article, including the plan and any amendments and reports, to determine if the submission is complete and correct as prescribed in §§ 49–962 and 49–963.

B. If a facility required to submit a plan or report under this article files an inadequate submission, the department shall notify the facility in writing of the inadequacy, identifying the specific deficiencies. In reviewing the adequacy of a plan or report, or any amendment to a plan or report, the department shall base its determination on whether the plan, report or amendment is complete and correct in accordance with the requirements of this article. If the submission is inadequate, the department shall specify a reasonable time of at least ninety days within which the facility shall file a modified submission addressing the specified deficiencies.

C. If, after the specified time, the facility has not filed a modified submission or the modified submission is otherwise inadequate, the department may enter a formal notice of inadequacy. The department shall place a copy or abstract of the notice of inadequacy in the department's annual report.

D. If a formal notice of inadequacy is entered, the department, pursuant to title 41, chapter 6,[1] may hold a public hearing at least thirty days but not more than ninety days after providing written notice to the facility. The department may issue an administrative order requiring the facility to correct the deficiencies. If the facility fails to comply with an administrative order, the department may enforce that order in a judicial proceeding including an action for contempt.

E. In reviewing for adequacy an amendment or annual progress report, the department's review is restricted to the scope of the current submission. Previous amendments to the plan and annual progress reports that were found to be adequate are not subject to review.

F. If a facility required under this article to submit a plan or annual progress report fails to submit the plan or report, the department shall order that facility to submit an adequate plan or report within a reasonable time period of at least ninety days. If the facility fails to develop an adequate plan or progress report in response to that order within the time period specified in that order, the department may do any of the following:

1. Under procedures established by rule, provide for inspecting the facility, gathering necessary information and preparing a plan or progress report for the facility at the facility's expense.

2. Pursuant to title 41, chapter 6, enter an administrative order for compliance that is enforceable in a judicial proceeding including an action for contempt.

G. The attorney general, at the request of the director, may bring an action in superior court to recover the department's costs incurred under subsection F of this section. The facility owner or operator may appeal the department's determination to proceed under this subsection and subsection F pursuant to title 41, chapter 6 before the department prepares the plan or progress report. Any final agency order issued pursuant to this section is subject to judicial review pursuant to title 12, chapter 7, article 6.[2]

H. Failure to implement the pollution prevention plan is a violation of this article and the attorney general, at the request of the director, may bring an action in superior court to compel implementation of the provisions of an approved plan, and the director pursuant to title 41, chapter 6 may enter an administrative order for compliance that is enforceable in a judicial proceeding including an action for contempt.

I. Reports and submissions made to the department pursuant to this article shall be deemed adequate for purposes of this article unless the department notifies the facility in writing of any deficiencies within ninety days of receipt of the submission.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991.

[1] Section 41–1001 et seq.
[2] Section 12–901 et seq.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–965. Pollution prevention technical assistance program

A. The department shall establish a technical assistance program designed to assist all persons in reducing to the fullest extent possible the amount and toxicity of the hazardous waste that is generated or toxic substances used in this state. The assistance program may include:

1. The establishment of a hazardous waste reduction clearinghouse of all available information concerning hazardous waste reduction, toxic substances minimization, recycling programs, economic and energy savings, and production and environmental improvements.

2. The production of workshops, conferences and handbooks on the topics described in paragraph 1 of this subsection.

3. Cooperation with university programs to develop hazardous waste reduction and toxic substances minimization curricula and training.

4. Presentation of on-site technical assistance for hazardous waste generators and toxic substances users.

5. Researching and recommending incentive programs for innovative hazardous waste management and toxic substances reduction.

B. The technical assistance program shall be funded from monies allocated from the hazardous waste management fund as prescribed in § 49–927.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–966. Annual report by department

On December 31, 1993 and each year thereafter, the department shall submit an annual report evaluating the pollution prevention program to the governor, the president of the senate and the speaker of the house of representatives. The department shall utilize information submitted to the department of agriculture pursuant to title 3, chapter 2, articles 5 and 6[1] and the division of emergency management pursuant to title 26, chapter 2, article 3.[2] The annual report shall contain all of the following:

1. A description of the department's activities to encourage pollution prevention with particular attention to technical assistance efforts.

2. A compilation of the information received in the toxic data reports.

3. An estimate of the total number of facilities reporting and filing plans.

4. A synopsis of progress, summarized from the annual progress reports.

5. A list of facilities that have inadequate plans or reports, that have failed to make progress toward the goals established in their plans or that have made inadequate progress toward their goals.

6. A list of facilities that file an annual toxic chemical release form pursuant to § 313 of the superfund amendments and reauthorization act of 1986 (P.L. 99–499)[3] and that are not required to file a hazardous waste generator report under federal law, and recommendations regarding participation in the pollution prevention program for those facilities.

7. Specific recommendations for statutory and regulatory changes to the program to improve compliance, enforcement and progress toward the purposes of this article.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991. Amended by Laws 1992, Ch. 156, § 24.

[1] Sections 3–341 et seq. and 3–361 et seq.
[2] Section 26–331 et seq.
[3] 42 U.S.C.A. § 9601 note.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–967. Availability of information to the public

A. Any records, reports or information obtained from any person under this article, including records, reports or information obtained or prepared by the director or a department employee, shall be available to the public, except that the information, or a particular part of the information, shall be considered confidential on either:

1. Notice from the person, accompanying the information, stating that the information, or a particular part of the information, if made public, would divulge the trade secrets of the person or other information likely to cause substantial harm to the person's competitive position.

2. A determination by the attorney general that disclosure of the information or a particular part of the information would be detrimental to an ongoing criminal investigation or to an ongoing or contemplated civil enforcement action under this chapter in superior court.

B. If the director, on his own or following a request for disclosure, disagrees with the confidentiality notice, he may request the attorney general to seek a court order authorizing disclosure. If a court order is sought, the person shall be served with a copy of the court filing and shall have twenty business days from the date of service to request a hearing on whether a court order should be issued. The hearing shall be conducted in camera, and any order resulting from the hearing is appealable as provided by law. The director may not disclose the confidential information until a court order authorizing disclosure has been obtained and becomes final. The court may award costs of litigation including reasonable attorney and expert witness fees to the prevailing party.

C. Notwithstanding subsection A, the following information obtained from any person under this article shall be available to the public:

1. The name and address of any permit applicant or permittee.

2. The types and amounts of any hazardous waste generated, stored, treated or disposed.

3. The types and amounts of any toxic substances released to the environment.

D. Notwithstanding subsection A, the director may disclose, with accompanying confidentiality notice, any records, reports or information obtained from any person under this article, including records, reports or information obtained by the director or department employees, to:

1. Other state employees concerned with administering this chapter or if the records, reports or information are relevant to any administrative or judicial proceeding under this chapter.

2. Employees of the United States environmental protection agency if such information is necessary or required to administer and implement or comply with federal statutes or regulations.

Added by Laws 1991, Ch. 315, § 31, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

ARTICLE 5. POLLUTION PREVENTION FOR STATE AGENCIES

Article 5, consisting of §§ 49–971 to 49–973, was added by Laws 1991, Ch. 315, § 32, effective July 3, 1991.

§ 49–971. Pollution prevention reports; state agencies

A. A state agency that produces hazardous waste or uses toxic substances in excess of the threshold quantity prescribed in § 49–963 shall complete and file with the director a pollution prevention report.

B. The pollution prevention report shall be completed on a form published by the director and shall be filed with the director by July 1, 1993, and each year thereafter.

C. The pollution prevention report shall provide:

1. Information on releases, toxics use reduction, waste minimization, pollution controls and pollution prevention measures employed by the agency and an assessment of the effectiveness of such pollution prevention measures.

2. A two-year numeric goal for reduction of each hazardous waste above threshold quantity which is certified by the director of the agency which has responsibility for management of the facility which produced the hazardous waste.

3. The address of each off-site treatment, storage or disposal facility to which each hazardous waste generated was transported and the type of treatment or disposal method used for each hazardous waste at each off-site facility.

D. An agency required to file a pollution prevention report may certify that there is no reasonably available and technically feasible alternative to the current level of use of a hazardous waste at the facility. That certification shall be reviewed by the director for his approval.

E. If the department discovers a deficiency in a pollution prevention report, the department shall allow the agency ninety days from the date of notice of the deficiency to correct the deficiency.

F. The following are exempt from the reporting requirements of subsection D of this section:

1. Pilot plants and pilot production units at which less than ten thousand pounds of a hazardous waste is extracted, generated, manufactured or otherwise used.

2. Start-up production units from a time period equal to the shorter of either the time period from the date of initial operation until required operation efficiency is achieved or two years from the date of initial operation.

3. Activities in laboratories, including quality control laboratories, to the extent and in the manner that those activities are exempt from reporting in regulations adopted as prescribed in § 313 of title III of the superfund amendments and reauthorization act of 1986 (P.L. 99–499).

G. State agencies claiming the exemptions provided for in subsection D shall maintain on-site documentation supporting all exemption claims.

H. The department shall make all pollution prevention reports available to the public.

Added by Laws 1991, Ch. 315, § 32, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–972. Pollution prevention plan for state agencies

A. The state agency that is required to file a pollution prevention report as prescribed by § 49–971 shall have a goal of twenty per cent reduction in hazardous waste within two years,

fifty per cent reduction in hazardous waste within five years and a seventy per cent reduction in hazardous waste in ten years.

B. On or before January 1, 1993 and every five years thereafter, state agencies required to report shall submit their reports to the director.

C. A state agency required to file a pollution prevention plan may include in the report a certification that there is no reasonably available and technically feasible alternative to the current level of use of the hazardous waste in the specified production process at their facilities. If approved by the director, the certification shall serve as demonstration of compliance with the goals stated in subsection A of this section.

D. The state agency required to prepare a pollution prevention plan shall maintain a copy of the plan and annual summaries at the agency and at the facility, where they shall be available for inspection by the department and by the public on request to the department.

E. Any state agency required to prepare a pollution prevention plan shall submit the plan on a form published by the department and a pollution prevention plan summary on the date required for submission of the plan.

F. The pollution prevention plan summary shall include a summary of all data and information in the plan, including:

1. A statement of the scope and objectives of the pollution prevention plan considering toxicity, volume, disposal costs and liability costs, and a numerical statement of the reductions in facility-wide use of each hazardous waste at the facility over the next five or more years.

2. A description and calculations relating to each of the production processes and sources identified at the facility and targeted for reduction.

3. A cost benefit analysis of the reductions targeted in the plan.

4. Identification and explanation of technology, procedures and options available and technically feasible for reducing the use of each hazardous waste at the facility, an explanation of options not implemented and a time schedule for implementing chosen options.

5. The address of each off-site treatment, storage or disposal facility to which each hazardous waste generated at the facility was transported, the type of treatment or disposal methods used for each hazardous waste at each off-site facility and an estimate of the reduction efficiency typically achieved by those treatment methods for that waste stream.

6. A written certification that the agency has prepared a pollution prevention plan and that a copy of the plan is available at the agency or facility for the department's inspection and for inspection by the public on request to the department.

G. To the extent practicable, the information required for the preparation of a pollution prevention plan shall be based on information developed and forms completed by the state agency for the purposes of compliance with §§ 26–347 and 26–351, the federal pollution prevention act, § 304(*l*) of the federal water pollution control act, pretreatment sludge permits pursuant to 40 code of federal regulations part 503, or other required state and federal reports.

H. The department shall make all pollution plans and pollution prevention plan summaries available to the public.

I. If the department determines that a plan is not in compliance with the requirements of this section, the department may allow the person submitting the plan ninety days from the date of the notice of deficiency to correct the deficiency.

J. Each state agency required to prepare and maintain a pollution prevention plan shall file an annual progress report. The annual progress report shall both:

1. Analyze the progress made, if any, in pollution prevention including toxics use reduction, source reduction and hazardous waste minimization relative to each performance goal established and relative to the plan contents.

2. Set forth amendments to the pollution prevention plan and explain the need for the amendments.

Added by Laws 1991, Ch. 315, § 32, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

§ 49–973. Toxic data report; progress report

A. A state agency shall file a toxic data report on July 1 for the preceding calendar year if the agency either:

1. Produced ten thousand pounds or more of hazardous waste.

2. Manufactured or treated twenty-five thousand pounds or more of hazardous waste.

B. The toxic data report required in subsection A of this section shall include an annual progress report as prescribed in § 49–972, subsection J. The toxic data report shall contain the information and shall be in the format of a toxic chemical release form required by § 313 of the superfund amendments and reauthorization act of 1986 (P.L. 99–499).

Added by Laws 1991, Ch. 315, § 32, eff. July 3, 1991.

Historical and Statutory Notes

For legislative finding, policy and severability provisions of Laws 1991, Ch. 315, see Historical and Statutory Notes following § 49–109.

CHAPTER 6

UNDERGROUND STORAGE TANK REGULATION

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ARTICLE 1. GENERAL PROVISIONS

Historical and Statutory Notes

Laws 1991, Ch. 115, § 3, effective May 13, 1991, provides:

"Sec. 3. **Transition**

"An applicant who was issued an installation permit for underground storage tanks after September 26, 1990 shall be authorized to operate for ninety days following installation in compliance with the terms of the installation permit."

§ 49–1001. Definitions

In this chapter, unless the context otherwise requires:

1. "Being used" means not having been taken out of operation.

2. "Closure" means the removal of an underground storage tank from operation.

3. "Corrective actions" means those actions that are prescribed pursuant to § 49–1005, subsection E.

4. "Designated representative" means a person to whom an owner or an operator, or both, assign in writing any right, title or interest which the owner or operator, or both, may have in and to the proceeds of a reimbursement for a corrective action made under article 3 of this chapter.[1]

5. "Guarantor" means a person, other than an owner or operator, who provides evidence of financial responsibility for an owner or operator pursuant to this chapter.

6. "Motor fuel" means petroleum or a petroleum based substance that is motor gasoline, aviation gasoline, number 1 or number 2 diesel fuel or any grade of oxygenated gasoline typically used in the operation of a motor engine.

7. "Occurrence" means an incident which results in a release from an underground storage tank system, and any other releases which may be occurring simultaneously at the facility at which the underground storage tank system is located, and which are reasonably discoverable at the time of the discovery of the initial release.

8. "Operator" means a person in control of, or having responsibility for, the day-to-day operation of an underground storage tank.

9. "Out of operation" means having been closed in accordance with all applicable fire codes and other statutory and regulatory requirements for closure in effect on the date that closure was accomplished.

10. "Person" means an individual, trust, firm, joint stock company, corporation, joint venture, partnership, association, consortium, state, municipality, interstate body, commission, political subdivision of a state and the United States government.

11. "Petroleum" means crude oil or any fraction of crude oil, which is liquid at sixty degrees Fahrenheit and 14.7 pounds per square inch absolute, and petroleum based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels, residual fuel oils, lubricants, jet fuels, distillate fuel oils, petroleum solvents and used oils.

12. "Political subdivision" means a county, city, town or other taxing district other than the state that is authorized to take property by eminent domain.

13. "Regulated substance" means:

(a) Petroleum.

(b) A substance specified in the comprehensive environmental response, compensation, and liability act of 1980 (P.L. 96–510; 94 Stat. 2767; 42 United States Code § 9601(14))[2] but not including a substance regulated as a hazardous waste under the solid waste disposal act of 1984 (P.L. 98–616; 98 Stat. 3221; 42 United States Code § 6921).[3]

14. "Release" means a spill, leak, emission, discharge, escape, leach or disposal of a regulated substance from an underground storage tank into groundwater, surface water or subsurface soils.

15. "Suspected release" means any of the following:

(a) The discovery by owners and operators or others of released regulated substances at the underground storage tank site or in the surrounding area.

(b) Erratic behavior of regulated substance dispensing equipment, the sudden loss of a regulated substance from an underground storage tank, an unexplained presence of water in the underground storage tank or other extraordinary operating conditions that could reasonably be associated with a release from an underground storage tank and that are observed by owners and operators, unless system equipment is found to be defective but not leaking and is repaired or replaced immediately.

(c) That the monitoring results from a release detection method required under 40 code of federal regulations §§ 280.41 and 280.42, this chapter or rules adopted pursuant to this chapter indicate that a release may have occurred unless either of the following occurs:

(i) The monitoring device is found to be defective and is immediately repaired, recalibrated or replaced and additional monitoring data do not confirm the initial result.

(ii) In the case of inventory control, a second month of inventory reconciliation data does not confirm the initial result.

16. "Tank" means a stationary device constructed of wood, concrete, steel, plastic or other nonearthen materials and used to contain regulated substances.

17. "Underground storage tank" means a tank or combination of tanks and underground pipes connected to tanks being used or having been used to contain regulated substances and which has at least ten per cent of its volume underground. Underground storage tank does not mean any of the following:

(a) A farm or residential tank of one thousand one hundred gallons or less capacity used for storing motor fuel for noncommercial purposes.

(b) A tank used for storing heating oil for consumptive use on the premises where stored.

(c) A septic tank.

(d) A pipeline facility, including gathering lines, regulated under either:

(i) The natural gas pipeline safety act of 1968 (49 United States Code §§ 1671 through 1686).[4]

(ii) The hazardous liquid pipeline safety act of 1979 (49 United States Code § 2001).[5]

(e) An intrastate pipeline facility regulated under a state law comparable to the provisions of law referred to in subdivision (d), item (i) or (ii).

(f) A surface impoundment, pit, pond or lagoon.

(g) A storm water or wastewater collection system.

(h) A flow-through process tank.

(i) A liquid trap or associated gathering liner directly related to oil or gas production and gathering operations.

(j) A storage tank situated in an underground area, such as a basement, cellar, mine working, drift, shaft or tunnel, if the storage tank is situated on or above the surface of the floor.

(k) Pipes connected to any of the structures described in subdivisions (a) through (j).

Amended by Laws 1989, Ch. 201, § 2; Laws 1990, Ch. 328, § 2, eff. June 21, 1990; Laws 1991, Ch. 214, § 1.

[1] Section 49–1051 et seq.
[2] 42 U.S.C.A. § 9601(14).
[3] 42 U.S.C.A. § 6921.
[4] 49 U.S.C.A. §§ 1671 through 1686.
[5] 49 U.S.C.A. § 2001 et seq.

Cross References

Hazardous substances, definition for purposes of remedial actions, petroleum, see § 49–281.

Information gathering and access, enforcement provisions, see § 49–288.

Standards for liquid fuels, see § 41–2083.

§ 49–1001.01. Definition of owner

A. In this chapter, unless the context otherwise requires, "owner" means a person who owns an underground storage tank and a person who owned an underground storage tank immediately before the discontinuation of its use. A person who owns or owned property at the time an underground storage tank is located on the property is the owner of the underground storage tank if both of the following circumstances exist:

1. After making all reasonable efforts, the department is unable to determine the identity of the person who owns or operates the tank or owned or operated the tank immediately before the discontinuation of its use.

2. The person engages in an activity with respect to the tank that is subject to the regulatory requirements of this chapter.

B. Subject to subsection C of this section, owner does not include any of the following:

1. A person who holds indicia of ownership primarily to protect a security interest in either the underground storage tank or in the property on which the underground storage tank is or was located but who does not participate in the management of an underground storage tank and who is not otherwise engaged in petroleum production, refining or marketing.

2. The state or a political subdivision, if the property where the underground storage tank is located comes into the possession or control of the state or a political subdivision pursuant to any of the following:

(a) Title 12, chapter 8, article 2 or 3.[1]

(b) Section 28–115.

(c) Section 49–143.

C. A person described in subsection B shall exercise due diligence prior to acquiring possession or control of the property or the underground storage tank. In such case, such person shall not be deemed the owner, and the owner of the tank shall be the person who last owned the tank before the person came into possession or control.

Added by Laws 1991, Ch. 214, § 2.

[1] Sections 12–1111 et seq., 12–1141 et seq.

§ 49–1002. Notification requirements; exemptions

A. Except as otherwise provided in this section, each owner of an underground storage tank shall notify the department in writing and shall specify the tank's age, size, type, location and use.

B. For an underground storage tank that was taken out of operation on or before January 1, 1974, regardless of whether the tank was removed from the ground, the owner is exempt from giving notice.

C. For an underground storage tank that was taken out of operation after January 1, 1974 but before November 8, 1984 and that was removed from the ground, the owner is exempt from giving notice.

D. For an underground storage tank that was taken out of operation after January 1, 1974 but before November 8, 1984 and that was not removed from the ground, the owner shall specify the type and quantity of the substances that were stored in the tank immediately before it was taken out of operation. These requirements are in addition to the requirements for notice prescribed in subsection A.

E. For an underground storage tank that was taken out of operation after November 8, 1984 but before December 22, 1988 the director may require the owner to make reasonable efforts to specify the age, size, location and use of the tank, the type and quantity of the substances that were stored in the tank immediately before it was taken out of operation and the date of its removal from operation.

F. An owner who brings an underground storage tank into operation shall meet the notification requirements of this section within thirty days after the tank is brought into operation.

G. A person who sells a tank for use as an underground storage tank shall notify the purchaser of the notice requirements of subsection F.

H. The notices required by this section shall be made on forms prescribed by the department.

Amended by Laws 1989, Ch. 201, § 3; Laws 1991, Ch. 214, § 3.

§ 49–1003. Detection of releases; record keeping requirements

A. Until the rules adopted pursuant to subsection C are in effect, the owner and operator of an underground storage tank shall maintain a release detection system that complies with the requirements of 40 Code of Federal Regulations parts [1] 280.40 through 280.44.

B. Until the rules adopted pursuant to subsection C are in effect, the owner and operator of an underground storage tank shall maintain systematic and complete records of release detection information that complies with the requirements of 40 Code of Federal Regulations part [2] 280.45.

C. The director shall adopt rules establishing release detection requirements and release detection record keeping requirements. The rules adopted pursuant to this subsection shall be consistent with and no more stringent than the federal regulations in effect on the date on which the rules are adopted.

Amended by Laws 1989, Ch. 201, § 4.

[1] So in original, probably should read "sections".
[2] So in original, probably should read "section".

Historical and Statutory Notes

The 1989 amendment rewrote subsecs. A and B; and added subsec. C.

Cross References

Loan account, purposes, see § 49–1072.

§ 49–1004. Reporting requirements

A. The operator and owner of an underground storage tank shall notify the department of each release or suspected release from the tank as soon as practicable but no later than twenty-four hours after the release or suspected release is detected.

B. The operator of an underground storage tank shall notify the owner of each release from the tank as soon as practicable but no later than twenty-four hours after the release is detected.

C. Notice by the operator and owner required by this section may be made orally or in writing but shall be followed within fourteen days by a written report to the department that a release or suspected release has been detected. The written report shall specify to the extent known at the time of the report the nature of the release or suspected release, the regulated substance released, the quantity of the release, the period of time over which the release occurred, the initial response and the corrective action taken as of the date of the report and anticipated to be taken subsequent to the date of the report. In addition, the written report shall include additional information required by rules that are consistent with federal regulations in effect on the date on which the rules are adopted.

D. The director may require that an owner and operator of an underground storage tank perform or cause to be performed a tank test to confirm a release.

Amended by Laws 1989, Ch. 201, § 5.

Historical and Statutory Notes

The 1989 amendment rewrote subsecs. A, C and D.

Cross References

Underground storage tank tax, release, department notification, see § 49–1053.

§ 49–1005. Corrective action

A. When a release is discovered the owner and operator of an underground storage tank shall take immediate action to stop the release and to identify and mitigate any fire, explosion or vapor hazard.

B. The owner and operator of an underground storage tank shall take corrective action in response to the release of regulated substances from the tank.

C. Nothing in this section shall prevent the director from taking or requiring corrective action pursuant to any other provision of law.

D. The director shall prescribe by rule the corrective actions to be taken in the event of a release of a regulated substance from an underground storage tank. Any rules adopted pursuant to this subsection shall be consistent with federal regulations in effect on the date on which the rules are adopted. Corrective actions shall include requirements regarding:

1. Initial response measures.
2. Initial abatement measures.
3. A site check.
4. Initial site characterization.
5. Removal of free product.
6. Investigations for soil, surface water and groundwater cleanups.
7. Responses to contaminated soil, surface water and groundwater.

E. Until rules adopted pursuant to subsection D of this section are in effect, corrective actions shall be accomplished in a manner consistent with 40 code of federal regulations §§ 280.60 through 280.67.

Amended by Laws 1989, Ch. 201, § 6; Laws 1991, Ch. 214, § 4.

Cross References

Underground storage tank tax, reimbursement for corrective action costs, see § 49–1052.

§ 49–1006. Statement of financial responsibility

A. If required by regulations adopted pursuant to 42 United States Code § 6991b(d) to establish evidence of financial responsibility, an owner and operator shall file with the department a statement of financial responsibility containing evidence that the owner and operator are financially capable of taking the actions required by this chapter.

B. Evidence of financial responsibility required by this section shall be established in a manner prescribed by the director by rule. The rules adopted pursuant to this section shall be consistent with and no more stringent than the federal regulations in effect on the date on which the rules are adopted.

Amended by Laws 1989, Ch. 201, § 7.

§ 49–1008. Closure

The temporary closure, permanent closure and change in service of an underground storage tank shall be accomplished in a safe and secure manner which prevents releases of regulated substances. The director shall prescribe by rule standards for these activities. Any rules adopted pursuant to this section shall be consistent with the federal regulations in effect on the date on which the rules are adopted. Until the rules adopted pursuant to this section are in effect, a temporary closure, permanent closure or change in service shall be accomplished in a manner consistent with 40 Code of Federal Regulations parts [1] 280.70 through 280.74.

Amended by Laws 1989, Ch. 201, § 8.

[1] So in original, probably should read "sections".

Historical and Statutory Notes

The 1989 amendment rewrote the section.

§ 49–1009. Tank performance standards

A. No person may install an underground storage tank unless the tank meets all of the following requirements:

1. Is designed to prevent releases due to corrosion or structural failure for the operational life of the tank.

2. Is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material or designed in a manner to prevent the release of a regulated substance.

3. The material used in the construction or lining of the tank is compatible with the substance to be stored.

B. The owner and operator of an underground storage tank shall use an underground storage tank made of or lined with materials that are compatible with the regulated substance stored in or dispensed from the underground storage tank.

C. The director may adopt rules specifying design, construction, installation, performance and compatibility standards for underground storage tanks. The rules adopted pursuant to this subsection shall be consistent with and no more stringent than federal regulations in effect on the date on which the rules are adopted.

D. The director may require an owner and operator of an underground storage tank to perform or cause to be performed a tank test to determine compliance with the standards established pursuant to this section.

Amended by Laws 1988, Ch. 252, § 24; Laws 1989, Ch. 201, § 9.

Historical and Statutory Notes

The 1988 amendment substituted "June 30, 1987" for "the effective date of this chapter" in subsec. A; inserted a new subsec. C; and redesignated former subsec. C as subsec. D.

The 1989 amendment rewrote the section, which had read:

"A. From and after June 30, 1987 and until new rules are adopted by the director, no person may install an underground storage tank unless the tank meets all of the following requirements:

"1. Is designed to prevent releases due to corrosion or structural failure for the operational life of the tank.

"2. Is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material or designed in a manner to prevent the release or threatened release of a regulated substance.

"3. The material used in the construction or lining of the tank is compatible with the substance to be stored.

"B. Notwithstanding subsection A, if soil tests conducted by the owner in accordance with ASTM standard G57–78, or a similar standard, show that soil resistivity in an installation location is twelve thousand ohm/cm or more and provided the director determines the tank is adequately protected, a storage tank without corrosion protection may be installed in that location.

"C. The director shall determine whether underground storage tanks and piping and dispensing equipment are compatible with the product being stored or dispensed. The director shall evaluate the effects of oxygenated fuels, as defined in § 41–2121, on new and existing underground storage tanks and shall adopt necessary rules to assure that materials used in construction or lining of these tanks are compatible with the product being stored or dispensed.

"D. The director shall promulgate rules specifying design, construction, installation, performance and compatibility standards for new underground storage tanks to take effect after January 1, 1988."

Cross References

Loan account, purposes, see § 49–1072.

§ 49–1010. Preemption of local regulation; delegation of administrative authority

A. The provisions of this chapter and the rules which implement this chapter, as they relate to the identification, prevention and remediation of releases of regulated substances from underground storage tanks are of statewide concern and shall not be subject to further local regulation.

B. The director, by intergovernmental agreement or otherwise, may delegate to other departments or agencies and to a city, town or county the authority to administer the provisions of and enforce all or any part of this chapter or the rules adopted pursuant to this chapter.

Amended by Laws 1989, Ch. 201, § 10; Laws 1991, Ch. 214, § 5.

§ 49–1012. Confidentiality of records

A. Records or other information furnished to or obtained by the director concerning regulated substances are available to the public, except that any records and information which relate to the trade secrets, processes, operations, style of work or apparatus or confidential statistical data, amount or source of any income, profits, losses or expenditures of any person are only for the confidential use of the department in the administration of this chapter unless the owner or operator expressly agrees to their publication or availability to the public. This section does not prohibit the appropriate governmental agency from publishing quantitative and qualitative statistics pertaining to the storage of regulated substances. Notwithstanding provisions to the contrary in this section, information regarding the nature and quality of releases from underground storage tanks otherwise reportable pursuant to this chapter shall be available to the public.

B. This section does not prohibit the department from providing confidential information to a duly authorized congressional committee or the United States environmental protection agency if the information is treated as prescribed by 40 code of federal regulations part 2.

Amended by Laws 1991, Ch. 214, § 6.

Historical and Statutory Notes

The 1991 amendment deleted "to the identity" preceding "confidential statistical data" in the first sentence of subsec. A; inserted the designation of subsec. A; and added subsec. B.

§ 49–1014. Rules

The director shall adopt rules necessary to provide procedures for the administration of this chapter and to cause the program for the regulation of underground storage tanks established by this chapter to be approved by the administrator of the environmental protection agency pursuant to 42 United States Code § 6991c.

Amended by Laws 1989, Ch. 201, § 11.

§ 49–1015. Underground storage tank revolving fund; regulatory account; use; purpose

A. An underground storage tank revolving fund is established and shall be administered by the director. Monies in the fund are exempt from lapsing under § 35–190. The fund shall be divided into three separate accounts designated as the regulatory account, the assurance account and the loan account. On notice from the director, the state treasurer shall invest and divest monies in each separate account as provided by § 35–313. The state treasurer shall credit monies from these investments to the respective account. The regulatory account shall be used according to this section. The assurance account and loan account shall be used according to articles 3 and 4 of this chapter.[1]

B. The regulatory account consists of monies appropriated by the legislature, monies which are expenses, costs and judgments recovered pursuant to this chapter, monies obtained from the fees imposed by this chapter and the rules adopted under this chapter and gifts.

C. Monies from the regulatory account may be used for the following:

1. To provide state matching monies and to meet other obligations as prescribed by § 9003(h)(7)(B) of the federal solid waste disposal act.

2. For all the reasonable and necessary costs incurred in taking corrective actions pursuant to § 49–1017.

3. For the costs of recovering the expenses of corrective actions pursuant to § 49–1017.

4. For the costs incurred in administering the regulatory requirements of this chapter.

5. For the costs of administering the regulatory account. The reasonable costs of the department to administer the regulatory account shall be reimbursed by the regulatory account, but the regulatory account shall not be charged with any other costs incurred by the department in administering this chapter.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1990, Ch. 328, § 3, eff. June 21, 1990.

[1] Sections 49–1051 et seq. and 49–1071 et seq.

§ 49–1016. Responsibilities of owners and operators

A. Unless specifically indicated otherwise, the responsibilities of this chapter are imposed on the owner and the operator of an underground storage tank. If the owner and operator of an underground storage tank are separate persons, only one person is required to discharge any specific responsibility. Both persons are liable in the event of noncompliance.

B. The liabilities and responsibilities for releases of regulated substances imposed pursuant to this chapter shall apply even if the conduct that resulted in the release or the release itself occurred before August 13, 1986.

C. If a person comes into the possession or control of property where an underground storage tank is located and the person is not the owner under § 49–1001.01, the person shall:

1. Notify the department in writing specifying the tank's location, size and use, if known, where the owner has failed to do so.

2. Notify the department of each release or suspected release from the tank as soon as practicable where the owner or operator has failed to do so.

3. If the person voluntarily undertakes to remove or otherwise close the tank, do so in a safe and secure manner which prevents releases of regulated substances and in accordance with standards prescribed by the director pursuant to § 49–1008.

4. If the person voluntarily undertakes corrective action, take corrective action in a manner consistent with federal regulations and rules adopted by the director pursuant to § 49–1005.

D. A person acting under subsection C of this section shall not incur the liability of an owner.

E. No agreement or conveyance shall be effective to transfer the obligations imposed by this chapter from the owner or operator of any underground storage tank, or from any person who may be liable for a release or threat of release under this chapter, to any other person. Nothing in this section shall bar any agreement to insure, hold harmless, or indemnify a party to such agreement for any liability under this chapter nor shall it bar a cause of action that an owner or operator or any other person has or would have against any person.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1991, Ch. 214, § 7.

Historical and Statutory Notes

Laws 1989, Ch. 201, § 13, providing for establishment of the advisory committee on financial responsibility for underground storage tanks, is repealed by § 14 of that act effective December 3, 1989.

The 1991 amendment deleted ", and the release was not discovered until after August 12, 1986" from the end of subsec. B; and added subsecs. C through E.

§ 49–1017. Powers of director; corrective actions

A. The director may take corrective action with respect to a release of a regulated substance that is petroleum into the environment from an underground storage tank if the director determines that action is necessary to protect human health, safety or the environment and any of the following conditions exist:

1. The department cannot locate, within ninety days or a shorter period necessary to protect human health or the environment, a person who is all of the following:

(a) An owner or operator of the tank concerned.

(b) Subject to the corrective action requirements of § 49–1005.

(c) Capable of properly carrying out the corrective action required by § 49–1005.

2. Corrective action costs at a facility exceed the amount of coverage required by § 49–1006 and, considering the class or category of underground storage tank from which the release occurred, expenditures from the underground storage tank revolving fund are necessary to ensure effective corrective action.

3. The owner or operator has failed or refused to comply with an order of the director under § 49–1013 to take the corrective actions required by § 49–1005.

B. In determining whether to take a corrective action pursuant to subsection A of this section, the director shall consider and make written findings regarding all of the following factors:

1. The physical and chemical characteristics of the type of petroleum released, including its toxicity, persistence and potential for migration.

2. The hydrogeologic characteristics of the site where the underground storage tank is located and the surrounding area.

3. The proximity, quality and current and future uses of nearby surface water and groundwater.

4. The potential effects of residual contamination on nearby surface water and groundwater.

5. The degree of exposure.

C. If direct costs are incurred by the director for undertaking corrective action with respect to a release of a regulated substance that is petroleum, the owner and operator are liable to this state for these direct costs, except for those amounts which are eligible for and within the coverage limits provided by § 49–1054. Liability imposed pursuant to this subsection is strict, joint and several. In this subsection, "direct costs" means the cost of the corrective actions, investigations, enforcement and litigation.

D. The director may take a corrective action with respect to a release of a regulated substance that is not petroleum only as a remedial action subject to chapter 2, article 5 of this title,[1] and the rules adopted pursuant to that article. If the director takes a corrective action for the release of a regulated substance that is not petroleum, all of the rights, duties and responsibilities of a person associated with the release shall be determined pursuant to that article.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1990, Ch. 328, § 4, eff. June 21, 1990.

[1] Section 49–281 et seq.

Cross References

Underground storage tank revolving fund, assurance account, see § 49–1051.

§ 49–1018. Corrective action; enforcement; priority

The director shall give priority in undertaking state-led corrective actions pursuant to § 49–1017 to releases of regulated substances from underground storage tanks which pose the greatest threat to human health and the environment.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1991, Ch. 214, § 8.

Historical and Statutory Notes

The 1991 amendment inserted "state-led" and deleted "and in issuing orders pursuant to § 49–1013" following "pursuant to § 49–1017".

§ 49–1019. Causes of action; limitation; liability

A. An owner or an operator of an underground storage tank or any other person who takes a corrective action for a release of petroleum from the underground storage tank

pursuant to § 49–1005 or from whom costs are recovered by this state for a release of petroleum from an underground storage tank pursuant to § 49–1017 may bring an action in superior court against a person who caused or contributed to the release to require that person to reimburse him for the reasonable costs of the corrective action. The person seeking reimbursement shall have the burden of demonstrating that the corrective action costs incurred were reasonable.

B. This article does not affect or modify the obligations or liability of a person, by reason of subrogation or otherwise, under any other provision of common law, federal law or the laws of this state, for damages, injury or loss resulting from a release of petroleum or for the costs of a corrective action, except that a person who receives compensation for the costs of a corrective action pursuant to this article is precluded from recovering compensation for the same corrective action costs pursuant to any other federal law or the laws of this state. A person who receives compensation for corrective action costs pursuant to federal law or the laws of this state is precluded from receiving compensation for the same corrective action costs as provided in this article.

C. In an action under subsection A of this section, a person may establish by a preponderance of the evidence that the liability for causing or contributing to a release may be apportioned. In exercising its powers of apportionment, a court shall consider:

1. The ability of the liable parties to demonstrate that their contribution to a release of petroleum can be distinguished.

2. The amount of petroleum involved.

3. The degree of toxicity of the type of petroleum involved.

4. The degree of involvement by the liable parties in the generation, transportation, treatment, storage or disposal of the type of petroleum.

5. The degree of care exercised by the parties with respect to the type of petroleum concerned, taking into account the characteristics of the type of petroleum.

6. The degree of cooperation by the liable parties with federal officials or officials of this state or its political subdivisions to prevent harm to the public health or the environment.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1991, Ch. 214, § 9.

Historical and Statutory Notes

The 1991 amendment, in subsec. A, inserted " or any other person" following "operator of an underground storage tank" in the first sentence, and inserted the last sentence.

1991 Reviser's Note:

Pursuant to authority of § 41–1304.02, in subsection C, paragraph 4 "The" was substituted for the first "the" to correct an electronic data base error.

§ 49–1020. Fees

Each owner and operator of an underground storage tank which is subject to regulation under this chapter shall pay annually to the department a fee of one hundred dollars for each tank. The fees collected under this section shall be transmitted to the state treasurer for deposit in the regulatory account of the underground storage tank revolving fund established in § 49–1015. The director shall adopt rules to provide for the orderly imposition and collection of the fees imposed by this section.

Added by Laws 1989, Ch. 201, § 12. Amended by Laws 1990, Ch. 328, § 5, eff. June 21, 1990.

Historical and Statutory Notes

Laws 1990, Ch. 328, § 7, effective June 21, 1990, provides:

"Sec. 7. Fee

"In addition to the fee prescribed by § 49–1020, Arizona Revised Statutes, on or before October 1, 1990 each owner or operator of an underground storage tank shall pay to the department of environmental quality a fee of one hundred dollars for each tank. The department shall transmit the fee collected under this section to the state treasurer for deposit in the loan account of the underground storage tank revolving fund pursuant to § 49–1071, Arizona Revised Statutes, as added by this act."