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2006-01-0159

June 11, 1993

Mr. Donald G. Bell
Water Pollution Compliance Officer
AZ Dept. Of Environmental Quality
Office Of Water Quality
3033 N. Central Avenue
Phoenix, AZ USA 85012

JAB
COPY

Dear Mr. Bell,

Re: Monthly report for May, 1993 on the Contention Mine area, Tombstone Mining District, Cochise Co., Arizona - prepared on behalf of the Tombstone Development Co., Inc., Grand Island, Nebraska.

The primary activity on the Contention Mine area during the month was exploration drilling by USMX Inc. of Denver Colorado. USMX on the first of May decided to join as a formal joint venture partner of Excellon Resources US Inc. the lease holder and Valdez Gold Inc. (see attached news release).

Starting in early January of 1993, USMX acted to test mineralization in the Tombstone area on a month by month basis. Joining in a Joint Venture with Excellon / Valdez in May for a minimum 3 month period is indicative of encouraging results from the previous work.

Excellon had prepared a computer model of the Contention Mine and surrounding area including the southeastern portion of the town of Tombstone. This model, known as a digital elevation model (DEM) can be displayed in a variety of formats and viewed from any angle. For this report, a typical topographic map was constructed and is shown in Figures 1, 2, and 3. Though the topography is available with 5 foot contour intervals, only the 25 foot contours are shown in these figures, so cultural features would stand out. All wells and exploration holes as of 4/15/93 were surveyed and plotted accurately on the map views, showing collar position as well as true bottom hole location in plan. Figure 4 is a north - south crosssectional view showing all exploration drill holes, current monitor wells including Tombstone City Well #1, anticipated monitor wells MW #1, and #2 and the mean water level plotted from TEI # 2.

As can be seen from Figure 4, all exploration drill holes are above the water table. These holes have been backfilled and plugged according to Arizona regulation. Samples of all cuttings

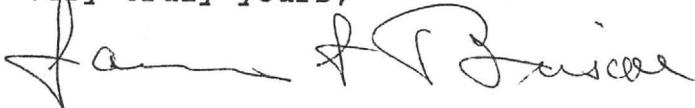
have been retained for further analysis, including surface intervals where dump material was cut. No perched water has been encountered.

Monitor wells #1 and #2 were spudded. After a 20 foot surface casing was cemented in, Monitor Well # 1 encountered broken and caving ground at about 80 feet, and was temporarily abandoned until a casing program could be designed and material acquired. Surface casing could not be placed because of caving conditions at Monitor Well # 2 and the site was abandoned. Monitor Well #3 was sited 900 feet east and due south of Monitor Well #1. After setting the 20 feet of surface casing, caving conditions were encountered in this well also. It too was temporarily abandoned.

PVC casing and screen has been designed for Monitor Wells # 1 and #3, and drilling them to 600 feet and casing is planned for the last half of June, or as soon as a rig is available. Sampling of the water table will begin after well completion.

It is anticipated that the drilling program in the Contention area may define an ore body. Thus an APP for operation may be required. It is understood that the permit issued to PBR Minerals Inc. is in noncompliance, and an APP for closure is required. Both will be started on by mid June.

Very truly yours;

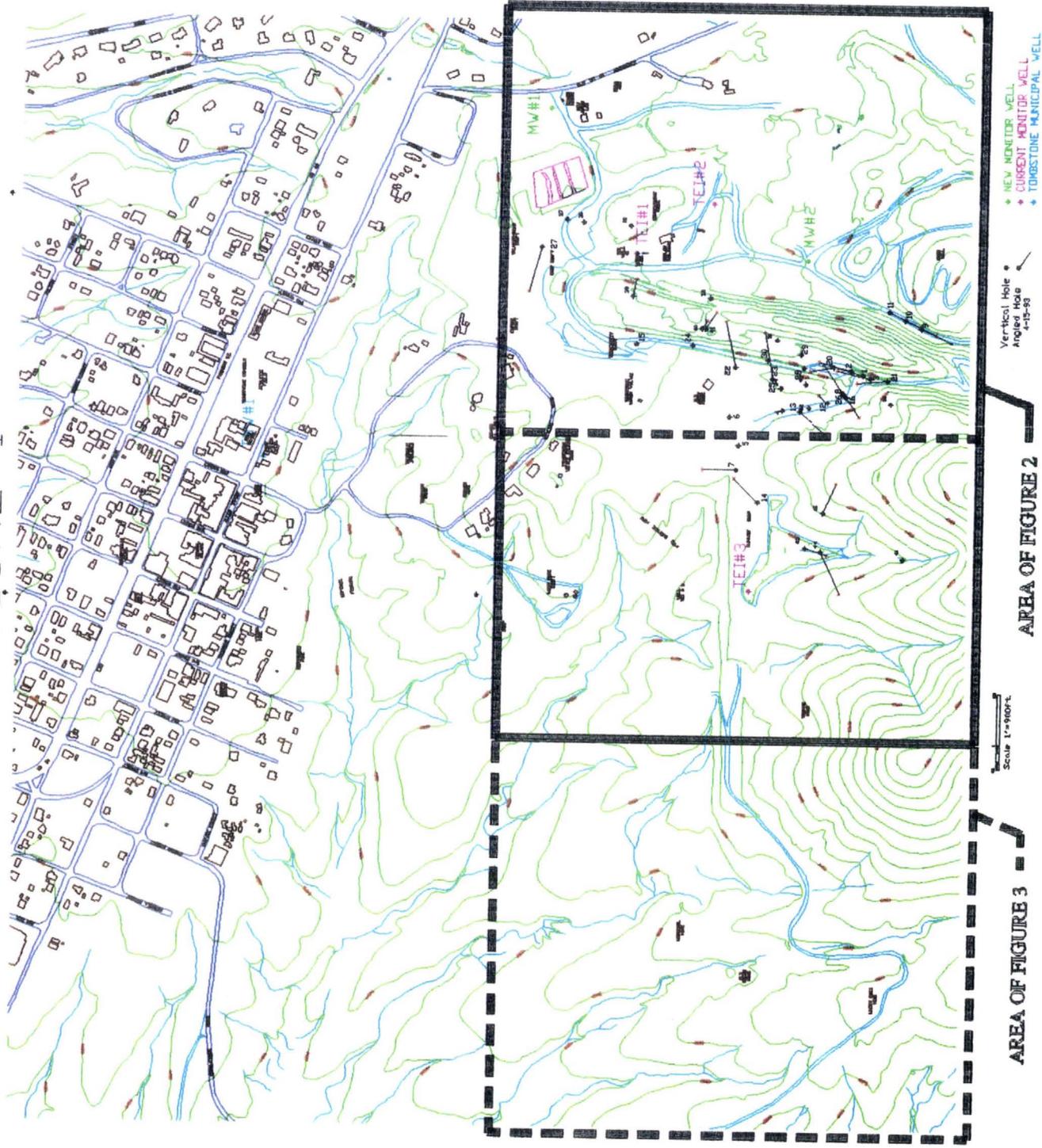


James A. Briscoe
Registered Geologist

DGB06/01/93

cc: Jerry Niedfelt, Pres., Tombstone Development Co.
A. Douglas MacKenzie, Pres., Excellon Resources USA Inc.
James Knox, Pres., USMX Inc.

FIGURE 1



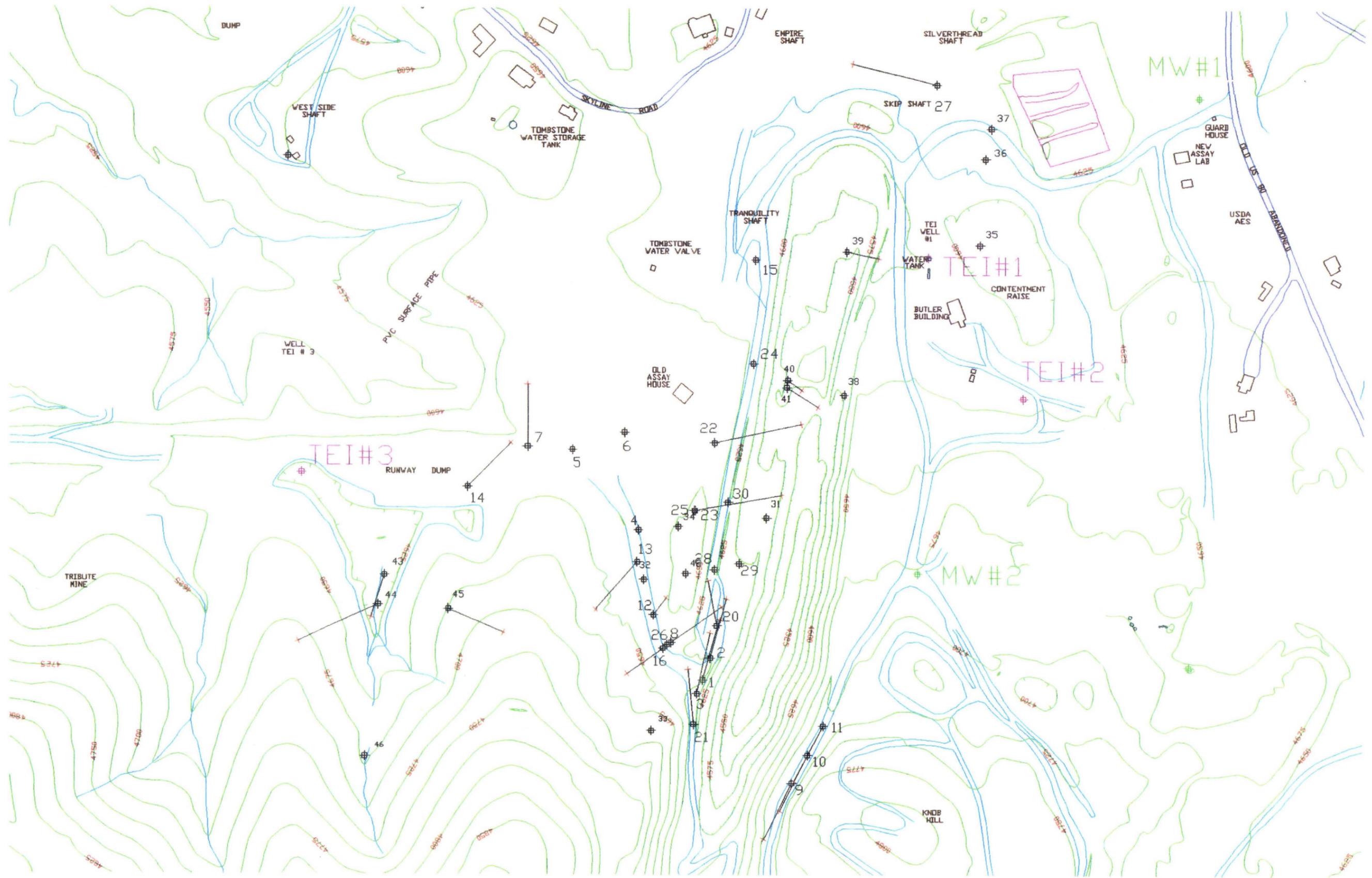
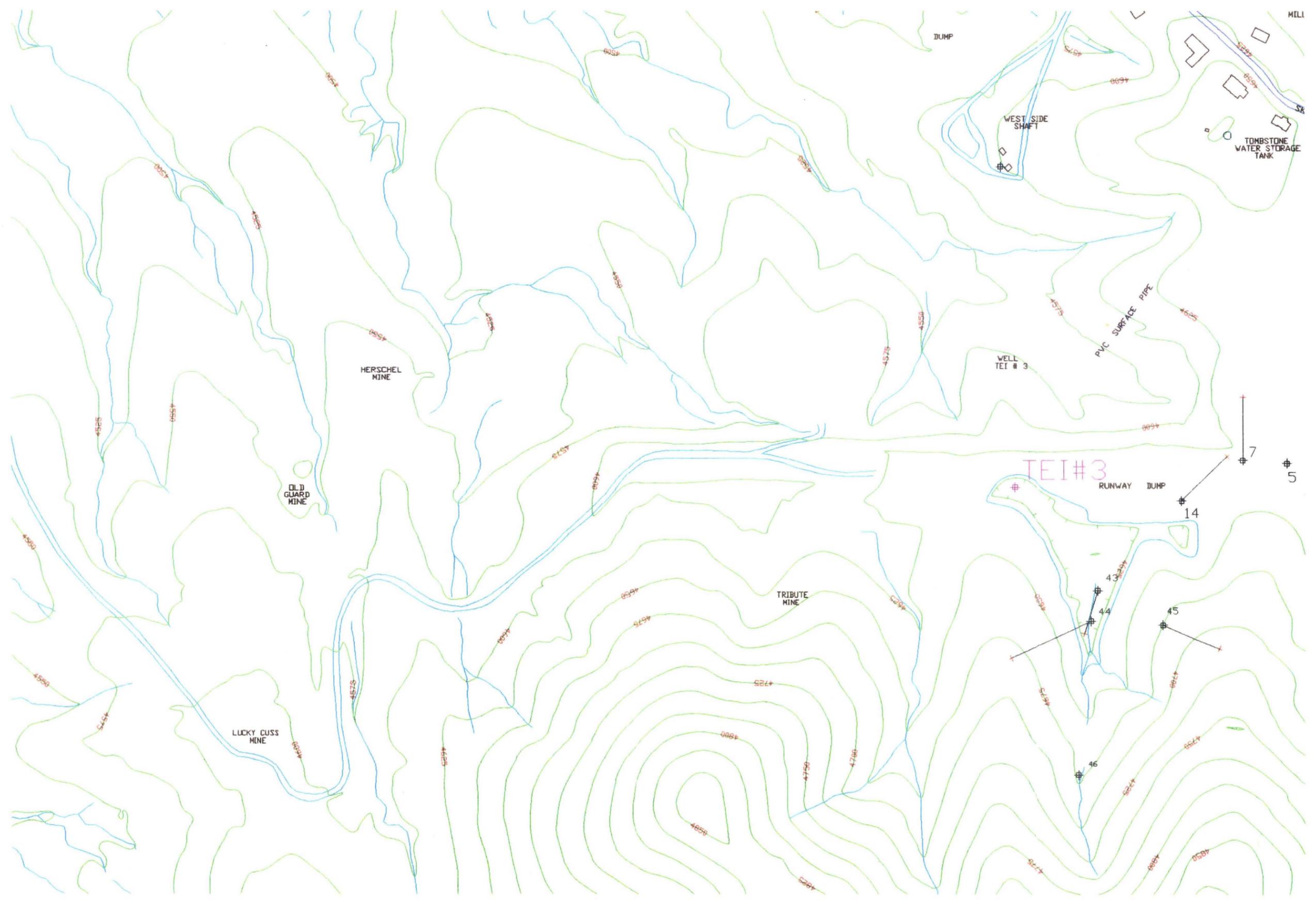


FIGURE 2

Scale 1"=300ft.

- ◆ NEW MONITOR WELL
- ◆ CURRENT MONITOR WELL
- ◆ TOMBSTONE MUNICIPAL WELL



150 0 300
 Scale 1"=300ft.

FIGURE 3

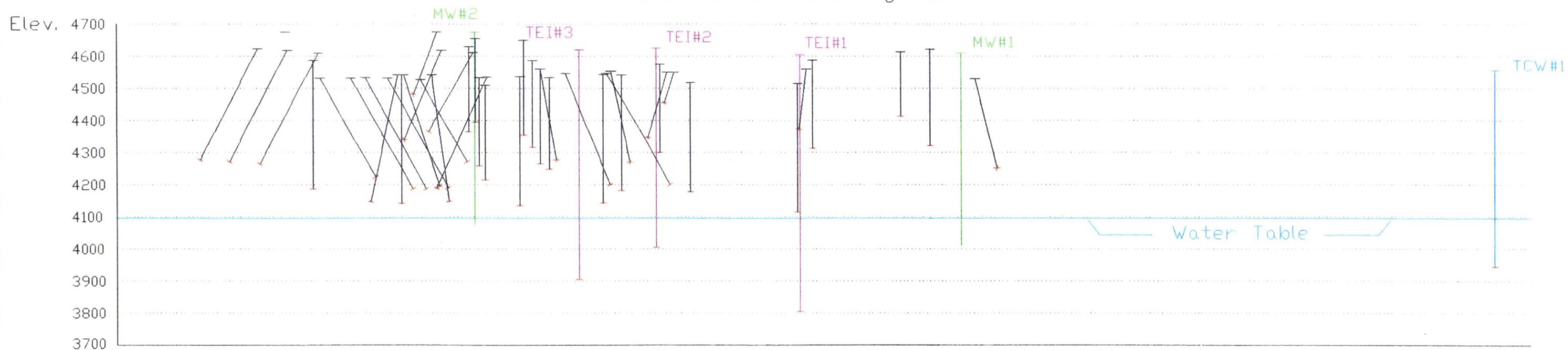
- ◆ NEW MONITOR WELL
- ◆ CURRENT MONITOR WELL
- ◆ TOMBSTONE MUNICIPAL WELL

FIGURE 4

- N/S Cross Section looking West -

South

North



150 0 300

Vertical & Horizontal Scale 1"=300 ft.
4-15-93



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

JAB Scratch copy

CERTIFIED MAIL
Return Receipt Requested

Date: July 8, 1993
REF: WP923

Jerry Neidfeldt, President
Tombstone Development Co.
P.O.Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Company Inc.-Site Inspection and Technical Assistance Meeting Summary; Inventory No. 102806; Cochise County.

Dear Mr. Niedfeldt:

TECHNICAL ASSISTANCE MEETING SUMMARY

The Arizona Department of Environmental Quality ("ADEQ"), conducted an inspection on June 22, 1993 at the Tombstone Development Company Mine Site ("Facility"), near Tombstone, Arizona. During the facility inspection, violations of the Arizona Revised Statutes (A.R.S.) and Arizona Administrative Code (A.A.C.) were observed.

I. MONITORING AND SAMPLING

A.R.S. § 49-263 The Facility shall establish that the previously permitted mining and leaching sites are environmentally safe.

CORRECTIVE ACTION

Within ninety (90) days of receipt of this letter, the following actions shall be carried out:

1. A sampling line shall be established across the old pregnant and barren solution pond site in areas that showed the higher signs of contamination from previous sampling. The depth of the sampling shall be established by on-site investigation of cross sections of the soils present. Photographs of these profiles shall be submitted to indicate the reasoning of the choices made. A sufficient number of samples to

indicate the condition of the area shall be collected. The samples shall be tested for the items listed in the attached Exhibit A.

2. A pre-approved sampling plan shall be developed and completed to indicate that the old washed pile of tailings is environmentally safe. The samples shall be tested for the items listed in the attached exhibit A.

3. Monitor wells shall be drilled which will establish the flow gradient of the underground water, the character of the water in the previously polluted areas, and the presence of pollutants for any future mining operations known at this time. These monitoring wells shall be developed to become a part of the Facilities future monitoring and testing procedures. The samples shall be tested for the items listed in the attached Exhibit A. Once the Aquifer has been characterized, the facility shall develop a regular monitoring and reporting scheme for ADEQ review and approval. This schedule shall be carried out on the regular basis specified until the permits are completed.

4. Following the development and testing of these wells, a comprehensive report shall be developed, within 30 days, correlating the sites monitor wells and the outside well data. This report shall indicate the character and condition of the Aquifer and any pollution that may have been caused at the site or any adjacent locations. This evaluation shall establish the existing conditions prior to the start of any new activity. A compliance schedule describing any remediation necessary shall be developed and presented with this report.

5. Within 60 days of the receipt of this letter, a watershed control map shall be developed to indicate the runoff controls at the site. These controls shall be consistent with the Aquifer Protection Permit (APP) Needs as they are known at this time. An Operations and Maintenance ("O & M") manual shall be developed to describe the necessary maintenance required to keep the watershed controls in proper operating condition. This map and the corresponding O & M Manual shall be updated as facilities are changed at the site.

II. PERMITS

Within 30 days the facility shall contact Don Bell of ADEQ's Water Pollution Compliance Staff to arrange for pre application meetings for the following Permits:

1. NPDES Permit-Clean Water Act Section 402.
2. Aquifer Protection Permit- A.A.C. Title 18, Chapter 9.
3. UST Closure Permits-A.R.S. § 49-1008
4. Solid Waste Closure Permits-A.R.S. § 49-762

*National Pollution Discharge
Elimination System*

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III. SAMPLE ASSAY LABORATORY SITES

A.A.C. R18-8-261 and R18-8-262. Laboratory chemicals and process chemicals shall be handled, stored, transported and disposed of in a proper manner consistent with the above Arizona Revised Environmental Statutes and Title 27 of the Arizona Mining Statutes.

CORRECTIVE ACTION

Laboratory and process chemicals kept on site shall be stored in properly vented rooms under lock and key. Chemicals which are out of date or which are no longer desired, shall be disposed of in the properly described manner, with a proper manifest to a properly designated disposal area.

IV. UNDERGROUND STORAGE TANKS (UST) SITES

A.R.S. § 49-1002 Petroleum product storage tanks located on site have not been properly registered with the State of Arizona and have not been properly constructed or installed according to the requirements of the state.

CORRECTIVE ACTION

Within 30 days of receipt of this letter, the petroleum products contained in the tanks shall be characterized by a state approved vendor and disposed of in the proper manor for the products located in each of the tanks. These actions shall be properly manifested while being carried out. Disposal shall be at an approved facility.

Within 30 days the Facility will make arrangements for a pre-permit application meeting with the ADEQ UST Section to develop the necessary closure requirements and remediation. Remediation shall include both above and below ground remediation.

V. SOLID WASTE SITES

A.A.C. R18-8-702 (proposed rule). Waste tires were observed piled in an unregistered landfill at the Facility.

CORRECTIVE ACTIONS:

Within 90 days of receipt of this letter, the facility will contact the ADEQ Solid Waste Unit and file with the Director the required one time notice of commencement of burial of mining industry off road tires as required by the above rule (copy of proposed rule is attached). A.A.C. R18-8-701.5. defines "Mining

Tombstone Development Company, Inc.
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industry off road motor vehicle waste tires" as an off road waste tire which is greater than three feet in outside diameter which was used in mining. This notification will identify the location of the burial cell. Since the burial cells shall become a part of the Aquifer Protection Permit (APP), I am requesting that these engineering APP requirements be completed and reviewed by APP Technical Review before complete burial is carried out. Tires which do not fit the description of a waste mining tire shall be deposited in a proper Waste Tire Collection Site (WTCS).

ATTACHMENTS:

Copy of Proposed Chapter 8, Waste Tires, Article 7.
Directory of Arizona Waste Tire Collection Sites.

A.R.S. § 49-762 The landfill was not registered with the Department as of October 1, 1992, as per part K of A.R.S. 49-762. The Facility is therefore deemed to be a new facility. As a new facility according to A.R.S. 762.B., the Facility is required to have a facility plan prior to operation, and or closure.

CORRECTIVE ACTION: Attached is a set of guidelines for closure of the landfill. Within thirty (30) days, the facility will contact Dan Zeller of the Solid Waste Unit (602-207-4118) and develop a closure plan to accommodate the solid Waste Unit, and which will meet the requirements of the APP Application which will later be submitted. At a minimum, a description of events shall be included with the APP applications. This closure plan will be submitted and approved by ADEQ prior to any action on site.

Before instigation of action to cover and cap the area, the Attorney General's Office shall be contacted to determine the disposition of the evidence in their case concerning the domestic dumping which occurred on the site. Contact Investigator Andy Rubalcava of the Attorney General's Office at 602-542-4853.

Old equipment, containers, and other materials not contained in landfills shall be consolidated in centralized equipment or materials yards in a manner which will not be or become an environmental nuisance. Buildings and facilities which are conducive to rodent and insect infestation problems shall be remediated.

Within (90) days the Facility will research and develop a waste stream guideline which will describe how to provide the proper disposal of items that have been left on site. These items (both solid waste and hazardous waste) include but are not limited to:

- Empty cyanide barrels
- Waste plastic pipe and liner materials
- Residues and sludges left in the heap leach area.
- Cyanide contaminated materials not leached or washed on site.
- Laboratory and process chemicals
- Septic wastes contaminated with laboratory chemicals.
- Used or contaminated petroleum products
- Old equipment and used containers.
- Building materials no longer useful to the facility.

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This waste stream information shall be left in the O & M Manuals as guidelines for future operators of the property.

ATTACHMENTS:
Waste Management Landfill Closure Guidelines-1992
Copy of the Solid Waste Statutes-Chapter 4.

VI. COMPLIANCE SCHEDULES

Within ninety (90) days the Facility shall develop a compliance schedule that will describe the completion of all the items needed to complete the remediation of the site. This schedule shall include at a minimum:

1. A monitoring and reporting schedule for the active portions of the facility.
2. A schedule for the permitting activities that are known as of the schedule delivery date. The Facility shall be responsible for the time for their participation and not for the Departments reviews.
3. A schedule for the planned cleanup and remediation actions to be carried out.
4. The schedules shall describe the development, and time elements needed, to plan and execute each of the compliance items through completion and inspection.

The Facility is required to submit documentation of compliance with each of the referenced rules by the date specified for each.

Please be advised that the violations listed above, which the Facility agreed to resolve, must be addressed within that time frame. Any violations which are not addressed within that time frame, will be incorporated into a Consent Order.

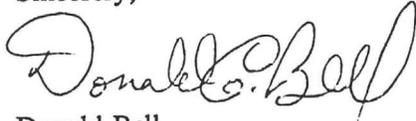
ADEQ is accountable to the citizens of Arizona and mandated by law to ensure that facilities are in compliance with all applicable statutes and rules. ADEQ must be assured that compliance has been achieved. Therefore, any submittal required by this letter must include the following statement and must be signed by a person authorized to act on behalf of the company or empowered to make decisions on behalf of the company to certify to the ADEQ their knowledge of and accountability for the submittal:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tombstone Development Company, Inc.
Technical assistance letter
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If you require further assistance, please contact me at (602) 207 4613.

Sincerely,



Donald Bell
Compliance Officer
Water Pollution Compliance Unit
Office of Water Quality

DGB:arv
B:\TOMBSTON\TA.30

cc:

Peggy Guichard-Watters, Manager, OWQ Compliance Section
Andy Rendes, Southern Regional Office
Dave Anderson, APP Hydrology Unit

Jeff Ende, Mining APP
Dave Zeller, OWP, Solid Waste Section
Jim Brisco, Jabba, Inc.
Roger Kennett, PRP, APP section
Cochise County Health Department
Andy Rubalcava, Investigator, Attorney General's office.

Tombstone Development Company, Inc.
Technical assistance letter
page 7

DISTRIBUTION LIST

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Tombstone Development Co.
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Grand Island, Nebraska 68803

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Aidelaide St. East
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Ontario, Canada
M5C 2T6

Jim Brisco, Representative
Excellon Resources Inc.
c/o Jabba Inc.
2100 N. Wilmot
Tucson, Arizona 85712
(602)721-1375

Tombstone Development Company
 Technical assistance letter
 Exhibit A - Required Samples

Old Heap Leach and Old Washed Tailings

EPA 1312 (1)	AGP / ANP (2)	Ag (Silver)
As (Arsenic)	Ba (Barium)	Be (Beryllium)
Cd (Cadmium)	Cr (Chromium)	Cu (Copper)
Hg (Mercury)	Ni (Nickel)	Pb (Lead)
Se (Selenium)	Sb (Antimony)	Tl (Thallium)
Zn (Zinc)	Total Cyanide	WAD Cyanide

- (1) Synthetic Precipitation Leaching Procedure
 (2) Acid Generating Potential / Acid Neutralization Potential

Monitor Wells

Note: All monitor well metals should be analyzed as Total metals (e.g. total Silver, total Arsenic, etc.)

TKN (1)	Total petroleum hydrocarbons (2)	Alkalinity, Total
Alkalinity, Phenol	Chloride	Conductivity
Fluoride	Hardness	NO ₂ /NO ₃ , Total
pH	Sulfate	TDS (3)
Ag (Silver)	As (Arsenic)	Ba (Barium)
Be (Beryllium)	Cd (Cadmium)	Ca (Calcium)
Cr (Chromium)	Cu (Copper)	Fe (Iron)
K (Potassium)	Hg (Mercury)	Mg (Magnesium)
Mn (Manganese)	Na (Sodium)	Ni (Nickel)
Pb (Lead)	Se (Selenium)	Sb (Antimony)
Tl (Thallium)	Zn (Zinc)	Total Cyanide
WAD Cyanide		

- (1) Total Kjeldahl Nitrogen
 (2) BLS 181
 (3) Total dissolved solids

Arizona Department of Environmental Quality

AQUIFER PROTECTION PERMIT APPLICATION

PART II - DISCRETIONARY INFORMATION

A. Specific portions of the following information is required upon request of the Department. Please see the application guidance document, or establish what is needed during the pre-application meeting. Requirements vary depending on facility design and specific site characteristics of the location.

1. HYDROLOGIC STUDY

Have you included:

- a. A description of the surface and subsurface geology;
- b. The location of any perennial or ephemeral surface water bodies; *maps*
- c. The characteristics of the Aquifer and Geologic Units with limited permeability, including depth, hydraulic conductivity and transmissivity.
- d. The rates, volumes and directions of surface water and ground water flow, including hydrographs, if available and Equi-potential maps. *MAPS & report*
- e. The location of the 100-year flood plain and an assessment of the 100-year flood surface flow and potential impacts on the facility; *maps*
- f. A documentation of the existing quality of the water in the aquifers underlying the site, including, where available, the method of analysis and quality assurance and quality control procedures associated with the documentation; *Don't have yet*
- g. A documentation of the extent and degree of any known soil contamination in the vicinity of the facility; *maps & sample data*
- h. An assessment of the potential of the discharge to cause the leaching of pollutants from surface soils or vadose materials; *No potential*
- i. Any anticipated changes in the water quality expected as a result of the discharge; *Water assay sheet*

- _____ j. A description of any expected changes in the elevation and flow directions of the groundwater that may be caused by the facility; *NONE*
- _____ k. Map of the facility's discharge impact area; *MAPS*
No discharge
- _____ l. The criteria and methodologies used to determine the discharge impact area.

2. PROPOSALS FOR VARIOUS PERMIT CONDITIONS

If requested, have you included detailed proposals for the items indicating how the applicant proposes to satisfy the requirements of A.R.S. 49, Chapter 2, Article 3, and A.C.C. R18-9-101 thru 130.

_____ a. Alert Levels

Alert levels may be based upon site-specific conditions described by the applicant or may be based upon a pollutant which indicates the potential appearance of another pollutant or may be prescribed to be measured at the point of release, the point of compliance or any intervening point;

_____ b. Discharge Limitations

Discharge limitations should be based upon the considerations described in ARS 49-243 A, B, C, D;

_____ c. Monitoring Plan

- 1) The type and method(s) of monitoring to be conducted; *MDA, for wells every 12 months - in January*
- 2) The frequency of monitoring; *↑*
- 3) The analytical techniques or methods used to perform the sampling or analysis;
- 4) Any requirements for the installation, use or maintenance of monitoring equipments, and reporting intervals and monitoring records as prescribed by the department.

_____ d. Contingency plans for alert level exceedances;

_____ e. Contingency plans for discharge limit exceedances;

- ___ f. Contingency plans for Aquifer Water Quality Standard violations;
- ___ g. Compliance Schedule;
- ___ h. Temporary cessation plans;
- ___ i. Closure and Post-Closure plans.

R18-9-123. Aquifer Protection Permit Application Fees

A. With each application for an individual Aquifer Protection Permit under R18-9-107, the applicant shall remit an initial fee according to the following schedule, except as otherwise provided in subsections H, I and J. The fee shall be payable to the State of Arizona, and shall be deposited in the state general fund, or if otherwise required by law, in the Water Quality Assurance Fund, or a fund established specifically for aquifer protection permit fees.

Categories	Initial Fee (In U.S. dollars)	Maximum Fee
Wastewater Treatment Plants		
On-Site Sewage Disposal Systems (less than 20,000 gpd) -----	51550	3450
Wastewater Treatment Plants Where Influent is Predominantly Sewage		
Lined Surface Impoundment (Evapotranspiration) -----	3300	6500
Discharge to Water of the U.S. -----	4800	7950
Subsurface Discharge -----	4150	7950
Landfills		
Municipal solid waste -----	4500	15750
Construction Debris -----	2850	6950
Other -----	5100	14600
Mines		
Tailings Piles or Ponds -----	7150	15400
Base Metal Leaching Operations with Chemical Process -----	4600	10550
Precious Metals Processing -----	4150	10200
In-Situ Leaching -----	8950	14600
Other -----	5900	14400
-----	1350	4250
Drywells -----		
Industrial Wastewater Discharges		
Surface Impoundment -----	3650	9900
Discharge to Water of U.S. -----	5050	9700
Subsurface Discharge -----	4600	10250
-----	4850	15900
Other Discharging Facilities -----		

B. If the actual cost of processing the application identified in subsection A or J is less than the initial fee paid, the difference between the actual cost and the amount listed and paid shall be returned to the applicant with a final itemized bill within 30 days of the issuance or denial of the permit. If the actual cost of processing the application is greater than the corresponding amount listed, the department shall send the applicant a final itemized bill for the difference between the initial fee paid and the actual cost of processing the application, except that the final bill shall not exceed the applicable maximum fee in subsection A or J. Such difference shall be paid in full before issuance of the permit.

C. The Department shall keep a record of the costs associated with denied applications. If there is an amount not covered by the initial fee and that is not paid, the Department shall add the product of the unpaid hours multiplied by the hourly rate in subsection G at the time of denial to the initial fee of a permit applied for under R18-9-107 by the same entity at a later date.

D. When determining actual cost under subsection B, the Department shall use a flat hourly rate for all direct labor hours spent working on the permit. The hourly rate shall be based on an annual sum of the following aquifer protection permit program related costs divided by the direct labor hours allocated for aquifer protection permit processing for the same year.

1. Salary and personnel benefit costs of aquifer protection permit program employees directly involved in processing permits.

2. Salary and personnel benefit costs of aquifer protection permit program employees indirectly involved in processing permits, such as supervisory and clerical personnel.
3. Department overhead and other operating expenses attributable to all aquifer protection permit program employees.
4. Per diem expenses.
5. Transportation costs.
6. Reproduction costs.
7. Laboratory analysis charges.
8. Public notice advertising and mailing costs.
9. Presiding officer expenses.
10. Court reporter expenses.
11. Facility rentals.
12. Other reasonable, direct, permit-related expenses documented in writing by the Department.

E. Direct labor hours spent working on the permit shall consist of time spent by aquifer protection permit program technical staff or consultants on tasks specifically related to the processing, issuance, or denial of a particular permit, including time at a facility inspecting the facility, time at a public hearing, or time at a preapplication conference held pursuant to R18-9-107.D.

- F. Direct labor hours shall not include any of the following:
1. training.
 2. travel to or from any facility or permit hearing.
 3. time by clerical or supervisory staff, unless the supervisory staff is filling in for a particular technical staff member in that person's absence.

G. From the effective date of this subsection, the flat hourly rate shall be \$31.84 per hour. The Director shall annually publish the fee schedules under subsections A and J and the flat hourly rate under this subsection which will be applicable for the following 12 months. The fee schedules and hourly rate shall be based on the Department's costs for the previous full fiscal year.

H. For individual Aquifer Protection Permits which are consolidated pursuant to R18-9-122, and unless the applicant qualifies for the fee provision described in subsection I, the applicant shall remit an initial fee which equals the sum of the greatest initial fee among the facilities, and the initial fee applicable to each additional facility reduced by 40%. The maximum fee to the applicant for consolidated permits shall be equal to the greatest maximum fee among the facilities, plus the maximum fee applicable to each additional facility reduced by 40%.

I. For purposes of subsection A, an applicant applying for individual permits for two or more facilities of the same category of facilities that, in addition, are engaged in similar operations, and have discharges of similar chemical characteristics, and are geographically contiguous, is required to remit only the initial fee, and shall be charged no more than the maximum fee, applicable to a single such facility.

J. With an application that is a request for modification to an individual Aquifer Protection Permit or for a transfer of an individual Aquifer Protection Permit, the applicant shall remit an initial fee in the same manner as described in subsection A, and according to the following schedule:

I appears to apply to TDE. & there a fee of \$7,150 per Category Mines, - Tailings Piles or Ponds.

Not clear if we have to also file under Category - Landfills, construction Debris - \$2,850. If so, the total could be \$7,150 + \$2,850 = \$10,000

Categories	Initial Fee (In U.S. dollars)	Maximum Fee
Permit modification as described in R18-9-121.C(1) or (2) or that results from a major modification to a facility as described in A.R.S. § 49-201.18	1000	(Same as that allowed under subsection A)
Permit modification that is described as a minor modification under R18-9-121.D.	0	100
Any other permit modification including those described in R18-9-121.C(3) or (4)	300	1000
Permit transfer	300	500

K. This rule is effective April 12, 1992. Persons who have submitted complete applications for permits, modifications or transfers before the effective date of this rule shall be required to remit only the permit application fee that was in effect when the application was submitted. Persons who have submitted applications before the effective date of this rule that are incomplete as of the effective date of this rule shall be subject to an initial fee equal to the permit fee for the appropriate category at the time of submission. The final itemized bill for an application that is incomplete on the effective date of this rule shall include only direct labor hours incurred after the effective date of this rule.

R18-9-123.1 Review of Bill

- A. Any person who receives a final bill from the department for the processing, and issuance or denial of a permit under this article may request an informal review of the hours billed and may pay the bill under protest. If the bill is paid under protest, the department shall issue the permit if it would be otherwise issuable after normal payment. The request shall specify the areas of dispute and be made in writing to the assistant director of the department for the office of water quality within 10 working days of the date of receipt of the final bill. Unless the department and applicant agree otherwise, the informal review shall take place within 30 days of the department's receipt of the request. Notice of the time and place of informal review shall be mailed to the requester at least ten working days prior to the informal review. The assistant director shall review whether the time billed is correct and reasonable for the tasks involved. Disposition of the informal review shall be mailed to the requester within ten working days after the informal review.
- B. The assistant director's decision after the informal review shall become final unless within thirty days after receipt of the decision the applicant requests a hearing before an administrative law judge appointed by the department of administration. The hearing, and any appeal of the decision, shall be governed by A.R.S. § 49-321. Any final agency decision issued pursuant to this section is subject to judicial review pursuant to title 12, chapter 7, article 6.

Master copy



Phone: (602) 207-4621
(800) 234-5677
FAX: (602) 207-4674

Michael D. Greenslade, P.E.

Mining APP Unit
Water Quality Division

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
3033 North Central Avenue, Phoenix Arizona 85012



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
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SOLID WASTE LANDFILL
CLOSURE/POST-CLOSURE PLAN GUIDELINES - 1994

- I. **Introduction** These guidelines present the Arizona Department of Environmental Quality (ADEQ) requirements, based on current State and Federal regulations, for closure and post-closure plans at solid waste landfills, and the process for obtaining an ADEQ approval of these plans. The goal of these guidelines is the development of closure and post-closure plans that minimize the release of leachate, explosive gases, and solid waste at closed solid waste landfills caused by deterioration of the final cover system.

Municipal solid waste landfill (MSWLF) units¹, which stopped receiving waste by the effective date of the Federal RCRA Subtitle D regulations contained in Title 40 of the Code of Federal Regulations Part 258 (40 CFR 258), must comply with the requirements outlined in these guidelines and the final cover requirements specified in 40 CFR § 258.60(a). MSWLF units² which continue receiving waste after the effective date of 40 CFR 258 must comply with all of the requirements of 40 CFR 258 as well as the requirements of these guidelines. All other solid waste landfills², not regulated under the RCRA hazardous waste program, must comply with the requirements outlined in these guidelines and to the criteria contained in 40 CFR 257. The effective dates of 40 CFR 258 are as follows:

- A. October 9, 1993 for MSWLF units that dispose of more than 100 tons per day (TPD) of solid waste;
- B. April 9, 1994 for MSWLF units that dispose of less than 100 TPD of solid waste; and
- C. October 9, 1995 for MSWLF units that dispose of less than 20 TPD of solid waste, and meet the conditions for exemption contained in 40 CFR § 258.1(f)(1).

Two copies of closure and post-closure plans must be submitted to ADEQ. One copy will go to the ADEQ Solid Waste Program and the other will go to the Aquifer Protection Permit (APP) Program for review and approval. The ADEQ Solid Waste Program will conduct at least one closure inspection after completion of closure activities to validate that closure has been completed in accordance with the approved plan. After closure construction has been completed, inspected by ADEQ and certified by an independent registered engineer, ADEQ will list the facility on the Arizona Directory of Closed Solid Waste Landfills.

¹ 40 CFR 258.2 defines a MSWLF unit as a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile.

²All solid waste landfills, that have not been officially closed by ADEQ, must also comply with any additional State rules that are adopted.



II. **Aquifer Protection Permit** The owner or operator of an existing solid waste landfill must obtain an APP unless, pursuant to Arizona Revised Statute (ARS) 49-241.E, a closure plan is submitted to the Director by October 9, 1996³, and all the following requirements are met:

- A. The solid waste landfill stops receiving waste prior to October 9, 1998³;
- B. The solid waste landfill receives less than 20 TPD of solid waste on an annual average;
- C. There is no evidence of existing groundwater contamination⁴; and
- D. Either of the following applies:
 - 1. The solid waste landfill serves a community that experiences annually an interruption in surface transportation for at least 3 consecutive months that prevents access to a regional solid waste management facility, or
 - 2. The solid waste landfill serves a community that has no practicable waste management alternative and is located in an area that receives 25-inches or less of precipitation annually.

The APP program will determine if the requirements of ARS 49-241.E are satisfied and if so, closure and post-closure plan review and approval will be conducted solely by the Solid Waste Program. If the requirements of ARS 49-241.E cannot be met, a joint Solid Waste/APP review and approval will be required.

III. **Restrictive Covenants** Effective October 9, 1993, the owner or operator of a new or existing solid waste landfill must record an instrument imposing a restrictive covenant, pursuant to ARS 49-771, on the disposal area of the facility in the county recorder's office in the county in which the solid waste landfill is located. The covenant must state that the land has been used as a solid waste landfill and that the property owners, their agents or employees or any of their heirs, successors, lessees or assignees must not engage in filling, grading, excavating, drilling, or mining the property during the operating life of the solid waste landfill. These activities may occur after closure if provided for in the approved closure or post-closure plan, or approved of by the Director. Attachment II is a "model" standardized form for the restrictive covenant. Exhibit "A", referenced in the model, should be a legal description of the solid waste landfill to include, if possible, a map showing the landfill location. Completed restrictive covenants should be sent to the attention of the Solid Waste Section for presentation to the Director for his approval and signature.

The Director may waive this State required restrictive covenant if the land is Federal land or if contracts that exist between the landowner and the licensee on October 9, 1993 are not renegotiable. Restrictive covenant waivers are not allowed under the Federal RCRA Subtitle D regulations contained in 40 CFR 258 which apply to MSWLFs. The Director will consider factors such as the original design, type of operation, material deposited, energy recovery from methane gas and stage of decomposition of the disposal area. A certified copy of the recorded restrictive covenant, executed by the Director and all of the owners of the tract of land, must be submitted.

IV. **Financial Assurance Requirements** Beginning April 9, 1994, unless extended to comply with the Federal requirements, all existing and new solid waste landfills may not operate unless financial responsibility has been demonstrated for closure, post-closure care, and any necessary corrective action as a result of known releases from the facility. Pursuant to ARS 49-770, the following financial assurance mechanisms may be used for financial responsibility:

- * Surety bond;

³ Owners and operators of MSWLF units should also take note of the 40 CFR 258 closure and effective date requirements, and plan accordingly.

⁴See Attachment I.

- * Certificate of deposit;
- * Trust fund with pay-in-period;
- * Letter of credit;
- * Insurance policy;
- * Certificate of self-insurance;
- * Deposit with the State Treasurer;
- * Evidence of ability to meet corporate financial test;
- * Evidence of ability to meet local Government financial test;
- * Evidence of ability to meet corporate guarantee test;
- * Evidence of ability to meet local government guarantee test;
- * Evidence of ability to meet the political subdivision financial test;
- * Multiple financial assurance mechanisms; and
- * Additional financial mechanisms which may be acceptable to the Director.

If an APP is required, a demonstration of financial responsibility will be necessary, pursuant to Arizona Administrative Code R18-9-117, to fully carry out the terms and conditions of the APP.

V. Closure and Post-Closure Plans The closure plan must include and address the following:

A. Existing Site Conditions The site conditions including the following:

1. Site Maps of the facility detailing:

- (a) Site location and acreage;
- (b) Property boundaries and limits of filling operations;
- (c) Access barriers (berms, fences and gates);
- (d) Local topography; ⁵
- (e) Drainage patterns; ⁵
- (f) 100-year floodplains; ⁵
- (g) Prevailing winds;
- (h) Structures; ⁵
- (i) Land use; ⁵
- (j) Regional Geology;
- (k) Subsurface lithology and soil classifications (USCS); ⁴
- (l) Groundwater depth, gradients and quality; ⁴
- (m) Location of groundwater wells; ⁴
- (n) On-site roads and utilities.

2. A discussion of existing site conditions detailing:

- (a) Discharge control technologies (liners, leachate, gas, and run-on/run-off control systems);
- (b) Type of disposal unit (trench, cell, area);
- (c) Filling procedures used including compaction equipment, typical working faces utilized, type and thickness of daily cover, and typical disposal unit configuration;
- (d) Number of employees and duties;
- (e) Annual average precipitation and evaporation rates; ⁴ and
- (f) Local vegetation.

⁵ On-site and within 1/4 mile of site

B. Waste Characterization The waste characterization portion of the closure plan must include the following:

1. A listing of the volume, physical and chemical characteristics of waste accepted and disposed of at the facility;
2. A separate listing of wastes such as industrial wastes, septage, contaminated soils, asbestos wastes, tires, medical wastes and hazardous materials accepted at the facility;
3. A compliance history of the facility; and
4. A discussion of landfill security, waste screening and waste separation practices.

Waste types and volumes may be identified by conducting a review of records and receipts or by conducting a survey of local industry sources and contacting past operators. If no waste characterization data is available or submitted with the closure plan, ADEQ may require a laboratory analysis of waste sampled from the landfill⁹.

C. Closure Activities The closure activities section of the Closure Plan must include information for a detailed description of the methods, procedures, and processes proposed to be utilized for closure of each unit. Construction plans and specifications for the final cover system, including quality assurance/quality control testing protocols to be utilized, must be included. Acceptable QA/QC test methods are included in Attachment III, and recommended QA/QC test frequencies for clay liner source and construction monitoring are included in Tables I and II of this attachment. At a minimum, the following must be included in the closure activities section of the Closure Plan:

1. **Final Cover** - A properly designed final cover inhibits precipitation and other liquids from infiltrating into the underlying solid waste resulting in leachate formation. The slope of the final cover must be greater than 2% with preferred slopes between 3 and 5%. A stability analysis may be required for steeper slopes. Provisions for erosion protection due to environmental conditions such as wind, rain, and frost must be addressed if applicable. The final cover must be designed and constructed to include the following:
 - (a) **Infiltration Layer** - This layer must consist of a minimum of 18-inches of earthen material with a permeability less than any bottom liner system or natural subsoils present, or a permeability no greater than of 1×10^{-5} cm/sec, whichever is less; and
 - (b) **Erosion Layer** - This layer must consist of a minimum 6-inches of earthen material that is capable of sustaining native plant growth.
2. **Site Drainage** - Include details on slopes, diversions, run-off/run-on and detention\retention;
3. **Decontamination and removal of equipment and structures;**
4. **A plan and schedule for removal of any remaining waste inventory;**
5. **Installation and placement of any groundwater, soil and air monitoring devices (groundwater monitoring will not be required for landfills exempt from an APP);**
6. **Testing procedures for any groundwater, soil and air monitoring devices;**
7. **Cost of Closure Activities** - A detailed written cost, in current dollars, of hiring a third party to close the largest area ever requiring a final cover at any time during the active life of the landfill must be developed. Closure cost estimates must be annually adjusted to reflect the true costs of closure activities;
8. **Schedule** - A schedule for completing all closure activities must be developed; and
9. **Closure Certification** - A certification, signed by an independent engineer registered in the State of Arizona, verifying that closure of each landfill unit, cell, or area has been completed in accordance with the approved closure plan must be submitted before final approval by ADEQ of closure activities.

Closure activities must begin, in accordance with an approved closure plan, no later than 30 days after final receipt of waste and completed within 180 days following the beginning of closure activities. Extensions of the closure may be granted by the Director if the owner or operator can demonstrate that closure will, of necessity, take longer than 180 days.

- D. Post-Closure Care** The post-closure plan must include a description of the routine maintenance and monitoring activities necessary to prevent and detect any releases which may occur from the landfill to the environment. Post-closure care must be conducted for 30 years unless increased or decreased by the Director. Supporting documentation must be presented for an alternate post-closure care period. An outline of methods to collect and control the formation of leachate and explosive gases, and monitoring must be an integral part of the post-closure plan. The number, placement and construction details of the monitoring wells and/or devices is dependent on the waste and site characteristics.

At a minimum, the following will need to be included in the post-closure plan:

1. A schedule for maintaining the integrity and effectiveness of the final cover, including repairs to the to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or damaging the final cover;
2. A schedule for maintaining and operating any leachate collection and gas monitoring systems (include actions to be taken if explosive gas levels exceed to lower explosive limit (LEL) at the property boundary or 25% of the LEL in facility structures, and procedures for managing leachate);
3. A schedule for monitoring the ground water if required in an APP;
4. Parties responsible for all post-closure care activities, including, name, address and telephone number;
5. A description of the planned uses of the property during the post-closure care period;
6. Cost of Post-Closure Activities - A detailed written cost, in current dollars, of hiring a third party to conduct post-closure care over the entire post-closure care period must be included. Post-closure cost estimates must be adjusted annually to reflect the true costs of post-closure care activities, including annual and periodic costs.

Following completion of post-closure care for each MSWLF unit, a certification, signed by an independent engineer registered in the State of Arizona, verifying that post-closure care has been completed in accordance with the approved post-closure plan must be submitted for ADEQ review and approval.

-- END --

ATTACHMENT I

An ADEQ staff hydrologist will determine if there is evidence of existing groundwater contamination. Therefore it is in the best interest of the owner or operator of a solid waste landfill to provide all applicable information to ADEQ. The following list is an example of the type of information which should be included in the closure plan by facilities requesting to be exempt from an APP:

Hydrologic Information

- * Depths to groundwater at the landfill;
- * Local and regional directions of groundwater flow and information used to determine flow direction;
- * List of all groundwater wells within a one-mile radius of the facility along with construction and ownership information, and use. If no wells are located within a one-mile radius, list all wells within three mile radius. If no wells are available with a three-mile radius, list the nearest well and the nearest downgradient well;
- * Any water quality investigations conducted for the landfill or water quality data from wells in the vicinity;
- * Floodplain information and surface water quality, if applicable. Submit a map and emphasize the location of the floodplain with respect to the landfill; and
- * Annual precipitation information.

Geologic Information

- * Soil types;
- * Any soil boring information developed for the facility;
- * Percolation test results;
- * Subsurface lithology; and
- * Any other applicable information which might be helpful to the APP Program.

Landfill Construction

- * Final cover;
- * Liner systems;
- * Leachate collection system; and
- * Any other applicable information which might be helpful to the APP Program.

Landfill History¹

- * Years operated;
- * Amount of wastes disposed;
- * Type of wastes disposed; and
- * Communities served.

An ADEQ staff hydrologist will review the submitted data, verify the hydrologic and geologic information, and check ADEQ water quality data bases for in-house reports including preliminary assessments, site investigations, Federal or State Superfund reports, etc. The hydrologist will also research the Solid Waste and APP files for inspection reports and compliance actions.

If sufficient information is not available, the facility may be requested to do additional work, such as trenching into the landfill to conduct waste and leachate analyses, determine soil moisture content, analysis and predict impacts to groundwater using a model approach (i.e., HELP and Multimed models), or install groundwater monitor wells and sample groundwater to determine impacts on aquifer.

¹ All records should be submitted or summarized.

ATTACHMENT II

IN WITNESS WHEREOF, each party to this agreement has caused it to be executed on the dates indicated below.

[_____], a _____ corporation

By _____

Its _____

[Office]

Date _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1993, by _____ the _____ of _____, a[n] _____ corporation, on behalf of the corporation.

Notary Public

My Commission Expires:

The foregoing restrictive covenant is accepted this _____ day of _____, 1993.

Edward Z. Fox
Director
Arizona Department of
Environmental Quality.

Notary Public

My Commission Expires:

"MODEL" RESTRICTIVE COVENANT

The undersigned owner[s] of the real property described on Exhibit "A" attached hereto and by this reference incorporated herein [the "Property"], hereby acknowledge[s] that the Property [has been and] will be used as a solid waste landfill. Pursuant to A.R.S. 49-771, [we] hereby covenant[s] and agree[s] [with one another] that [none of us], or [our] agents, employees, heirs, successors, lessees, executors, administrators, or assigns, will ever engage in filling, grading, excavating, drilling or mining the property during the operating life of the solid waste landfill, or after its closure, without the approval of the Director of the Arizona Department of Environmental Quality, or any successor official or agency as provided by law, unless provided for in the approved facility closure or postclosure plan.

This agreement constitutes a mutual covenant running with the land and all successors in interest, heirs, lessees, executors, administrators, or assigns shall be deemed parties to this agreement to the same effect as the original signers, and all subsequent deeds or other instruments conveying any title to the Property or any portion thereof shall be made expressly subject to this restrictive covenant; provided, however, that this agreement shall automatically terminate if A.R.S. 49-771 is revoked or revised in such a manner as to eliminate the restrictive covenant requirement.

ATTACHMENT III

INSPECTION METHODS USED DURING THE CONSTRUCTION OF
LAND DISPOSAL FACILITIES

Facility component	Factors to be inspected	Inspection Methods	Test method reference ²
Foundation	Removal of unsuitable materials	Observation	NA
	Proof rolling of subgrade	Observation	NA
	Filling of fissures or voids	Observation	NA
	Compaction of soil backfill	(See low-permeability soil liner component)	NA
	Surface finishing	Observation	NA
	Sterilization	Supplier's certification and observation	NA
	Slope	Surveying	NA
	Depth of excavation	Surveying	NA
	Seepage	Observation	NA
	Soil type (index properties)	Visual-manual procedure Particle size analysis Atterberg limits Soil classification	ASTM D2488 ASTM D422 ASTM D4318 ASTM D2487
	Cohesive soil consistency (field)	Penetration tests Field vane shear test Hand penetrometer Handheld torvane Field expedient unconfined compression	ASTM D3441 ASTM D2573 Horslev, 1943 Lanz, 1968 TM 5-530 (U.S. Dept of Army, 1971)
Strength (laboratory)	Unconfined compressive strength Triaxial compression Unconfined compressive strength for soil-cement	ASTM D2166 ASTM D2850 ASTM D1633	
Dikes	Dike slopes	Surveying	NA
	Dike dimensions	Surveying; observations	NA
	Compacted soil	(See low-permeability soil liner component)	
	Drainage system	(See leachate collection system component)	
	Erosion control measures	(See cover system component)	

(continued)

² For all test methods, the most up-to-date standard should be used.

Facility component	Factors to be inspected	Inspection methods	Test method reference ¹
Low-permeability soil liner	Coverage	Observation	NA
	Thickness	Surveying; measurement	NA
	Clod size	Observation	NA
	Tying together of lifts	Observation	NA
	Slope	Surveying	
	Installation of protective cover	Observation	NA
	Soil type (index properties)	Visual-manual procedure Particle size analysis Atterberg limits Soil classification	ASTM D2488 ASTM D422 ASTM D4318 ASTM D2487
	Moisture content	Oven-dry method Nuclear method Calcium carbide (speedy) Frying pan (alcohol or gas burner)	ASTM D2216 ASTM D3017 AASHTO T217 Spigolon & Kelley (1984)
	In-place density	Nuclear methods Sand cone Rubber balloon Drive cylinder	ASTM D2922 ASTM D1556 ASTM D2167 ASTM D2937
	Moisture-density relations	Standard proctor Modified proctor Soil-cement M-D test	ASTM D698 ASTM D1557 ASTM D558
	Strength (laboratory)	Unconfined compressive strength Triaxial compression Unconfined compressive strength for soil-cement	ASTM D2166 ASTM D2850 ASTM D1633
	Cohesive soil consistency (field)	Penetration tests Field vane shear test Hand penetrometer Handheld torvane Field expedient unconfined compression	ASTM D3441 ASTM D2573 Horslev, 1943 Lanz, 1968 TM 5-530 (U.S. Dept of Army, 1971)
	Permeability (laboratory)	Fixed wall Flexible wall	SW-870 (EPA, 1983) ASTM D5084 SW-846 Method 9100 (EPA, 1984)
	Permeability (field)	Double Ring Infiltrometer	ASTM D5093 or ASTM D3385

(continued)

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Facility component	Factors to be inspected	Inspection Methods	Test method reference ¹	
Flexible membrane liners	Susceptibility to frost damage	Susceptibility classification Soil-cement freeze-thaw test	Chamberlin, 1981 ASTM D560	
	Volume Change	Consolidometer (undisturbed or remolded sample) Soil-cement wet-dry test Soil-cement freeze-thaw test	Holtz, 1965 ASTM D559 ASTM D560	
	Thickness	Thickness of unreinforced plastic sheeting (paragraph 8.1.3, deadweight method—specifications for nonrigid vinyl chloride plastic sheeting)		ASTM D1593
		Thickness of reinforced plastic sheeting (testing coated fabrics)		ASTM D751
		Tensile properties	Tensile properties of rigid thick plastic sheeting (standard method test for tensile properties of plastics)	ASTM D638
	Tear strength	Tensile properties of reinforced plastic sheeting (Grab method A—testing coated fabrics)		ASTM D751
		Tensile properties of thin plastic sheeting		ASTM D882
		Tear strength of reinforced sheeting (modified tongue tear method B—testing coating fabrics and sheeting)		ASTM D751
		Tear strength of plastic sheeting (Die C—test method for initial tear resistance of plastic film and sheeting)		ASTM D1004
	Bonding materials	Manufacturer's certification		NA
Bonding equipment	Manufacturer's certification		NA	
Handling and storage	Observation		NA	

(continued)

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Facility component	Factors to be inspected	Inspection methods	Test method reference ¹
	Seaming	Ply adhesion of reinforced synthetic membranes, bonded seam strength in peel (machine method, Type A test methods for rubber properties, adhesion to flexible substrate)	ASTM D413 ASTM D4437
		Bonded seam strength in shear of reinforced plastic sheeting (modified grab method A--testing coated fabrics)	ASTM D751
		Bonded seam strength in shear of unreinforced plastic sheeting (modified)	ASTM D3083
	Sealing around penetrations	Observation	NA
	Anchoring	Observation	NA
	Coverage	Observation	NA
	Installation of upper bedding layer	Observation	NA
Leachate collection system			
Granular drainage and filter layers	Thickness	Surveying; measurement	NA
	Coverage	Observation	NA
	Soil type	Visual-manual procedure Particle size analysis Soil classification	ASTM D2488 ASTM D422 ASTM D2487
	Density	Nuclear methods Sand cone Rubber balloon	ASTM D2922 ASTM D1556 ASTM D2167
	Permeability (laboratory)	Constant head	ASTM D2434
Synthetic drainage and filter layers	Material type	Manufacturer's certification	NA
	Handling and storage	Observation	NA
	Coverage	Observation	NA

(continued)

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Facility component	Factors to be inspected	Inspection methods	Test method reference ¹
	Overlap	Observation	NA
	Temporary anchoring	Observation	NA
	Folds and wrinkles	Observation	NA
	Geotextile properties	Tensile strength Puncture or burst resistance Tear resistance Flexibility Outdoor weatherability Short-term chemical resistance Fabric permeability Percent open area	Horz (1984) Horz (1984) Horz (1984) Horz (1984) Horz (1984) Horz (1984) Horz (1984) Horz (1984)
Pipes	Material type	Manufacturer's certification	NA
	Handling and storage	Observation	NA
	Location	Surveying	NA
	Layout	Surveying	NA
	Orientation of perforations	Observation	NA
	Jointing - Solid pressure pipe	Hydrostatic pressure test	Section 4, AWWA C600
	- Perforated pipe	Observation	NA
Cast in-place concrete structures	Sampling	Sampling fresh concrete	ASTM C172
	Consistency	Slump of portland cement concrete	ASTM C143
	Compressive strength	Making, curing, and testing concrete specimens	ASTM C31
	Air content	Pressure method	ASTM C231
	Unit weight, yield, and air content	Gravimetric method	ASTM C138
	Form work inspection	Observation	NA

(continued)

Waste Management Landfill Closure Guidelines - 1994.....

Facility component	Factors to be inspected	Inspection methods	Test method reference ¹
Electrical and mechanical equipment	Equipment type	Manufacturer's certification	NA
	Material type	Manufacturer's certification	NA
	Operation	As per manufacturer's instructions	NA
	Electrical connections	As per manufacturer's instructions	NA
	Insulation	As per manufacturer's instruction	NA
	Grounding	As per manufacturer's instructions	NA
Cover systems			
○ Cover foundation	Waste placement records/ waste placement process	Observation	NA
	Soil backfill	(See foundation component)	
○ Low-permeability Soil barrier	(See low-permeability soil liner component)		
○ Flexible membrane barrier	(See flexible membrane liner component)		
○ Bedding layer	(See flexible membrane liner component)		
○ Drainage and gas venting layers	(See leachate collection system component)		
○ Topsoil and vegetation (erosion control measures)	Thickness	Surveying	NA
	Slope	Surveying	NA
	Coverage	Observations	NA
	Nutrient content	Various procedures	Page, 1982
	Soil pH	Soil pH; lime requirement	Page, 1982
	Soil type; moisture content	(See low-permeability soil liner component)	
	Vegetation type	Supplier's certification; observations	NA
	Seeding time	Supplier's recommendations; observations	NA

TABLE I: SOIL SOURCE TESTING³

TEST	FREQUENCY
Grain Size	1 per 1,000 yd ³
Moisture Content	1 per 1,000 yd ³
Atterberg Limits	1 per 5,000 yd ³
Moisture/Density Relationship	1 per 5,000 yd ³
Lab Permeability	1 per 10,000 yd ³

TABLE II: SOIL TESTING DURING CONSTRUCTION¹

TEST	FREQUENCY
Density (nuclear or sand cone)	5/acre/lift or 1 per 250 yd ³
Moisture Content	5/acre/lift or 1 per 250 yd ³
Lab Permeability	1/acre/lift or 1 per 1,500 yd ³
Atterberg Limits	1/acre/lift or 1 per 1,500 yd ³
Grain Size	1/acre/lift or 1 per 1,500 yd ³
Moisture/Density Relationship	1 per soil type or 5,000 yd ³
Field Permeability	1 per liner soil type



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WASTE MANAGEMENT LANDFILL CLOSURE GUIDELINES - 1992

- I. **Introduction.** These guidelines present step by step procedures necessary to protect human health and the environment at a landfill which has stopped accepting waste. This is achieved by implementing processes to minimize formation and release of leachate and explosive gases, and by providing post-closure monitoring and maintenance requirements to protect against damages caused by age and by deterioration as a result of environmental conditions. Facilities which will stop receiving waste by October 9, 1993 shall follow the requirements outlined in these guidelines. Facilities which will stop receiving waste after October 9, 1993, shall also follow the closure requirements of the federal Subtitle D program in Title 40 of the Code of Federal Regulations Part 258 (40 CFR 258).

An existing landfill shall submit two copies of the closure/post-closure plan to ADEQ for review and approval. One copy will go to the Solid Waste Unit and the other copy will go to the Aquifer Protection Permit (APP) Unit. The plan shall be submitted at least ninety (90) days prior to the time in which waste will no longer be accepted. The ADEQ Solid Waste Unit will conduct a closure inspection after the closure plan has been approved to validate that all planned closure activities have been completed. After the closure construction has been satisfactorily completed, ADEQ will list the facility on the Arizona Directory of Closed Solid Waste Landfills. Existing facilities must also contact ADEQ's, Office of Water Quality, APP Unit for information on an APP.

Closure activities shall begin in accordance with an approved closure plan, no later than 30 days after final receipt of waste at each landfill. Closure shall be completed within 180 days. The closure and post-closure plan cost analysis shall be updated annually to reflect the true costs of closure activities.

- II. **Aquifer Protection Permit.** The owner or operator of an existing solid landfill facility shall obtain an APP from the Office of Water Quality unless all the following requirements are met:
- A. The solid waste landfill stops receiving waste prior to October 9, 1993;
 - B. The solid waste landfill receives less than twenty (20) tons of solid waste on an annual average; and,
 - C. There is no evidence of existing groundwater contamination¹.
- III. **Restrictive Covenants.** Beginning October 9, 1993, the owner or operator of a new or existing solid waste landfill shall record an instrument imposing a restrictive covenant on the disposal area of the facility in the county recorder's office in the county in which the solid waste landfill is located. The

¹See Attachment I.



covenant shall state that the land has been used as a solid waste landfill and that the property owners, their agents or employees or any of their heirs, successors, lessees or assignees must not engage in filling, grading, excavating, drilling, or mining the property during the operating life of the solid waste landfill. These activities may occur after closure if provided for in the approved facility closure or post-closure plan, or approved of by ADEQ. ADEQ may waive the restrictive covenant prescribed by this section if the land is federal land or if contracts that exist between the landowner and the licensee on October 9, 1993 are not renegotiable. ADEQ will consider factors such as the original design, type of operation, material deposited, energy recovery from methane gas and stage of decomposition of the disposal area. The owner or operator shall provide a certified copy of the recorded restrictive covenant after approval of the facility plan but before beginning operation of the facility.

IV. Financial Assurance Requirements. Beginning April 9, 1994, all existing and proposed solid waste facilities may not be operated unless financial responsibility has been demonstrated for closure, post-closure care, and any necessary corrective action as a result of known releases from the facility². The following financial assurance mechanisms may be used for financial responsibility:

- A. Surety Bond
- B. Certificate of Deposit
- C. Trust Fund with Pay-In-Period
- D. Letter of Credit
- E. Insurance Policy
- F. Certificate of Self-Insurance
- G. Certificate With The State Treasurer
- H. Evidence of Ability to Meet Corporate Financial Test
- I. Evidence of Ability to Meet Local Government Financial Test
- J. Evidence of Ability to Meet Corporate Guarantee Test
- K. Evidence of Ability to Meet Local Government Guarantee Test
- L. Evidence of Ability to Meet the Political Subdivision Financial Test
- M. Multiple Financial Assurance Mechanisms
- N. Additional financial mechanisms which may be acceptable to ADEQ.

V. Closure and Post-Closure Plans. The closure plan shall address the following:

- A. Site Conditions. The site conditions shall include the following:
 - 1. Site Maps of the facility detailing:
 - a. Site location;
 - b. Property boundaries;
 - c. Site acreage;
 - d. Limits of filling operations;

²Rules shall be adopted by October 1, 1993, indicating the type and terms and conditions of the financial assurance mechanisms to be required as part of the facility plan.



- e. Access barriers (berms, fences and gates);
- f. Local topography; *
- g. Site drainage;
- h. Local drainage patterns; *
- i. 100-year floodplains; *
- j. Prevailing winds;
- k. Structures; *
- l. Surrounding land use; *
- m. Geology regional; *
- n. Geology of vadose zone;
- o. Soil classifications;
- p. Groundwater depth and gradients;
- q. Groundwater quality;
- r. Groundwater wells; *
- s. Roads; and
- t. Utilities.

* on-site and within 1/4 mile of site

2. A discussion of site conditions detailing:

- a. Discharge control technologies (liners, leachate collection, gas collection);
- b. Site type (trench, cell, area);
- c. Filling procedures used;
- d. Number of employees;
- e. Annual and monthly average precipitation and evaporation rates;
- f. Local vegetation;
- g. Daily cover (type and amounts used);
- h. Compaction (equipment used);
- i. Typical slopes of working faces; and
- j. Thickness of disposal cells.

B. Waste Characterization. The waste characterization portion of the closure plan shall include the following:

- 1. A listing of the volume, physical and chemical characteristics of total waste accepted and disposed of at the facility.
- 2. A separate listing of wastes such as industrial wastes, septage, contaminated soils, asbestos wastes, tires, medical wastes and hazardous materials accepted at the facility.
- 3. A compliance history of the facility.
- 4. A discussion of landfill security, waste screening and waste separation practices.

Waste types and volumes may be identified by conducting a review of landfill records and receipts or by conducting a survey of local industry sources and contacting past landfill operators. If no waste characterization data is available or submitted with the closure plan then the ADEQ Solid Waste Unit may require a laboratory analysis of waste sampled from the landfill.



C. **Closure Activities.** The closure activities section of the Closure Plan shall include information for a detailed description of the methods, procedures, and processes to close each unit or cell of the solid waste facility.

1. **Final Cover** - A properly designed final cover prevents precipitation and other water from infiltrating into the underlying solid waste and causing leachate formation. The slope of the final cover shall be greater than 2% and less than 20% to provide the proper drainage.

a. **Infiltration Layer** - This layer shall consist of a minimum 18 inches earthen material with a permeability less than the cell liner or at a minimum of 1×10^{-6} cm/sec. The infiltration layer shall have a compaction greater than 90% of maximum dry density, which will not allow run-off or surface water to enter the underlying waste, but will allow for soil gas venting. Include in the closure plan, the thickness, porosity, permeability, compaction, water holding capacity and the material to be used in the infiltration layer.

b. **Erosion Layer** - This layer shall consist of a minimum 6 inches of earthen material which is revegetated with drought tolerant and low maintenance plant growth. Include in the closure plan, the thickness, final slope, and material used, as well as the type of vegetation, root depths, and water and fertilizer requirements in the erosion layer.

2. **Site Drainage** - Include details on the slopes, diversions, run-off, run-on and detention/retention ponds.

3. **Equipment and structure removal and decontamination;**

4. **Include a plan for removal of any remaining waste inventory.**

5. **Installation and placement of monitoring devices - groundwater, soil and air (this does not apply to landfills exempt from an APP permit);**

6. **Testing procedures for monitoring devices and contamination levels (this does not apply to landfills exempt from an APP permit);**

7. **Cost of Closure Activities** - The owner or operator of the solid waste facility shall develop written site-specific cost estimates for closure activities to determine the amount of financial assurance required under the post-closure plan approval;

8. **Schedule for closure activities to be completed; and**

9. **Closure Certification** - The owner or operator of the solid waste facility shall submit a certification verifying that closure of each landfill unit or cell has been completed in accordance with the approved closure plan. The certification shall be based on a review completed by an independent engineering contractor or in-house engineer, with a current Arizona registration.

D. **Post-Closure Activities.** The post-closure plan shall include a description of the routine maintenance and monitoring activities to prevent and detect any releases which may occur from the facility to the environment. Post-closure activities must be done for 30 years. Include an outline on methods to collect and control formation of leachate and explosive gases. Groundwater and explosive gas monitoring shall also be an integral part of the post-closure plan. The number, placement and construction details of the monitoring wells is dependent on the waste and site characteristics of the facility.

At a minimum, the following will need to be addressed in the post-closure plan:

1. A schedule for maintenance and frequency of monitoring activities.
2. A schedule for maintenance for the final cover of the facility, including, vegetation seeding, irrigation, and fertilization.
3. A schedule for maintenance on collection and drainage systems.
4. Responsible parties for all post-closure activities, including, name, address and telephone number.
5. Predicted future site access controls and land uses.
6. A cost estimate to complete post-closure activities.

-- END --

REVISED:
NOVEMBER 27, 1992
MDG:SEC:md



ATTACHMENT I

ADEQ's APP Hydrology Unit determines if there is evidence of existing groundwater contamination. Therefore it is in the best interest of the owner or operator of a landfill to provide all applicable information to ADEQ. The following list is an example of the type of information which should be included in the closure plan by facilities requesting to be exempt from an APP:

Hydrologic Information

- Depth to groundwater at the facility
- Direction of groundwater flow and information used to determine flow direction.
- List of all groundwater wells within a one-mile radius of the facility along with construction and ownership information, and use. If no wells are located within a one-mile radius, list all wells within three mile radius. If no wells are available with a three-mile radius, list the nearest well and the nearest downgradient well.
- Any water quality investigations conducted for the facility or water quality data from wells in the vicinity.
- Floodplain information and surface water quality, if applicable. Submit a map and emphasize the location of the floodplain with respect to the landfill.
- Annual precipitation information

Geologic Information

- Soil type
- Any soil boring information developed for the facility
- Percolation tests
- Subsurface lithology
- Any other applicable information which might be helpful to the APP Unit.

Landfill Construction

- Cap
- Liner
- Leachate collection system
- Any other applicable information which might be helpful to the APP Unit.

Landfill History

- Years operated
- Amount of wastes disposed
- Type of wastes disposed
- Communities served
- All records should be submitted or summarized.

ADEQ Staff Hydrologist

- Review submitted data.
- Verify hydrologic and geologic information.



Waste Management Landfill Closure Guidelines - 1992.....

- Check Solid Waste files for inspection reports and compliance actions. If referred from the Solid Waste Unit, summary and/or data should be included when submitted to APP Section.
- Check ADEQ water quality data base.
- Check for in-house reports: Preliminary Assessment, Site Investigation, Federal or State Superfund reports, etc.

If insufficient information is available, the facility may be requested to do additional work, such as:

- Trenching into the landfill to do waste analysis, soil moisture, leachate analysis and predict impacts to groundwater using a model approach (i.e., HELP model).
- Install groundwater monitor wells and sample groundwater to determine impacts on aquifer.





ARIZONA REVISED STATUTES
SOLID WASTE MANAGEMENT ACT AS OF 1992

SOLID WASTE MANAGEMENT
Ch. 4

§ 49-701

ARTICLE 1. GENERAL PROVISIONS

§ 49-701. Definitions

In this chapter, unless the context otherwise requires:

1. "County" means:
 - (a) The board of supervisors in the context of the exercise of powers or duties.
 - (b) The unincorporated areas in the context of area of jurisdiction.
2. "Facility plan" means any design or operating plan for a solid waste facility or group of solid waste facilities.
3. "Household hazardous waste" means solid waste as defined in 40 Code of Federal Regulations section 261.2 as adopted on July 1, 1991 that is derived from households and is categorically exempt pursuant to 40 Code of Federal Regulations section 261.4.(B)(1) as adopted on July 1, 1991.
4. "Inert Material" means material that is biologically inert or is insoluble in water and will not decompose or leach substances to water, including uncontaminated broken concrete, brick, rock, gravel, sand and soil.
5. "Management Agency" means any person responsible for the day to day operation, maintenance and management of a particular public facility or group of public facilities.
6. "Medical waste" means any solid waste which is generated in the diagnosis, treatment or immunization of a human being or animal or in any research relating to that diagnosis, treatment or immunization, or in the production or testing of biologicals, but not including hazardous waste as defined in section 49-921.
7. "On site" means the same or geographically continuous property that may be divided by public or private right-of-way if the entrance and exist between the properties is at a crossroads intersection and access is by crossing the right-of-way and not by traveling along the right-of-way. Noncontiguous properties that are owned by the same person and connected by a right-of-way that is controlled by that person and to which the public does not have access are deemed on site property. Noncontiguous properties that are owned or operated by the same person regardless of right-of-way control are also deemed on site property.
8. "Person" means any public or private corporation, company, partnership, firm, association or society of persons, the federal government and any of its departments or agencies, this state or any of its agencies, departments, political subdivisions, counties, towns or municipal corporations, as well as a natural person.
9. "Process" or "processing" means the reduction, separation, recovery, conversion or recycling of solid waste.



10. "Public facility" means any site owned and operated or utilized by any person and open to the general public for resource conservation or recovery or for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste. Public facility includes a public solid waste landfill.
11. "Salvaging" means the removal of solid waste from a solid waste facility with the permission and in accordance with rules or ordinances of the management agency for purposes of productive reuse.
12. "Scavenging" means the unauthorized removal of solid waste from a solid waste facility.
13. "Solid waste" means any garbage, trash, rubbish, refuse, sludge from a waste treatment plant, water supply treatment plant or pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material but not including domestic sewage or hazardous wastes.
14. "Solid waste facility" means any site owned, operated or utilized by any person for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste or household hazardous waste but does not include the following:
 - (a) A site which solid waste that was generated on site is stored in containers or tanks for ninety days or less.
 - (b) A transfer facility.
 - (c) A site that stores, receives, source separates or reduces recyclable solid waste, including paper, glass, wood, cardboard, household textiles, scrap metal, plastic, tree trimmings, aluminum, steel or other recyclable material that have no significant adverse effect on the environment.
 - (d) An agricultural site where sludge from a wastewater treatment facility is applied to the land as a fertilizer or beneficial soil amendment.
15. "Solid waste landfill" means a facility at which solid waste is place in or on land for the purposes of long-term storage or disposal. Solid waste landfill does not include a land application unit, surface impoundment, injection well, area containing ash from the combustion of coal, compost pile or agricultural on-site disposal area covered under section 49-766.
16. "Solid waste management" means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste in a manner that protect public health and safety and the environment and prevents and abates public nuisances.
17. "Solid waste management plan" means the plan which is adopted pursuant to section 49-721 and which provides guidelines for the collection, source separation, storage, transportation, processing, treatment, reclamation and disposal of solid waste in a manner that protects public health and safety and the environment and prevents and abates public nuisances.



18. "Transfer facility" means a site that is owned, operated or used by any person for the rehandling or storage for ninety days or less of solid waste that was generated off site for the purpose of transporting that solid waste. Transfer facility does not include a site identified in paragraph 15, subdivision (c) of this section. 1992

§ 49-702. Authorization to accept funds or grants

The department, counties and incorporated cities and towns may accept and expend any funds granted to them or otherwise made available by the federal government, any political subdivision of this state, any agency or branch of the federal or state government, or any private agency in order to carry out the purposes of this chapter. 1986

§ 49-703. Joint operation

- A. The department may cooperate with, coordinate or enter into agreements and memoranda of understanding with appropriate federal, state, political subdivision and tribal governments, and with other appropriate persons, both public and private, in carrying out its duties and promoting its objectives under this chapter.
- B. Each county, city or town may exercise authority to jointly own or operate, with any other person, any public facility within this state and also may enter into cooperative agreements as necessary and appropriate for the operation of any public facility.
- C. Each county, city or town may, either alone or in combination with any other county, city or town, contract with any person to provide any service required or authorized by this chapter. 1986

§ 49-704. Applicability of chapter to local regulations and services

This chapter does not prevent any county, city or town from adopting and enforcing any ordinance, resolution or other policy relating to solid waste regulation or solid waste services if such policy is otherwise authorized by statute or charter and is not in conflict with this chapter or any rule or regulation adopted pursuant to this chapter. 1986

§ 49-705. Integration of solid waste programs

The director shall integrate all of the programs authorized in this chapter and those other programs regulating solid waste management that are administered by the department for purposes of administration and enforcement and shall avoid duplication and dual permitting to the maximum extent practicable. 1991



ARTICLE 2. PLANNING AND ASSISTANCE

§ 49-721. statewide solid waste management plan

The department shall prepare and keep current a statewide solid waste management plan which establishes standards for solid waste facilities in cooperation with facility owners or operators, local governments and management agencies. The department shall notify solid waste management agencies and facility owners or operators of proposed changes to the plan at least three months prior to submission of the plan to the director for adoption. The department shall update and readopt the plan as determined necessary by the director. 1991

§ 49-722. Planning and technical assistance

- A. The department may provide technical and planning assistance as appropriate to solid waste facility owners or operators and management agencies, including the training of personnel.
- B. Each county, city or town may render technical assistance as appropriate to the state, counties, municipalities, local agencies, local health officers, private industries and others in the planning and operation of solid waste facilities. 1991

§ 49-723. Research and development

- A. The department may initiate, conduct and support research, development and demonstration projects and programs directed toward improving solid waste management, resource conservation and resource recovery methods, techniques, systems and facilities, or for preventing or mitigating the adverse effects of environmental pollution if the projects and programs do not duplicate those of other states or the United states.
- B. Each county, city or town may conduct studies and investigations regarding new or improved methods of solid waste management and coordinate the studies with other agencies. 1986

§ 49-724. Distribution of appropriated funds to local governments

The department shall develop criteria in consultation with local governments for the distribution of funds appropriated to county, city or town management agencies or their designated representatives, if funds have been appropriated for this purpose. 1986

ARTICLE 3. SOLID WASTE SERVICES

§ 49-741. Local public facilities for solid waste management

Each county, city or town shall:



1. Provide or contract for public facilities at such intervals and as conveniently as the governing body deems necessary for the safe and sanitary disposal of solid waste generated within its jurisdiction.
2. Comply with regulations adopted by the director in the administration of solid waste management programs. 1986

§ 49-742. User fees

User fees may be established or waived by a county, city or town to cover all or part of the cost of development, construction, operation, administration and financing of solid waste management activities. 1986

§ 49-743. Commercial permits

Each county, city or town may require that persons using public facilities provided by it obtain permits if determined necessary for the purpose of regulating, identifying and determining specific categories of waste and waste haulers. 1986

§ 49-744. Salvaging

A management agency may permit salvaging, but such salvaging shall be supervised and strictly controlled. Each county, city or town may regulate salvaging of solid waste at any public facility it provides. 1986

§ 49-745. Ownership of solid waste

Solid waste offered or set out for collection, transportation, storage, disposal or recovery becomes, on acceptance by a management agency or solid waste facility, the sole property of the accepting management agency or solid waste facility. 1991

§ 49-746. Private enterprise recycling and solid waste management

- A. A municipality of this state, with a population exceeding sixty thousand, shall not prohibit or unreasonably restrain a private enterprise from delivering commercial or industrial recycling services or commercial or industrial solid waste management services within or to the municipality.
- B. The municipality shall prescribe rules for the delivery of recycling services and commercial or industrial solid waste management services that promote availability of these services and promote competition in the delivery of these services.



- C. It shall not be presumed to be an unreasonable restraint for a municipality to have limited the number of commercial or industrial solid waste management service companies to one company for each sixty thousand or fewer persons in order to facilitate the regulation of solid waste collection pursuant to § 49-765 provided that at least seven companies are permitted under such an ordinance. 1988

§ 49-747. Annual registration of solid waste landfills; fees; disposition of revenue

- A. All solid waste landfills shall be registered annually with the department.
- B. The director shall establish a procedure for mailing registration forms each year to the owners of all solid waste landfills. The registration is valid for one year from the date of registration.
- C. At the time of registration the owner of a solid waste landfill shall pay to the department an annual fee for each site registered which is determined according to the population that the landfill serves based on the following schedule:
1. For solid waste landfills that serve fewer than ten thousand people, five hundred dollars.
 2. For solid waste landfills that serve at least ten thousand people but less than twenty-five thousand people, seven hundred fifty dollars.
 3. For solid waste landfills that serve at least twenty-five thousand people but less than fifty thousand people, one thousand dollars.
 4. For solid waste landfills that serve at least fifty thousand people but less than one thousand people, two thousand dollars.
 5. For solid waste landfills that serve at least one hundred thousand people but less than two hundred thousand people, three thousand dollars.
 6. For solid waste landfills that serve two hundred thousand people or more, five thousand dollars.
 7. Private rubbish landfills open to the public that accept demolition waste shall pay a flat fee of one thousand five hundred dollars.
 8. Private landfills closed to the public that accept nonhazardous waste shall pay a flat fee of one thousand five hundred dollars.
- D. All monies collected pursuant to this section shall be deposited in the water quality assurance revolving fund established by section 49-282. The director may authorize the expenditure of monies from the Water Quality Assurance Revolving Fund to pay the reasonable and necessary costs of administering the registration program pursuant to section 49-282, subsection C, paragraph 6.



- E. The initial registration of solid waste landfills existing on July 1, 1990 shall be completed not later than December 31, 1990.

ARTICLE 4. REGULATION OF SOLID WASTE

§ 49-761. Department rules; standards for solid waste management; variances; cease and desist orders

A. The department shall:

1. Define and prescribe reasonably necessary rules regarding storage, collection, transportation, disposal and reclamation of garbage, trash, rubbish, manure and objectionable wastes. The rules shall prescribe minimum standards for storing, collecting, transporting, disposing and reclaiming the wastes and shall provide for inspecting premises, containers, processes, equipment and vehicles, and for abating as public nuisances any premises, containers, processes, equipment or vehicles which do not comply with the minimum standards.
2. Adopt such rules, facility plans submittal guidelines, standards and procedures regarding the collection, source separation, storage, transportation, transfer, processing, treatment and disposal of solid waste at solid waste facilities as are reasonably necessary to implement this chapter, to protect public health and safety and the environment and to prevent and abate public nuisances.
3. By January 1, 1994, adopt rules to define biohazardous medical waste and to regulate biohazardous medical waste and medical sharps to include:
 - (a) A definition for biohazardous waste which includes wastes that contain material which is likely to transmit etiologic agents which have been shown to cause or contribute to increased human morbidity or mortality of epidemiologic significance. The department of environmental quality shall consult with the department of health services in making this determination.
 - (b) Reasonable necessary rules regarding the storage, collection, transportation, treatment and disposal of biohazardous waste and medical sharps, beginning with the placement by the generator of the waste in containers for the purpose of waste collection. In the case of self-hauling of waste by the generator, all storage facilities under the generator's control and all waste handling practices including storage, treatment and transportation shall be in accordance with these rules.
 - (c) Consideration of the quantity of medical sharps being generated.
4. By July 1, 1993, adopt rules for solid waste facilities that are not open to the public. In adoption of those rules, the department shall take into account the specific nature of the waste streams at those facilities.



5. Adopt rules for transfer facilities as necessary to protect the public health and safety and the environment and to prevent and abate public nuisances. The rules shall include:
 - (a) Facility notification to the department and best management practices for facilities that have a storage capacity of one hundred cubic yards of solid waste or less.
 - (b) Facility plan approval, financial assurance, public notice and best management practices for facilities that have a storage capacity of more than one hundred cubic yards of solid waste.
 6. Adopt rules for the application of sludge, as defined in 40 code of federal regulations section 122.2, from a wastewater treatment facility, as defined in section 49-371, to agricultural land for use as fertilizer or beneficial soil amendment. In adopting those rules, the department shall consider other federal and state laws and rules in an effort to avoid practices or requirements that duplicate, are inconsistent with or will result in dual regulation with other rules and laws.
 7. Adopt rules for facilities that store, receive, source separate or deduce recyclable solid waste for the purpose of transporting that waste to an off-site location. These rules shall include:
 - (a) Facility plan approval, financial assurance, public notice and best management practices solely for off-site collection facilities that have a storage capacity of more that one hundred cubic yards of recyclable solid waste.
 - (b) Facility plan approval, financial assurance, public notice and best management practices solely for on-site collection facilities that store recyclable material for more than one hundred eighty days.
 - (c) Best management practices for all sites that store or receive recyclable solid waste and that are not included in subdivisions (a) or (b) of this paragraph.
- B. The department may:
1. Within ninety days of receipt of a written request for a variance from a solid waste facility, transfer facility or recycling facility owner or operator or management agency, grant a variance from solid waste management rules and standards if the department concludes that no violation of health standards will occur. The department may consider whether a public nuisance will result. If the request is denied, the department shall prepare and make available to the agency or facility owner or operator a written decision including relevant data and a technical analysis supporting the denial.
 2. Issue an administrative cease and desist order against any person in violation of any rule adopted by the department as necessary to protect public health and safety and the environment and to prevent and abate public nuisances.
 3. Adopt reasonably necessary rules regarding the storage, collection, transportation, treatment and disposal of nonbiohazardous medical waste beginning with the placement by the generator of the waste in containers for the purpose of waste collection. In the case of self-haulers of the waste by the



generator, all storage facilities under the generator's control and all waste handling practices including storage, treatment and transportation shall be in accordance with these rules.

4. Adopt reasonably necessary rules regarding the tracking of biohazardous waste and medical sharps. Reasonable and necessary rules shall recognize the quantity of medical sharps generated.
 5. Adopt rules which prescribe standards to be used in determining if recyclable solid wastes have a significant adverse effect on the environment.
- C. Incinerators which dispose of medical waste shall comply with chapter 3 of this title, rules adopted pursuant to chapter 3 of this title and permits issued pursuant to chapter 3 of this title.
- D. The department shall consult with the department of health services in adopting rules under subsection A, paragraph 3, subdivision (a).

1992

§ 49-762. Solid waste facility plan approval; exemption

- A. Until October 9, 1993, the department shall review and approve public facility plans which satisfy rules adopted by the director prior to authorizing the construction and operation of a new public facility. Existing facilities are subject to the rules adopted by the director pursuant to this article. The director shall grant temporary authorization to operate a new public facility if in the director's opinion the public facility is needed immediately and could not be properly planned in advance. The department shall approve or disapprove plans within ninety days of receipt of complete plans containing all required supporting documentation. If plans are rejected, the department shall make available to the proposed agency a complete written, detailed rationale for disapproval including recommendations for correcting unacceptable parts of the plans.
- B. Any substantial change to the design or operation of the public facility from the approved plans shall be approved by the director before implementation. A public facility shall also comply with the following:
1. The owner or operator of a public facility shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the public facility. If the director fails to respond within fifteen days, the change shall be deemed to be in accordance with the facility's approved public facility plan.
 2. If the director determines that the change is substantial, the director shall within fifteen days of receipt of the notice notify the owner or operator of the public facility and require submittal of an amended plan for approval. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan.
- C. Any substantial change to the design or operation of a solid waste landfill from the approved plans shall be approved by the director before implementation. A solid waste landfill shall also comply with the following:



1. The owner or operator of a landfill shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the landfill. If the director fails to respond within thirty days, the change shall be deemed to be in accordance with the facility's approved landfill plan.
 2. If the director determines that the change is substantial, the director shall within thirty days of receipt of the notice, notify the owner or operator of the landfill and require submittal of a proposed change to an approved plan for approval and shall notify an effected city, town or county. The city, town or county shall within sixty days of receipt of the notice, notify the director whether the substantial change requested con plies with applicable municipal or county zoning ordinances and regulations.
 3. If the director determines that the change is substantial, the director shall within thirty days of the determination give the following notice:
 - (a) Publication of the proposed substantial change in a daily or weekly newspaper of general circulation in the area of the landfill.
 - (b) Written notice of the proposed substantial change to property owners in the following areas:
 - (i) If the landfill is in an unincorporated area within a three-mile radius of the outer boundaries of the proposed substantial change unless the three-mile radius intersects a municipal corporate boundary. In such case, property owners inside the municipal corporate boundary within one thousand feet of the outer boundary of the proposed substantial change shall be notified as well as the property owners outside the municipal corporate boundary within the three-mile radius of the outer boundary of the proposed substantial change.
 - (ii) If the landfill is an incorporate area within a one thousand foot radius of the outer boundaries of the proposed substantial change.
 4. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan. The director shall not approve a substantial change unless the city, town or unincorporated portion of a county in which a landfill is located notifies the director that the substantial change requested complies with applicable municipal or county zoning ordinances and regulations.
- D. The director may suspend, amend, withdraw, condition or revoke approval to operate a public facility if the director determines that the public facility is in violation of any rule adopted by authority of this chapter. Action taken by the director under this subsection shall conform with title 41, chapter 6.
- E. Beginning October 9, 1993, the department shall review and approve solid waste facility plans which satisfy financial assurance requirements prescribed in section 49-770, restrictive covenants for certain solid waste facilities as prescribed in section 49-771, location restriction requirements for certain solid waste disposal facilities as prescribed in section 49-772 and rules adopted by the director prior to authorizing the construction and operation of a new solid waste facility. Existing solid waste facilities that are not open



to the public are subject to the rules adopted pursuant to section 49-761, subsection A, paragraph 4. By January 1, 1994, existing solid waste facilities that are not open to the public shall submit a solid waste facility plan to the department for approval that satisfies rules adopted by the director. An existing solid waste facility that is not open to the public shall operate in compliance with its facility operating plan. The director shall grant temporary authorization to operate a new solid waste facility if in the director's opinion the solid waste facility is needed immediately and could not be properly planned in advance. An owner or operator of more than one solid waste facility that conducts similar activities with similar waste streams may prepare and implement a single plan that covers all of its facilities if it has received prior approval from the director and has complied with rules regarding single plans that are adopted by the director. The director, by rule, may exempt from facility plan approval requirements those solid waste facilities that are located in unincorporated areas and are used only for disposal by a single family residence located on the same property. The department shall approve or disapprove plans for new solid waste facilities within ninety days of receipt of completed plans containing all required supporting documentation. The department shall approve or disapprove plans for existing solid waste facilities within one hundred eighty days of receipt of a complete plan that contains all of the required supporting documentation. An existing solid waste facility may continue to operate while the department reviews the plan. Section 49-767, subsections F through I, do not apply to existing solid waste facilities that are not open to the public. If plans are rejected, the department shall make available to the owner or operator of the facility a complete written, detailed rationale for disapproval including recommendations for correcting unacceptable parts of the plans.

- F. Any substantial change to the design or operation of the solid waste facility from the approved plans shall be approved by the director before implementation. A solid waste facility shall also comply with the following:
 - 1. The owner or operator of a solid waste facility shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the solid waste facility. If the director fails to respond within fifteen days, the change shall be deemed to be in accordance with the facility's approved solid waste facility plans.
 - 2. If the director determines that the change is substantial, the director shall within fifteen days of receipt of the notice, notify the owner or operator of the solid waste facility and require submittal of an amended plan for approval. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan.
- G. The director may suspend, amend, withdraw, condition or revoke approval to operate a solid waste facility if the director determines that the facility is in violation of any rule adopted by authority of this chapter. Action taken by the director under this subsection shall conform with title 41, chapter 6.
- H. The following operations are exempt from the provisions of this article unless the operations involve materials that are required to have a special waste facility plan approval pursuant to section 49-857.
 - 1. Reclamation of land through the introduction of landscaping rubble or inert material.

2. Mining industry off road waste tires that are greater than three feet outside diameter and are buried at the site and rock, leach material, tailings and slag produced and maintained at the site of the mining or metallurgical operation.
 3. Agricultural on-site disposal as provided in section 49-766.
 4. Storage, treatment or disposal of inert material.
 5. Application of effluent as defined in section 45-101.
 6. Application or release of return flows from irrigated agriculture.
 7. Use, storage, treatment or disposal of by-products of regulated agricultural activities as defined in section 49-201 that are subject to best management practices under section 49-247 or by-products of livestock, range livestock and poultry, as defined in section 3-1201, or pesticide container regulated pursuant to title 3, chapter 2, article 6.
 8. Household hazardous waste collection events held at a temporary site for a period not to exceed six days in any calendar quarter.
- I. Beginning January 1, 1993, the director shall collect from the applicant a reasonable fee based on the department's reasonable direct cost not to include indirect cost for the processing, review, approval or denial of the plan, to be reviewed on an annual basis.. The director may amend an existing rule or adopt a new rule to establish criteria for those costs. That rule making is exempt from title 41, chapter 6 except that the director shall provide for reasonable notice and hearing.
- J. Except for solid waste facilities that submitted notice required by law for solid waste facilities that were not open to the public on September 21, 1991, solid waste facilities that are not open to the public on the effective date of this act shall submit to the director by October 31, 1992 a notice that contains the following information:
1. Facility name and mailing address.
 2. Legal description by township, range and section, and county assessor's book, map and parcel number.
 3. Description of waste storage and treatment equipment, and methods of waste management, including types and volumes of waste handled and time the waste remains on site.
 4. Description of waste disposal practices including measures taken to protect the environment and to protect the public health.
- K. Notices required by law for solid waste facilities that were not open to the public on September 1991, shall be deemed to be adequate, unless the solid waste facility is otherwise notified by the director by October 1, 1992.

- L. A solid waste facility that does not submit a notice as prescribed by subsection I of this section shall be deemed a new facility and shall comply with section 49-767 relating to solid waste plans and site approval. 1992

§ 49-763. Inspections

- A. Until January 1, 1993, the department may conduct such inspections of public facilities, premises and equipment as are necessary. The department shall give the management agency the opportunity to have its representatives accompany the inspector.
- B. Beginning January 1, 1993, the department may conduct such inspections of solid waste facilities, premises and equipment as are necessary. The department shall give the management agency or the owner or the operator of the facility 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. 1991

§ 49-764. Orders; monitoring; pollution control devices

- A. Until January 1, 1993, if the department determines that a public facility is a health, safety or environmental hazard, it may require the installation of necessary monitoring and pollution devices. Before implementing any such action the department must develop and make available to the management agency relevant data and technical analyses which show substantial evidence of the need to improvements.
- B. Except as otherwise provided in sections 49-422 and title 49, chapter 3, article 3, beginning January 1, 1993, the director may require by order the installation of necessary monitoring and pollution control devices at a solid waste facility if the requirements of subsection C of this section have met.
- C. Before issuing an order pursuant to subsection B of this section, the director shall determine in writing that all of the following conditions are met:
1. The solid 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 solid 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 date 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. 1991

§ 49-765. Local regulation of solid waste collection

Each county, city or town may establish regulations for private collection of solid waste within its area of jurisdiction, including standards for equipment, hours of operation, license fees and insurance requirements as necessary and hours of operation, license fees and insurance requirements as necessary and appropriate to operate a solid waste collection program. Ordinances or regulations authorized by this section and § 49-704 shall be equal to or more stringent than the provisions of this chapter and rules and regulations adopted by the department under this chapter. If authorized by statute, each county, city or town may provide for criminal and civil penalties for violation of such ordinances or regulations provided that such penalties do not exceed the penalties authorized by this chapter. 1986

§ 49-766. Agricultural on site disposal area; plan and permit

- A. A person engaged in farming or ranching on at least one hundred sixty acres in an unincorporated area may apply either alone or with not more than three other such persons on adjoining property to the board of supervisors to establish an agricultural on-site disposal area on the property for the disposal of solid waste generated on the property.
- B. The board of supervisors shall establish a solid waste disposal plan and permit consistent with good public health practices for each person specified in subsection A. The director shall be notified by the board of supervisors of the issuance of such permits and the location of disposal sites. Permits shall be issued for a period of two years or for shorter time periods as determined by the board of supervisors. 1986

§ 49-767. Solid waste facilities; permission; notice of site to property owners; hearing; exemption

- A. Any agency or political subdivision of this state which is required to select or is selecting a possible permanent site for a solid waste facility required to obtain approval pursuant to section 49-762 shall not select a site without obtaining approval of the city or town if the proposed permanent site is located within such city or town or the approval of the county in which the proposed permanent site is located if the proposed permanent site is located in the unincorporated area of the county.
- B. Any solid waste facility required to obtain approval pursuant to section 49-762 shall not be issued a permit pursuant to section 49-241, subsection A, receive a plan approval pursuant to section 49-762, or be placed on any site if any of the following apply.

1. An irrigation grandfathered right created pursuant to title 45, chapter 2, article 5 is appurtenant to all or any part of the site.
 2. Any part of that facility is within one-half mile of a one hundred year floodplain that has one hundred year flows in excess of twenty-five thousand cubic feet per second, as determined by the federal emergency management agency.
- C. Subsection B, paragraph 2 of this section does not apply to a site used solely for any of the following:
1. Reclamation of land through the introduction of landscaping rubble or inert material.
 2. Material produced in connection with a mining or mineral processing operation.
 3. Agricultural on-site disposal as provided in section 49-766.
 4. Solid waste transfer, recycling or any other use which does not involve permanent storage, treatment or disposal of solid waste.
 5. Industrial on-site solid waste storage, treatment or disposal if the facility is not open to the general public and is in existence on September 27, 1990.
 6. Receipt of solid waste for application to agricultural land as fertilizer or other beneficial soil amendment.
- D. An agency or political subdivision of this state which is required to select or which is selecting or permitting a possible permanent site for any solid waste facility required to obtain approval pursuant to section 49-767 shall post a notice in accordance with requirements specified by the department at the affected property so that the notices are visible from the public rights-of-way and shall send written notice of the selection of the possible permanent site by first class mail to property owners in the following areas:
1. If the proposed permanent site is in an unincorporated area, within a three mile radius of the outer boundaries of the proposed permanent site unless the three mile radius intersects a municipal corporate boundary. In such a case, property owners inside the municipal corporate boundary within one thousand feet of the outer boundary of the proposed permanent site shall be notified as well as those property owners outside the municipal corporate boundary within the three mile radius of the outer boundary of the proposed permanent site.
 2. If the proposed permanent site is in an incorporated area, within a one thousand foot radius of the outer boundaries of the proposed permanent site.
- E. The notice required by subsection D of this section shall be mailed to each owner of real property as shown on the list of property owners furnished by the county assessor, and the department of revenue. Within fifteen days after a request for such a list, the county assessor and the department of revenue shall

furnish to the agency or political subdivision a written list stating the name and address of each owner in the areas specified in subsection D of this section.

- F. Before a political subdivision makes a final decision on a possible permanent site for a facility specified in subsection A of this section, the political subdivision shall hold a public hearing in the general vicinity of the proposed permanent site, at which interested persons may appear and present their views. The political subdivision shall give notice of the hearing, to include all of the following:
1. Publication of notice in a daily or weekly newspaper of general circulation in the area of the proposed permanent site published once each week, beginning at least two weeks before the hearing.
 2. Mailed notice as provided in subsection D of this section sent at least two weeks before the hearing.
 3. Posted notice as provided in subsection D of this section that shall include information on the time and location of the public hearing and a list of those permits that are required in order to operate that proposed solid waste facility.
 4. Mailed notice at least two weeks before the hearing to the governing body of any city, town or unincorporated portion of a county that is located within a one-mile radius of the outer boundaries of the proposed solid waste landfill.
- G. Any agency or political subdivision that is holding a hearing that may result in the approval of or permit for the siting of a solid waste landfill shall mail notice at least two weeks before the hearing to the governing body of any city, town or unincorporated portion of a county that is located within a one-mile radius of the outer boundaries of the proposed solid waste landfill.
- H. Before any agency of this state grants a final permit for a facility specified in subsection A or D of this section, the agency shall:
1. If the applicant is a political subdivision, require the applicant to certify that a public hearing concerning a possible permanent site selection for the facility has been held in the general vicinity of the proposed permanent site, at which interested persons were allowed to appear and present their views.
 2. Hold a public hearing at least thirty days before a final decision concerning the permanent site, if such a hearing is warranted by the public interest, to be held in the general vicinity of the proposed permanent site, at which interested persons may appear and present their views. If such a hearing is held the agency shall send written notice of the selection of the possible permanent site as provided in subsection D of this section.
- I. This section shall not be construed to apply to any facility which receives funding under section 201 of the federal clean water act, as amended (P.L. 97-117).

1992

§ 49-768. Civil penalties

A person who violates a provision of a rule, material permit condition or requirement for approval relating to medical waste is subject to a civil penalty of not more than ten thousand dollars for each day for each violation. The attorney general, at the request of the director, shall file an act in the superior court in the county in which the violation occurred or in a county in which the department maintains an office to recover civil penalties provided for in this section. 1990

§ 49-769. Agency Orders; appeal

Any final agency order issued pursuant to this article is subject to title 12, chapter 7, article 6. 1991

§ 49-770. Financial assurance requirements for solid waste facilities

- A. Beginning April 9, 1994, a solid waste facility may not be operated unless financial responsibility has been demonstrated for the costs of closure, postclosure care, if necessary, and any corrective action as a result of known releases from the facility. By April 9, 1994, existing solid waste facilities shall modify and submit existing facility plans to the department to demonstrate the financial responsibility required by this section. A solid waste facility in operation before April 9, 1994 may continue to operate while the department reviews the modified plan. A demonstration of financial responsibility made for a solid waste facility under chapter 2, article 3 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 under chapter 2, article 3, for a solid waste facility shall not be required prior to completion of construction but shall be required before the department issues approval to operate.
- B. By October 1, 1993, the director shall adopt rules indicating the types of financial assurance mechanisms to be required as part of a facility plan and the content terms and conditions of each financial mechanism, including circumstances under which the department may take action on the financial assurance mechanism for facility closure, postclosure care if necessary and corrective action for known releases. The financial assurance mechanisms shall include the following:
1. Surety bond.
 2. Certificate of deposit.
 3. Trust fund with pay-in-period.
 4. Letter of credit.
 5. Insurance policy.
 6. Certificate of self-insurance.

7. Deposit with the state treasurer.
 8. Evidence of ability to meet corporate financial test.
 9. Evidence of ability to meet local government financial test.
 10. Evidence of ability to meet corporate guarantee test.
 11. Evidence of ability to meet local government guarantee test.
 12. Evidence of ability to meet the political subdivision financial test.
 13. Multiple financial assurance mechanisms.
 14. Additional financial assurance mechanisms that may be acceptable to the director.
- C. By October 1, 1993, the director shall adopt rules establishing a political subdivision financial test. The rules establishing the political subdivision financial test shall require the director to consider the entity's bond rating, income stream, assets, liabilities and assessed valuation of taxable property.
- D. The terms and conditions adopted by the director for each financial assurance mechanism shall provide:
1. The amount in current dollars equal to the cost of hiring a third party to complete site closure and, if necessary, continued postclosure monitoring and maintenance consistent with the plan and any factor to be applied for inflation. Amounts shall be updated annually for landfills and every three years for all other solid waste facilities to adjust for inflation or as necessary to reflect increased costs resulting from changes to the facility plan or facility conditions.
 2. The period after closure for which financial assurance is required.
- E. The approved financial assurance mechanism shall not be released unless the plan specified closure and postclosure requirements have been completed or unless new financial assurance has been submitted by a new owner or operator of the solid waste facility and approved by the director. The owner or operator of the solid waste facility:
1. Shall receive any accrued interest on financial assurance instruments retained by the department.
 2. May request a reduction in financial assurance requirements on completion of closure or portions of postclosure monitoring and maintenance that are approved by the director.
 3. Shall justify any reduction in closure or postclosure cost estimates in the facility plan.
 4. Shall assure that the period of coverage of the financial assurance instrument exceeds by a minimum of ninety days the applicable one or three year time period required in subsection D.

5. Shall be released from closure or postclosure financial responsibility on certification by a registered professional engineer or other environmental professional deemed acceptable by the director that the specific activities of closure or postclosure have been completed in accordance with the approved facility plan and placed in the operating record of the facility plan. 1992

§ 49-771. Restrictive covenants for solid waste landfills

- A. Beginning October 9, 1993, the director may grant approval for operation of a solid waste landfill only if a restrictive covenant has been placed on the disposal area of the facility. An existing solid waste landfill shall comply with this section by October 9, 1993. The director and all of the owners of the tract of land on which the solid waste landfill is located shall execute the restrictive covenant.
- B. The owner or operator of the solid waste landfill shall record the instrument imposing the restrictive covenant in the county office in the county in which the solid waste landfill is located. The owner or operator shall provide a certified copy of the recorded restrictive covenant after approval of the facility plan but before beginning operation of the facility.
- C. The restrictive covenant shall state that the land described in the covenant has been or will be used as a solid waste landfill and that the property owners, their agents or employees or any of their heirs, successors, lessees or assignees shall not engage in filling, grading, excavating, drilling or mining the property during the operating life of the solid waste landfill, or after closure without the approval of the director unless provided for in the approved facility closure or postclosure plan. In making this determination the director shall consider factors such as the original design, type of operation, material deposited, energy recovery from methane gas and stage of decomposition of the disposal area.
- D. The director may waive the restrictive covenant prescribed by this section if the land is federal land or if contracts that exist between the landowner and the licensee on October 9, 1993 are not renegotiable.

§ 49-772. Location restrictions for solid waste landfills; definitions

- A. Beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located within ten thousand feet of any airport runway end used by turbojet aircraft or within five thousand feet of any airport runway end used by only piston-type aircraft shall demonstrate in the facility plan that the facility is designed and operated so that it does not pose a bird hazard to aircraft. Owners and operators of solid waste landfills that are located within a five mile radius of any airport runway end used by turbojet or piston-type aircraft shall notify the affected airport and the federal aviation administration.
- B. In addition to siting requirements established pursuant to section 49-767, beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located in a one hundred-year floodplain shall demonstrate in the facility plan that the facility will not restrict the flow of the one

hundred-year flood, reduce the temporary water storage capacity of the floodplain or result in a washout of solid waste so as to pose a hazard to human health and the environment.

- C. Beginning October 9, 1993, owners and operators of new solid waste landfills shall not be located in wetlands, unless the owner or operator can demonstrate all of the following:
1. A practicable alternative site that does not involve wetlands is not available.
 2. The construction and operation of the solid waste landfill does not cause, contribute to, jeopardize or violate any applicable state water quality standard, toxic effluent standard or prohibition, endangered or threatened species or critical habitat.
 3. The construction and operation of the facility do not cause or contribute to significant degradation of wetlands.
 4. To the extent required under section 404 of the clean water act or applicable state wetland laws, steps have been taken to attempt to achieve no net loss of wetlands as defined in acreage and function by first avoiding impacts to wetlands to the maximum extent practicable pursuant to paragraph I of this subsection and offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions.
- D. Beginning October 9, 1993, owners and operators of new solid waste landfills shall not be located:
1. Within two hundred feet of a fault that has had displacement in holocene time unless the owner or operator can demonstrate in the facility plan that an alternative setback distance of less than two hundred feet will prevent damage to the structural integrity of the facility and will protect public health and the environment.
 2. In seismic impact zones unless the owner or operator can demonstrate in the facility plan that all containment structures, including liners, leachate collection systems and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.
- E. Beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located in an unstable area shall demonstrate in the facility plan that engineering measures have been incorporated into the facility design to ensure that the integrity of the structural components of the facility will not be disrupted, including at a minimum an analysis of the following:
1. On-site or local soil conditions that may result in significant differential settling.
 2. On-site or local geologic or geomorphologic features.
 3. On-site or local man-made surface or subsurface features or events.

F. For purposes of this section, unless the context otherwise requires:

1. "Airport" means a public use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.
2. "Bird hazard" means an increase in the likelihood of bird and aircraft collisions that may cause damage to the aircraft or injuries to its occupants.
3. "Displacement" means the relative movement of any two sides of a fault measured in any direction.
4. "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.
5. "Floodplain" means the areas adjoining the channel of a watercourse including areas where drainage is or may be restricted by man-made structures that have been or may be covered partially or wholly by floodwaters from the one hundred-year flood.
6. "Holocene" means the most recent epoch of the quaternary period, extending from the end of the pleistocene epoch to the present.
7. "Karst terranes" means areas where karst topography with its characteristic surface and subterranean features is developed as a result of dissolution of limestone, dolomite or other soluble rock. Characteristic physiographic features present in karst terranes include sinkholes, sinking streams, caves, large springs and blind valleys.
8. "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by loose sediments. Lithified earth material does not include man-made materials such as fill, concrete and asphalt or unconsolidated earth materials, soil or regolith lying at or near the earth surface.
9. "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a ninety per cent or greater probability that the acceleration will not be exceeded in two hundred fifty years, or the maximum expected horizontal acceleration based on a site specific seismic risk assessment.
10. "One hundred-year flood" or "base flood" means a flood that has a one per cent chance of being equalled or exceeded in a one-year period, based on criteria established by the director of the department of water resources.
11. "Poor foundation conditions" means those areas where features exist that indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of a solid waste disposal facility.

12. "Seismic impact zone" means an area with a ten per cent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in two hundred fifty years.
13. "Structural components" means liners, leached collection systems, final covers, run-on or run-off systems, flood control components and any other components used in the construction and operation of the solid waste disposal facility that are necessary for protection of public health and the environment.
14. "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas may include poor foundation conditions, areas susceptible to mass movements and karst terranes.
15. "Washout" means the carrying away of solid waste by surface water runoff.
16. "Wetlands" means those areas that are defined in 40 code of federal regulations section 232.2092

ARTICLE 5. ENFORCEMENT

§ 49-781. Compliance orders; appeal: enforcement

- A. If the director determines that a person is in violation of any provision of article 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter or any condition of a solid waste facility plan approval issued pursuant to this chapter or is creating an imminent and substantial endangerment to the public health or the environment, the director may issue an order requiring compliance immediately or within a specified period of time.
- 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. At the request of the director, the attorney general may file an action in superior court to enforce orders issued pursuant to this section after the order becomes final.

1992

§ 49-782. Actions on approval to operate

- A. The director may suspend, amend, withdraw, condition or revoke an approval to operate a solid waste facility if the director determines that the facility is in violation of any rule adopted pursuant to this chapter.

- B. The suspension, amendment, withdrawal, conditions or revocation of an approval to operate a solid waste facility shall comply with title 41, chapter 6. 1992

§ 49-783. Injunctive relief: civil penalties: costs

- A. If the director has reason to believe that a person is in violation of any provision of articles 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter, any condition of an approved solid waste facility plan issued pursuant to article 4 of this chapter or that a person is creating an imminent and substantial endangerment to the public health or the environment, the director through 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 the environment, without regard to whether the person has requested a hearing.
- B. A person who violates any provision of articles 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter, an order issued pursuant to this article or an approved solid waste facility plan issued pursuant to chapter 4 is subject to a civil penalty of not more than one thousand dollars for each day not to exceed fifteen thousand dollars for each violation. At the request of the director, the attorney general shall file an action in superior court to recover civil penalties as prescribed by this section. 1992

§ 49-784. Venue

An action filed pursuant to sections 49-781, 49-782 or 49-783 shall be brought in the superior court for the county in which the alleged violation occurred or in which the department maintains an office. 1992

49-785. Agency orders; appeal

- A. An order issued by the director pursuant to this chapter shall become final unless an appeal is made pursuant to title 41, chapter 6 within thirty days of receipt of the order.
- B. a final agency order issued pursuant to this article is subject to judicial review pursuant to title 12, chapter 7, article 6. 1992

ARTICLE 6. VIOLATIONS AND PENALTIES

§ 49-791. Violations; classification; civil penalties

- A. Until October 1, 1993, a person shall not:
1. Practice open burning at a public facility without a variance approval issued by the board.

2. Scavenge at a public facility.
 3. Damage or destroy signs posted at a public facility.
 4. Dump solid waste on public or private land in violation of the provisions of this chapter or any rule or regulation promulgated under this chapter.
- B. A violation of subsection A of this section is a class 2 misdemeanor.
- C. Until October 1, 1993, in addition to the penalties prescribed by subsection B of this section or section 13-1603, subsection 13-1603, a person who violates this section or section 13-1306 shall be subject to a civil penalty in the amount as prescribed by section 49-783.
- D. Beginning October 1, 1993, a person shall not:
1. Practice open burning at a solid waste facility without a variance approval issued by the director.
 2. Scavenge at a solid waste facility.
 3. Damage or destroy signs posted a solid waste facility.
 4. Dump solid waste on public or private land in violation of the provision of this chapter or any rule adopted under this chapter.
 5. Dispose of solid waste in violation of sections 49-761 and 49-762 or any rule adopted pursuant to those sections.
 6. Operate a solid waste facility in a manner inconsistent with the solid wastew facility plan after it has been approved or any rule adopted pursuant to article 4 of this chapter.
- E. A violation of subsection D of this section is a class 2 misdemeanor.
- F. In addition to the penalties prescribed by subsection E of this section or section 13-1603, subsection B, a person who violates this section or section 13-1603 shall be subject to a civil penalty in an amount prescribed by section 49-783.

1992

----END----

CHAPTER 8

~~BURIAL OF MINING INDUSTRY OFF ROAD MOTOR VEHICLE~~ WASTE TIRES

ARTICLE ~~17~~

4	R18-8-701	Definitions	1
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1 CHAPTER 8. DEPARTMENT OF ENVIRONMENTAL QUALITY

2 WASTE MANAGEMENT RULES

3 ARTICLE 7. ~~BURIAL OF MINING INDUSTRY OFF ROAD MOTOR~~

4 ~~VEHICLE WASTE TIRES~~

5 R18-8-701. Definitions

6 In addition to the definitions provided in A.R.S. § 44-1301,
7 the following definitions apply in this Article:

8 1. "Aquifer protection permit" means an aquifer protection
9 permit as provided for in A.R.S. § 49-241 et al.

10 2. "Burial cell" means an area of earthen materials where
11 mining industry off road motor vehicle waste tires are placed in or
12 on the land for burial. A burial cell may consist of an entire
13 overburden pile, waste rock pile, tailings impoundment or leach
14 area.

15 3. "Mining" means activities dedicated to the exploration,
16 extraction, beneficiation and processing, including smelting and
17 refining, of metallic ores.

18 4. "Mining facility" means any land, building, installation,
19 structure, equipment, device, conveyance, area, or source dedicated
20 to mining.

21 5. "Mining industry off road motor vehicle waste tire" means
22 an off road waste tire which is greater than three feet in outside
23 diameter which was used in mining.

24 6. "Operator" means a person who owns all or part of a
25 mining facility, or who leases, operates, or controls such

1 facility, a person responsible for the overall operation of the
2 mining facility, a management agency, or an authorized
3 representative.

4 7. "Person" means a person as defined by A.R.S. § 49-
5 201(21).

6 *Changes made for reasons described in III.B.1 and III.C.5.*

7 R18-8-702. Burial of mining industry off road waste tire

8 A. For a period of not more than five years from the
9 effective date of this Article, Mining industry off-road motor
10 vehicle waste tires may be disposed of by burial ~~for a period of~~
11 ~~not more than five years from the effective date of this Article.~~

12 B. No later than 24 hours after commencement of ~~At least 50~~
13 ~~days prior to~~ burial of any mining industry off road motor vehicle
14 waste tires, the operator of the mining facility shall file with
15 the Director a one-time notice of commencement of burial of ~~intent~~
16 ~~to bury~~ mining industry off road motor vehicle waste tires and a
17 map of the mining facility which clearly identifies the location
18 and dimensions of the burial cell or cells and the estimated number
19 of mining industry off road motor vehicle waste tires which will be
20 buried in each cell. Each burial cell shall be identified to the
21 Department using an alphabetical or numeric identifier. If a new
22 burial cell not previously included in the notice is utilized, the
23 mine operator shall submit an additional notice to the Department
24 within 24 hours after commencement of burial in that burial cell.

1 C. Burial of mining industry off road motor vehicle waste
2 tires shall occur only in areas which are, or will be, included in
3 the aquifer protection permit issued for the mining facility by the
4 Department. ~~These areas shall be limited to overburden piles,
5 waste rock piles and tailings impoundments. A burial cell may
6 consist of an entire overburden pile, waste rock pile or tailings
7 impoundment.~~ Burial of mining industry off-road motor vehicle
8 waste tires shall occur in leach areas only where an aquifer
9 protection permit has been issued by the Department covering that
10 leach area.

11 D. No changes.

12 E. Mining industry off road motor vehicle waste tires may be
13 buried at the mining facility only if the tires are waste generated
14 at that mining facility or another mining facility of the same
15 owner ~~and operator.~~

16 Changes made for the reasons described in III.C.1,, through
17 III.C.7.

18 R18-8-703. Cover requirements

19 A. The operator shall cover all mining industry off road
20 motor vehicle waste tires buried pursuant to this Article with a
21 minimum of six inches of earthen material within 50 days of
22 placement, or sooner if necessary, to prevent vector breeding or
23 fire.

1 B. The operator shall place final cover over the off road
2 motor vehicle waste tires within 180 days after placement of the
3 last tire which will be buried in a cell. The final cover shall
4 consist of earthen material which is at least three feet deep ~~and~~
5 ~~or which is in compliance~~ complies with the requirements of ~~an~~ the
6 aquifer protection permit ~~which includes~~ for the area where the
7 burial cell is located.

8 C. No changes.

9 *Changes made for reasons described in III.D.1. through III.D.3.*

10 R18-8-704. No changes.

11 R18-8-705. Burial cell closure certification

12 Within ~~180~~ 30 days after placement of final cover in
13 accordance with R18-8-703.B ~~the last mining industry off-road motor~~
14 ~~vehicle waste tire in a burial cell~~, the mining facility operator
15 shall file with the Director a burial cell closure certification.
16 The mining facility operator shall certify that no more tires will
17 be buried in the burial cell. A registered professional engineer
18 shall certify that cover material has been placed in accordance
19 with the cover requirements of R18-8-705.

20 *Changes are made for the reasons described in III.E.1. through*
21 *III.E.3.*

1 R18-8-706 No changes.

2 R18-8-707. Maintenance of records

3 ~~For at least three years after the burial cell closure~~
4 ~~certification is filed with the Department.~~ The mining facility
5 operator shall maintain, at the mining facility, records which
6 document the number and location of tires buried in each cell for
7 ~~at least three years after the burial closure certification is~~
8 ~~filed with the Department for all cells.~~

9 Changes made for reasons described in III.F.1. through III.F.3.

10 R18-8-708. No changes.

INFORMATIVE SUMMARY

The Arizona Department of Environmental Quality proposes to adopt rules pursuant to A.R.S. § 44-1304(F) and Laws 1992, Chapter 300, Section 17, which mandates that the director adopt rules prescribing permissible methods of disposal of mining industry off road motor vehicle waste tires greater than three feet in diameter. The rules, A.A.C. Title 18, Chapter 8, Article 7, Burial of Mining Industry Off Road Motor Vehicle Waste Tires, provide, for a period of five years, for burial of metallic ore mining off road motor vehicle waste tires at the mining facility where the waste tires are generated. The rules contain definitions and govern where at the facility mining industry off road motor vehicle waste tires may be buried and enumerate cover requirements. The rules provide for notification of the Director of the intent to bury tires at the mining facility, maintenance of records, annual reports to and inspections by the Department and burial closure certification. The rules also state under what circumstances mining waste tires may be stored at the mining facility.

DIRECTORY OF ARIZONA
WASTE TIRE COLLECTION SITES (WTCS)
&
WASTE TIRE PROCESSING FACILITIES (WTPF)

APRIL, 1993

PREPARED BY:

THE
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
3033 NORTH CENTRAL AVENUE, 6TH FLOOR
PHOENIX, ARIZONA 85012
(602) 207-4133

Any additions, corrections, or changes
in this directory MUST be submitted on the attached form and mailed to:

THE
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
ATTN: MICHELLE DIAZ, SECRETARY
3033 NORTH CENTRAL AVENUE, 6TH FLOOR
PHOENIX, ARIZONA 85012

Window 1

ARIZONA SOLID WASTE DISPOSAL FACILITY
DATA SCREEN

RECORD NUMBER:

FACILITY NAME:
FACILITY TYPE:

CONTACT NAME:
COUNTY:

OPERATOR:
ADDRESS:
CITY:
PHONE:

ZIP:

LAND OWNER:
ADDRESS:
CITY:
PHONE:

ZIP:

DIRECTIONS TO SITE:

TOWNSHIP:

RANGE:

SECTION:

1/4

1/4

1/4

LAST INSPECTION

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
ADAMSVILLE LF WTCS WTCS PINAL 03/26/92	PINAL CO. SW DEPT. P.O. BOX 1747 FLORENCE 85232 (602) 868-6680	PINAL COUNTY P.O. BOX 1746 FLORENCE 85232 (602) 868-6680	ALONG HWY 287 2 MILES WEST OF FLORENCE - 12370 E. 287 T 5S , R 9E , Sec. 9 1/4:
APACHE REGIONAL LF WTCS APACHE	BLUE HILLS ENVIRONMENTAL P.O. BOX 175 ST. JOHNS 85936 (602) 337-4364	APACHE COUNTY P.O. BOX 175 ST. JOHNS 85936 (602) 337-4664	2 ML NORTH ON ST. JOHNS HWY US 666 T 13N, R 29E, Sec. 18 1/4:
AZ PORTLAND CEMENT WTPF PIMA	AZ PORTLAND CEMENT P.O. BOX 338 RILLITO 85654 (602) 622-3503	CA PORTLAND CEMENT CO. 2025 E. FINANCIAL WAY GLENDDORA, CA 91740 (818) 852-6200	11115 N. CASA GRANDE HWY, RILLITO, AZ W. ON I-10 EXIT AVERA T 12S, R 12E, Sec. 6 1/4:
BUCKHEAD MESA WTCS WTCS GILA 05/22/92	GILA COUNTY P.O. BOX 2297 PAYSON 85547 (602) 474-8105	GILA COUNTY 1400 E. ASH GLOBE 85501 (602) 474-8105	10 ML. NO. OF PAYSON ON HW 87, EA. LF SIGN, GO 1 MILE T 11N, R 9E , Sec. 2 1/4:
CAMP VERDE LF WTCS WTCS YAVAPAI	JOHN WHITE 610 DOUGLAS AVE PRESCOTT 86301 (602) 445-6698	US DEPT. OF AG/FOREST SVC HC 64, BOX 240 RIMROCK 86335 (602) 567-4501	3 MIL E. OF CAMP VERDE ON NO. SIDE OF GENERAL CROOK TRAIL HWY, T 13N, R 5E , Sec. 10 1/4: NE
CERBAT LANDFILL WTCS WTCS MOHAVE	GAMBI DISPOSAL INC. P.O. BOX 568 FRENCH CAMP, CA 95231 (209) 465-0840	MOHAVE COUNTY 3675 E. ANDY DEVINE AVE. KINMAN 86401 (602) 757-0910	11 MI. NW OF KINGMAN, OFF HWY 93 ALONG MINERAL PARK ROAD T 23N, R 18W, Sec. 35 1/4: SW
COCHISE COUNTY WTCS WTCS COCHISE 01/30/92	COCHISE COUNTY DEQ 619 MELODY LANE BISBEE 85063 (602) 432-9579	COCHISE COUNTY P.O. BOX 225 BISBEE 85603 (602) 432-9479	3/5 ML. EAST OF STATE HW 666 ON SOUTH SIDE OF THOMPSON RD. T 20S, R 26E, Sec. 10 1/4:
COCONINO CO. WTCS WTCS COCONINO 04/29/92	COCONINO COUNTY HWY DEPT. 5600 E. COMMERCE FLAGSTAFF 86004 (602) 526-2735	COCONINO COUNTY 5600 E. COMMERCE FLAGSTAFF 86004 (602) 526-2735	5701 E. PENSTOCK, FLAGSTAFF T 21N, R 8E , Sec. 5 1/4:
COLINA TIRE RECOVERY WTPF PINAL	COLINALS TIRE RECOVERY 2310 S. 5TH ST. COOLIDGE 85228 (602) 723-7840	COLINAS TIRE RECOVERY 2310 S. 5TH ST. COOLIDGE 85228 (602) 723-7840	HWY 87 SO. TO COOLIDGE 8 MI. RT ON 5TH ST. 1/3 ML WE. FROM HWY 87 T 5S , R 8E , Sec. 34 1/4:

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
FRANCONIA TECH. WTPF MOHAVE	FRANCONIA TECH. 505 S. MADISON DRIVE TEMPE 85281 (602) 894-1286	FRANCONIA TECH. 505 S. MADISON DRIVE TEMPE 85281 (602) 894-1286	US 40 TO FRANCONIA RD. INTERCHANGE; NEAR TOPEKA & SANTA T 16N, R 19N, Sec. 8 1/4:
GRAHAM CO. SAFFORD WTCS GRAHAM	GRAHAM CO. 800 MAIN ST. SAFFORD 85546 (602) 428-1962	CITY OF SAFFORD 717 MAIN ST. SAFFORD 85546 (602) 428-2762	8TH AVE., 3 ML NO. OF SAFFORD T 6S, R 26E, Sec. 30 1/4:
INA WTCS WTCS PIMA 03/05/92	PIMA COUNTY 130 W. CONGRESS, 2ND FL. TUCSON 85701 (602) 740-3555	PIMA COUNTY 130 W. CONGRESS, 2ND FL. TUCSON 85701 (602) 740-3555	MILES WEST OF HW I-10 ON INA ROAD T 13S, R 12E, Sec. 1 1/4: NW
LA PAZ CO. WTCS WTCS LA PAZ	LA PAZ COUNTY 602 11TH ST./P.O. BOX BP PARKER 85344 (602) 677-3326	LA PAZ COUNTY 602 11TH ST./P.O. BOX BP PARKER 85344 (602) 667-3326	20 ML NO. OF QUARTZSITE, 2 MILES PAST 128 ON HWY 95 T 7N, R 19W, Sec. 13 1/4:
LOMA LINDA WTCS WTCS GREENLEE	GREENLEE COUNTY P.O. BOX 908 CLIFTON, AZ 85533 (602) 865-4762	GREENLEE COUNTY P.O. BOX 908 CLIFTON, AZ 85533 (602) 865-4762	1.5 ML EA. OF US HW 666 ON WARDS CANYON ROAD T 5S, R 30S, Sec. 15 1/4:
LONE PINE WTCS WTCS NAVAJO	NAVAJO COUNTY P.O. BOX 668 HOLBROOK 86025 (602) 524-6161	US FOREST SERVICE RR3, BOX B-50 LAKESIDE 85929 (602) 368-5111	6.9 ML. NORTH OF US HW 60 ON AZ HWY 77, WEST 1.7 ML ON LONE PINE T 11N, R 21, Sec. 12 1/4:
MOHAVE VALLEY LF WTCS MOHAVE	MESA DISPOSAL, INC. P.O. BOX 1133 BULLHEAD CITY 86430 (602) 758-3485	MOHAVE COUNTY 3675 E. ANDY DEVINE AVE. KINMAN 86401 (602) 757-0910	4 MI. EAST OF HWY 95 ALONG EL RODEO ROAD T 19N, R 21W, Sec. 21 1/4:
NW REGIONAL LF WTCS WTCS MARICOPA 05/08/92	MARICOPA CO. SW DEPT. 2901 W. DURANGO ST. PHOENIX 85009 (602) 506-7060	MARICOPA COUNTY 2901 W. DURANGO ST. PHOENIX 85009 (602) 506-7060	19401 W. DEER VALLEY RD. T 6N, R 2W, Sec. 20 1/4:
PEN-ROB LF WTCS WTCS NAVAJO	PEN-ROB, INC. 4592 E. MAIN, P.O. DRW. G JOSEPH CITY 86032 (602) 288-3605	PEN-ROB, INC. 4592 E. MAIN, P.O. DRW. G JOSEPH CITY 86032 (602) 288-3605	EAST SIDE OF PORTER AVE., 3 ML NO. OF HW I-40 IN JOSEPH CITY T 19N, R 19E, Sec. 33 1/4:

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
RIO RICO LF WTCS WTCS SANTA CRUZ	SANTA CRUZ CO. PUBLIC WRK P.O. BOX 818 NOGALES 85628 (602) 281-4695	RIO RICO PROPERTIES 1410 RIO RICO DR. RIO RICO 85621 (602) 281-8451	W ON FRONTAGE ROAD, 1 MI N OF PECK CANYON RD INTERCHANGE ON HWY T 22S, R 132, Sec. 16 1/4:
ROLL LF WTCS WTCS YUMA	YUMA CO. PUBLIC WORKS 2703 AVENUE B YUMA 85364 (602) 329-2300	US BUREAU OF RECLAMATION 3151 WINSOR YUMA 85364 (602) 726-6300	AVE 38E & CO. 3RD ST.; EA. 2 MI ON OLD HWY 80 TO AVE 38 E., GO T 7S , R 17W, Sec. 34 1/4:
BAKER SOUTHWEST WTPF MARICOPA 07/14/92	BAKER SOUTHWEST 11400 E. PECOS ROAD QUEEN CREEK 85242 (602) 981-3006	NB & I TIRE RECYCLING 11400 E. PECOS ROAD QUEEN CREEK 85242 (602) 981-3006	11400 E. PECOS ROAD LOCATED IN MESA T 1S , R 7E , Sec. 36 1/4:
RUSSELL GULCH WTCS WTCS GILA	GILA COUNTY P.O. BOX 2297 PAYSON 85547 (602) 474-8105	GILA COUNTY 1400 E. ASH GLOBE 85501 (602) 474-8105	1.6 ML. WEST OF US HWY 60 ON RUSSELL ROAD T 1N , R 15E, Sec. 27 1/4:
SOUTHWEST TIRE REC.INC. WTPF LA PAZ	DON DAVIS P.O. BOX 2217 POSTON, AZ 85271 (602) 669-6424	SCOTT DAVIS P.O. BOX 1100 LAGUNA PARKER, AZ 85344 (602) 669-2665	5 MI. NORTH OF MCVAY RD. ON HWY 72 MI. PAST MI. POST 40 T 4N , R 15W, Sec. 6 1/4:
YAVAPAI CO. REG. LF WTCS YAVAPAI	YAVAPAI CO., PUBLIC WORKS 25 E. GURLEY PRESCOTT 86301 (602) 771-3188	CITY OF PRESCOTT 211 S. CORTEZ ST. PRESCOTT 86302 (602) 445-3500	2800 SUNDG RANCH RD., 3 ML NW OF PRESCOTT ON NE SIDE OF US HWY 89 T 14N, R 2W , Sec. 24 1/4:
			T , R , Sec. 1/4:
			T , R , Sec. 1/4:
			T , R , Sec. 1/4:

Master
copy



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

CERTIFIED MAIL
Return Receipt Requested

Date: July 8, 1993
REF: WP923

Jerry Neidfeldt, President
Tombstone Development Co.
P.O.Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Company Inc.-Site Inspection and Technical Assistance Meeting
Summary; Inventory No. 102806; Cochise County.

Dear Mr. Niedfeldt:

TECHNICAL ASSISTANCE MEETING SUMMARY

The Arizona Department of Environmental Quality ("ADEQ"), conducted an inspection on June 22, 1993 at the Tombstone Development Company Mine Site ("Facility"), near Tombstone, Arizona. During the facility inspection, violations of the Arizona Revised Statutes (A.R.S.) and Arizona Administrative Code (A.A.C.) were observed.

I. MONITORING AND SAMPLING

A.R.S. § 49-263 The Facility shall establish that the previously permitted mining and leaching sites are environmentally safe.

CORRECTIVE ACTION

Within ninety (90) days of receipt of this letter, the following actions shall be carried out:

1. A sampling line shall be established across the old pregnant and barren solution pond site in areas that showed the higher signs of contamination from previous sampling. The depth of the sampling shall be established by on-site investigation of cross sections of the soils present. Photographs of these profiles shall be submitted to indicate the reasoning of the choices made. A sufficient number of samples to

indicate the condition of the area shall be collected. The samples shall be tested for the items listed in the attached Exhibit A.

2. A pre-approved sampling plan shall be developed and completed to indicate that the old washed pile of tailings is environmentally safe. The samples shall be tested for the items listed in the attached exhibit A.

3. Monitor wells shall be drilled which will establish the flow gradient of the underground water, the character of the water in the previously polluted areas, and the presence of pollutants for any future mining operations known at this time. These monitoring wells shall be developed to become a part of the Facilities future monitoring and testing procedures. The samples shall be tested for the items listed in the attached Exhibit A. Once the Aquifer has been characterized, the facility shall develop a regular monitoring and reporting scheme for ADEQ review and approval. This schedule shall be carried out on the regular basis specified until the permits are completed.

4. Following the development and testing of these wells, a comprehensive report shall be developed, within 30 days, correlating the sites monitor wells and the outside well data. This report shall indicate the character and condition of the Aquifer and any pollution that may have been caused at the site or any adjacent locations. This evaluation shall establish the existing conditions prior to the start of any new activity. A compliance schedule describing any remediation necessary shall be developed and presented with this report.

5. Within 60 days of the receipt of this letter, a watershed control map shall be developed to indicate the runoff controls at the site. These controls shall be consistent with the Aquifer Protection Permit (APP) Needs as they are known at this time. An Operations and Maintenance ("O & M") manual shall be developed to describe the necessary maintenance required to keep the watershed controls in proper operating condition. This map and the corresponding O & M Manual shall be updated as facilities are changed at the site.

II. PERMITS

Within 30 days the facility shall contact Don Bell of ADEQ's Water Pollution Compliance Staff to arrange for pre application meetings for the following Permits:

1. NPDES Permit-Clean Water Act Section 402.
2. Aquifer Protection Permit- A.A.C. Title 18, Chapter 9.
3. UST Closure Permits-A.R.S. § 49-1008
4. Solid Waste Closure Permits-A.R.S. § 49-762

Tombstone Development Company, Inc.
Technical assistance letter
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III. SAMPLE ASSAY LABORATORY SITES

A.A.C. R18-8-261 and R18-8-262. Laboratory chemicals and process chemicals shall be handled, stored, transported and disposed of in a proper manner consistent with the above Arizona Revised Environmental Statutes and Title 27 of the Arizona Mining Statutes.

CORRECTIVE ACTION

Laboratory and process chemicals kept on site shall be stored in properly vented rooms under lock and key. Chemicals which are out of date or which are no longer desired, shall be disposed of in the properly described manner, with a proper manifest to a properly designated disposal area.

IV. UNDERGROUND STORAGE TANKS (UST) SITES

A.R.S. § 49-1002 Petroleum product storage tanks located on site have not been properly registered with the State of Arizona and have not been properly constructed or installed according to the requirements of the state.

CORRECTIVE ACTION

Within 30 days of receipt of this letter, the petroleum products contained in the tanks shall be characterized by a state approved vendor and disposed of in the proper manor for the products located in each of the tanks. These actions shall be properly manifested while being carried out. Disposal shall be at an approved facility.

Within 30 days the Facility will make arrangements for a pre-permit application meeting with the ADEQ UST Section to develop the necessary closure requirements and remediation. Remediation shall include both above and below ground remediation.

V. SOLID WASTE SITES

A.A.C. R18-8-702 (proposed rule). Waste tires were observed piled in an unregistered landfill at the Facility.

CORRECTIVE ACTIONS:

Within 90 days of receipt of this letter, the facility will contact the ADEQ Solid Waste Unit and file with the Director the required one time notice of commencement of burial of mining industry off road tires as required by the above rule (copy of proposed rule is attached). A.A.C. R18-8-701.5. defines "Mining

Tombstone Development Company, Inc.
Technical assistance letter
page 4

industry off road motor vehicle waste tires" as an off road waste tire which is greater than three feet in outside diameter which was used in mining. This notification will identify the location of the burial cell. Since the burial cells shall become a part of the Aquifer Protection Permit (APP), I am requesting that these engineering APP requirements be completed and reviewed by APP Technical Review before complete burial is carried out. Tires which do not fit the description of a waste mining tire shall be deposited in a proper Waste Tire Collection Site (WTCS).

ATTACHMENTS:

Copy of Proposed Chapter 8, Waste Tires, Article 7.
Directory of Arizona Waste Tire Collection Sites.

A.R.S. § 49-762 The landfill was not registered with the Department as of October 1, 1992, as per part K of A.R.S. 49-762. The Facility is therefore deemed to be a new facility. As a new facility according to A.R.S. 762.B., the Facility is required to have a facility plan prior to operation, and or closure.

CORRECTIVE ACTION: Attached is a set of guidelines for closure of the landfill. Within thirty (30) days, the facility will contact Dan Zeller of the Solid Waste Unit (602-207-4118) and develop a closure plan to accommodate the solid Waste Unit, and which will meet the requirements of the APP Application which will later be submitted. At a minimum, a description of events shall be included with the APP applications. This closure plan will be submitted and approved by ADEQ prior to any action on site.

Before instigation of action to cover and cap the area, the Attorney General's Office shall be contacted to determine the disposition of the evidence in their case concerning the domestic dumping which occurred on the site. Contact Investigator Andy Rubalcava of the Attorney General's Office at 602-542-4853.

Old equipment, containers, and other materials not contained in landfills shall be consolidated in centralized equipment or materials yards in a manner which will not be or become an environmental nuisance. Buildings and facilities which are conducive to rodent and insect infestation problems shall be remediated.

Within (90) days the Facility will research and develop a waste stream guideline which will describe how to provide the proper disposal of items that have been left on site. These items (both solid waste and hazardous waste) include but are not limited to:

- Empty cyanide barrels
- Waste plastic pipe and liner materials
- Residues and sludges left in the heap leach area.
- Cyanide contaminated materials not leached or washed on site.
- Laboratory and process chemicals
- Septic wastes contaminated with laboratory chemicals.
- Used or contaminated petroleum products
- Old equipment and used containers.
- Building materials no longer useful to the facility.

Tombstone Development Company, Inc.
Technical assistance letter
page 5

This waste stream information shall be left in the O & M Manuals as guidelines for future operators of the property.

ATTACHMENTS:
Waste Management Landfill Closure Guidelines-1992
Copy of the Solid Waste Statutes-Chapter 4.

VI. COMPLIANCE SCHEDULES

Within ninety (90) days the Facility shall develop a compliance schedule that will describe the completion of all the items needed to complete the remediation of the site. This schedule shall include at a minimum:

1. A monitoring and reporting schedule for the active portions of the facility.
2. A schedule for the permitting activities that are known as of the schedule delivery date. The Facility shall be responsible for the time for their participation and not for the Departments reviews.
3. A schedule for the planned cleanup and remediation actions to be carried out.
4. The schedules shall describe the development, and time elements needed, to plan and execute each of the compliance items through completion and inspection.

The Facility is required to submit documentation of compliance with each of the referenced rules by the date specified for each.

Please be advised that the violations listed above, which the Facility agreed to resolve, must be addressed within that time frame. Any violations which are not addressed within that time frame, will be incorporated into a Consent Order.

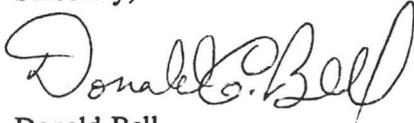
ADEQ is accountable to the citizens of Arizona and mandated by law to ensure that facilities are in compliance with all applicable statutes and rules. ADEQ must be assured that compliance has been achieved. Therefore, any submittal required by this letter must include the following statement and must be signed by a person authorized to act on behalf of the company or empowered to make decisions on behalf of the company to certify to the ADEQ their knowledge of and accountability for the submittal:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tombstone Development Company, Inc.
Technical assistance letter
page 6

If you require further assistance, please contact me at (602) 207 4613.

Sincerely,



Donald Bell
Compliance Officer
Water Pollution Compliance Unit
Office of Water Quality

DGB:arv
B:\TOMBSTON\TA.30

cc:

Peggy Guichard-Watters, Manager, OWQ Compliance Section
Andy Rendes, Southern Regional Office
Dave Anderson, APP Hydrology Unit

Jeff Ende, Mining APP
Dave Zeller, OWP, Solid Waste Section
Jim Brisco, Jabba, Inc.
Roger Kennett, PRP, APP section
Cochise County Health Department
Andy Rubalcava, Investigator, Attorney General's office.

Tombstone Development Company, Inc.
Technical assistance letter
page 7

DISTRIBUTION LIST

Jerry Neidfeldt, President
Tombstone Development Co.
P.O.Box 1445
Grand Island, Nebraska 68803

Excellon Resources Inc.
c/o Douglas Mckenzie, VP
Suite #200-20
Aidelaide St. East
Toronto
Ontario, Canada
M5C 2T6

Jim Brisco, Representative
Excellon Resources Inc.
c/o Jabba Inc.
2100 N. Wilmot
Tucson, Arizona 85712
(602)721-1375

Tombstone Development Company
 Technical assistance letter
 Exhibit A - Required Samples

Old Heap Leach and Old Washed Tailings

EPA 1312 (1)	AGP / ANP (2)	Ag (Silver)
As (Arsenic)	Ba (Barium)	Be (Beryllium)
Cd (Cadmium)	Cr (Chromium)	Cu (Copper)
Hg (Mercury)	Ni (Nickel)	Pb (Lead)
Se (Selenium)	Sb (Antimony)	Tl (Thallium)
Zn (Zinc)	Total Cyanide	WAD Cyanide

(1) Synthetic Precipitation Leaching Procedure

(2) Acid Generating Potential / Acid Neutralization Potential

Monitor Wells

Note: All monitor well metals should be analyzed as Total metals (e.g. total Silver, total Arsenic, etc.)

TKN (1)	Total petroleum hydrocarbons (2)	Alkalinity, Total
Alkalinity, Phenol	Chloride	Conductivity
Fluoride	Hardness	NO ₂ /NO ₃ , Total
pH	Sulfate	TDS (3)
Ag (Silver)	As (Arsenic)	Ba (Barium)
Be (Beryllium)	Cd (Cadmium)	Ca (Calcium)
Cr (Chromium)	Cu (Copper)	Fe (Iron)
K (Potassium)	Hg (Mercury)	Mg (Magnesium)
Mn (Manganese)	Na (Sodium)	Ni (Nickel)
Pb (Lead)	Se (Selenium)	Sb (Antimony)
Tl (Thallium)	Zn (Zinc)	Total Cyanide
WAD Cyanide		

(1) Total Kjeldahl Nitrogen

(2) BLS 181

(3) Total dissolved solids

318194 - APP for
CIDSURE LETTER



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 8, 1994
REF#: WP-94-1779

Jim Brisco, Representative
Excellon Resources Inc.
c/o Jabba Inc.
2100 North Wilmot
Tucson, Arizona 85712

RE: TOMBSTONE DEVELOPMENT CO., INC, AQUIFER PROTECTION PERMIT FOR
CLOSURE, COCHISE COUNTY

Dear Mr. Brisco:

Attached are the documents you need to apply for an Aquifer Protection Permit. As you read through the directions, many of the items needed for the regular APP are also needed for the closure document. The emphasis is on providing protection in the future after the close.

Dennis Turner has highlighted the necessary items for you. You will need to develop as much of the draft permit as you can in the next two or three weeks. Then you need to contact Dennis, at (602) 207-4663, and make an appointment for a preapplication meeting to review what you have accomplished and what you expect to accomplish with the application, and any questions you have at that time. When you have made that appointment please contact me.

If you have any questions please contact me at (602) 207-4613.

Sincerely,

A handwritten signature in cursive script that reads "Donald G. Bell".

Donald G. Bell
Compliance Officer
Surface Water Enforcement Unit
Water Quality Division

DGB:av

cc: Dennis Turner, Manager, Mining APP Unit



APP RULES

Q PRE AP MEETING

DDCS

AQUIFER PROTECTION PERMIT RULES

Arizona Department of Environmental Quality
Plan Review & Permits Section
3003 N. Central Ave., 5 Floor
P.O. Box 600
Phoenix, AZ 85001-0600

DISCLAIMER

The Department has produced this Handbook for the benefit of the regulated public affected by the rules. The Handbook is not the official version of the rules, and the Department acknowledges that it may contain errors. The official version of the rules, as published in the Arizona Administrative Code, may be obtained from the Secretary of State.

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October 1989

TITLE 18
ENVIRONMENTAL QUALITY

CHAPTER 9.
ARTICLE 1.
AQUIFER PROTECTION PERMITS

Section	
R18-9-101.	Definitions
R18-9-102.	Facilities to which the Article does not apply
R18-9-103.	Transition of groundwater quality protection permit program to aquifer protection permit program
R18-9-104.	Transition: Temporary cessation, closure, post-closure
R18-9-105.	Class exemptions
R18-9-106.	Determination of applicability
R18-9-107.	Individual permits: Application process
R18-9-108.	Individual permits: Application requirements
R18-9-109.	Special provisions: Recharge and Underground Storage and Recovery
R18-9-110.	Individual permit conditions: Alert levels
R18-9-111.	Individual permit conditions: Discharge limitations
R18-9-112.	Individual permit conditions: Monitoring requirements
R18-9-113.	Individual permit conditions: Reporting requirements
R18-9-114.	Individual permit conditions: Contingency plan requirements
R18-9-115.	Individual permit conditions: Compliance schedule
R18-9-116.	Individual permit conditions: Temporary cessation, closure; post-closure
R18-9-117.	Individual permit conditions: Technical and financial capability
R18-9-118.	Individual permit duration
R18-9-119.	Temporary permits
R18-9-120.	Individual permits: Certification of permittee
R18-9-121.	Individual permits: Permit actions
R18-9-122.	Consolidation of permits
R18-9-123.	Fees
R18-9-124.	Public participation
R18-9-125.	General permits: general provisions
R18-9-126.	General permits: sewage disposal systems
R18-9-127.	General permits: recharge pilot projects underground storage and recovery pilot projects
R18-9-128.	General permits: agricultural applications of wastewater sludge
R18-9-129.	General permits: other facilities
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CHAPTER 9.
ARTICLE 1.
AQUIFER PROTECTION PERMITS

R18-9-101. Definitions

In addition to the definitions prescribed in A.R.S. 49-101 and 49-201, the terms of this Article shall have the following meanings:

1. "Alert level" means a numeric value, expressing either a concentration of a pollutant or a physical or chemical property of a pollutant, which is established in an individual Aquifer Protection Permit and which serves as an early warning indicating a potential violation of either an Aquifer Water Quality Standard at the applicable point of compliance, or any permit condition.
2. "Aquifer Protection Permit" means an individual or general permit issued pursuant to A.R.S. 49-203 and 49-241 through 251, and this Article.
3. "Aquifer Water Quality Standard" means a standard established pursuant to A.R.S. 49-221 and 49-223.
4. "BACT" means the best available demonstrated control technology, processes, operating methods, or other alternatives to achieve the greatest degree of discharge reduction determined for a facility by the Director pursuant to A.R.S. 49-243.B and D.
5. "Discharge density" means the volume of effluent discharged per unit of time, per unit area of land available to assimilate the discharge. This shall be expressed in gallons per day per acre or in pounds of nitrogen per day per acre.
6. "Drywell" has the meaning ascribed to it in A.R.S. 49-331.3.
7. "Groundwater Quality Protection Permit" means a permit issued by the Arizona Department of Health Services or the Department pursuant to R9-20-208 prior to the effective date of this Article.
8. "Inert material" means that which is insoluble in water and will not decompose or leach substances to water, such as broken concrete, brick, rock, gravel, sand, and uncontaminated soils.
9. "Injection well" means a well which receives a discharge through pressure injection or gravity flow.
10. "Notice of Disposal (NOD)" means a document submitted pursuant to R9-20-205.A. prior to the effective date of this Article.
11. "Recharge project" has the meaning ascribed to it in A.R.S. 45-651.5.
12. "Sewage" means wastes from toilets, baths, sinks, lavatories, laundries, and other plumbing fixtures in residences, institutions, public and business buildings, mobile homes, watercraft, and other places of human habitation, employment, or recreation.
13. "Sewage disposal system" means a system for sewage collection, treatment, and discharge by surface or underground methods.
14. "Surface impoundment" means a pit, pond or lagoon, having a surface dimension that is equal to or greater than its depth, which is used for the storage, holding, settling, treatment or discharge of liquid pollutants or pollutants containing free liquids.
15. "Temporary cessation" means any cessation of operation of a facility for a period of greater than 60 days but which is not intended to be permanent.
16. "Underground storage and recovery project" has the meaning ascribed to it in A.R.S. 45-802.6.

R18-9-102. Facilities to which the Article does not apply

This Article shall not apply to any of the following:

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- A. Drywells which are used solely to receive storm runoff, except those that drain areas in which hazardous substances, are used, stored, loaded, or treated.
- B. The application of nitrogen fertilizers.
- C. Animal feeding operations.
- D. Activities conducted pursuant to a remedial action order issued or a plan approved pursuant to A.R.S. 49-281 through 49-287, and R18-7-101 through R18-7-110.
- E. Any use of pesticides directly in the commercial production of plants and animals which is subject to the federal Insecticide, Fungicide and Rodenticide Act, (P.L. 92-516; 86 Stat. 975; 7 United States Code sections 135 et. seq., as amended), or A.R.S. 49-301 through 49-309 and the rules adopted thereunder, or Title 3, Chapter 2, Article 6 of the Arizona Revised Statutes and the rules adopted thereunder.

R18-9-103. Transition of groundwater quality protection permit program to aquifer protection permit program

- A. Subject to the other provisions of this section, a Groundwater Quality Protection Permit issued pursuant to R9-20-201 through 226 before the effective date of this Article is continued according to the terms of the permit.
- B. An owner or operator of a facility for which a Groundwater Quality Protection Permit has been issued shall be deemed to be in compliance with this Article and Title 49, Chapter 2, Article 3, of the Arizona Revised Statutes if both of the following conditions are met:
 1. The owner or operator is in compliance with the conditions of the Groundwater Quality Protection Permit.
 2. The owner or operator is not causing or contributing to the violation of any Aquifer Water Quality Standard.
- C. An owner or operator of a facility for which a notice of disposal as required by R9-20-205 has been filed shall be deemed to be in compliance with this Article and Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes if the owner or operator is not causing or contributing to the violation of any Aquifer Water Quality Standard.
- D. An owner or operator of a facility which is in existence on the effective date of this Article, which was exempted by R9-20-202.B. before the effective date of this Article, and which is neither exempted under A.R.S. 49-250.B. or R18-9-105, nor is issued a general permit under this Article, shall be deemed to be in compliance with this Article and Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes if the person submits the information described in R18-9-108.A. and B.1. through 4. within 90 days after the effective date of this Article.
- E. Subsections B., C., and D. shall apply to a person until either of the following occurs:
 1. The owner or operator are issued an Aquifer Protection Permit.
 2. The owner or operator are denied an Aquifer Protection Permit.
- F. The Department shall be notified by the transferor and the transferee of any change in the owner or operator of a facility subject to subsections B., C. or D. within 10 days after the change occurs. The notice shall include the name of the transferor owner or operator, the name of the transferee owner or operator, and the name and location of the facility.
- G. The Department shall maintain a priority list indicating the order in which the facilities subject to Subsections A., B., C., and D. shall be requested to submit permit applications pursuant to R18-9-107. The list shall be available to the public upon request. The list shall be based upon the potential environmental risks to the aquifers of the state and upon the risks to

Appendix I
Average Daily Sewage Flow

Type of Establishment (unit basis)	Sewage Flow (gallons per unit per day)
Airport (passenger)	4
Apartments, multiple family (resident)	100
1 bedroom, assume 2 residents,	
2 bedrooms, assume 3 residents, etc.	
Camp: Campground, overnight with flush toilets (camper)	25
Campground, overnight with flush toilets and shower (camper)	50
Construction (bed)	50
Day with no meals served (camper)	15
Luxury (camper)	100-150
Resorts, day and night, with limited plumbing (camper)	50
Tourist with central bath and toilet facilities (person)	35
Clubs:Country (resident member)	100
Country (nonresident member)	25
Cottages with seasonal occupancy (resident)	100
Dwellings: Boarding of rooming houses (resident)	100
Additional kitchen requirements for nonresidents boarders	10
Dwellings: Residential (resident)	100
Factory (person)	25
Hospital (bed)	250-400
Hotel (room)	125
Institutions other than hospitals (person)	75-125
Laundries, self service (machine)	400
Mobile Home: Family (per resident)	100
Retirement (resident)	75
Motel (room)	125
Office (person)	25
Picnic: With bathhouses, showers & flush toilets (picnicker)	20
With toilet facilities only (picnicker)	10
Public Restrooms (toilet)	200
Restaurant (seat)	30
per meal served	100
Schools: Boarding (pupil)	100
Day with cafeteria, gymnasium & showers (pupil)	25
Day with cafeteria, but no gymnasium or showers (pupil)	20
Day without cafeteria, gymnasium or showers (pupil)	15
Service Station (bay)	1000
Shopping Center (square foot)	1
Swimming pool (swimmer)	10
Theaters: Drive-in (car space)	5
Movie (seat)	5
Trailer Park: (also see mobile home)	
Travel with no sewer connection (space)	125
Travel with sewer connection (space)	175

Organic Loading. Base All Organic Loadings on 200 mg/l BOD5 and 210 mg/l SS.

landfill unless the liner can be reused at another test location without a reduction in integrity.

5. The test site is restored to its natural grade.

D. A General Permit is issued for facilities which, for purposes of water quality sampling, hydrologic parameter testing, well development or redevelopment, receive water, drilling fluids or drill cuttings from a well, if the discharge is to the same aquifer in approximately the same location from which the water supply was withdrawn originally.

E. A General Permit is issued for injection wells, surface impoundments, and leach lines receiving discharge from only filter backwash from potable water treatment systems, condensate from refrigeration units, overflows from evaporative coolers, heat exchange system return water, or swimming pool filter backwash, where the discharge is less than 1,000 gallons per day.

F. A General Permit is issued for lined evapotranspiration beds receiving sewage which are issued an Approval to Construct pursuant to R18-9-804 and 805, and which are inspected and leak tested by the Department or its designated representative during construction.

G. A General Permit is issued for disposal of material that contains only uncontaminated soil, cement, bricks, or other similar inert material.

H. A General Permit is issued to facilities used for transportation of water for beneficial use, or pumped from the groundwater, which contain effluent from any wastewater treatment facility if all of the conditions are met:

1. The effluent is added for the purpose of delivery to a reuse, recharge, or underground storage and recovery facility that has a permit.

2. The transportation facility is concrete-lined.

3. The effluent does not exceed any Aquifer Water Quality Standard, except those standards for turbidity and bacteria.

4. The volumes and rates of effluent added do not exceed that necessary to meet the requirements of the permitted reuse, recharge, or underground storage and recovery facility.

I. A general permit is issued for surface impoundments which meet all of the following conditions:

1. The surface impoundments receive only filter backwash from potable water treatment systems.

2. The surface impoundments are constructed and operated pursuant to R18-4-231 and R18-4-265.

3. The surface impoundments are lined with a material having a permeability not greater than 1×10^{-6} cm/sec.

R18-9-130. Violations; Enforcement

Any person who owns or operates a facility contrary to the provisions of this Article, who violates the conditions specified in a permit issued pursuant to this Article, or who violates any Groundwater Protection Permit continued pursuant to R18-9-103.A., is subject to the enforcement actions prescribed in Title 49, Chapter 2, Article 4 of the Arizona Revised Statutes.

public health posed by the facilities, as determined upon consideration of the following:

1. The general vulnerability of the aquifer in terms of depth to groundwater and productivity of the aquifer.

2. Existing aquifer water quality.

3. The drinking water population potentially affected.

4. The waste hazard potential of the facility.

5. The existence of documented pollution problems attributable to the facility.

6. The status of the facility under R9-20-201 through R9-20-226.

H. A person who has an application for a Groundwater Quality Protection Permit pending on the effective date of this Section shall become subject to this Article and shall be issued an Individual Aquifer Protection Permit if a permit is issued.

R18-9-104. Transition: Temporary cessation, closure, post-closure

A. A person who has filed a notice of disposal as required by R9-20-205 shall notify the Director before any temporary cessation. The Director shall specify any measures to be taken by the person in order to prevent violations of Aquifer Water Quality Standards at the applicable point of compliance.

B. A person who has filed a notice of disposal as required by R9-20-205 and who owns or operates a facility that is required to obtain an Individual Aquifer Protection Permit under Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes and this Article shall submit an application for an Individual Aquifer Protection Permit if there is a cessation, for a period of at least three years, of the activity for which a facility or portion of a facility was designed and operated.

C. A person who has filed a notice of disposal as required by R9-20-205 and who owns or operates a facility that is required to obtain an Individual Aquifer Protection Permit under Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes and this Article shall notify the Director of the intent to cease operations prior to ceasing, without intent to resume, an activity for which the facility or a portion of the facility was designed or operated.

D. A person who has filed a notice of disposal as required by R9-20-205 who ceases, without intending to resume, an activity for which a facility or portion of a facility was designed and operated, or who is deemed subject to the closure requirements of this Section pursuant to Subsection B., and who owns or operates a facility that is required to obtain an Individual Aquifer Protection Permit under Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes and this Article shall submit to the Director an application for an Individual Aquifer Protection Permit within 90 days following the notification.

R18-9-105. Class exemptions

In addition to the classes or categories of facilities listed in A.R.S. 49-250.B., the following classes or categories of facilities are exempt from the permit requirements of this Article:

1. Facilities which treat, store, or dispose of hazardous waste and which have been issued a permit or which have interim status, pursuant to the Resource Conservation and Recovery Act (P.L. 94-580; 90 Stat. 2796; 42 United States Code sections 6901 et. seq., as amended) or the rules adopted pursuant to A.R.S. 49-922.

2. Underground storage tanks which contain regulated substances as defined in A.R.S. 49-1001.0.

3. Facilities for the disposal of solid waste, as defined in A.R.S. 49-701.12, which are located in unincorporated areas and which only receive solid waste from four or fewer households.

R18-9-106. Determination of applicability

A. Any person who engages or who intends to engage in an operation or an activity which may result in a discharge which is regulated under this Article may request on a form provided by the Department that the Department determine the applicability of A.R.S. 49-241 through 251 and this Article to the operation or activity.

B. A person requesting a determination of applicability shall provide the following information:

1. The name of the operation or activity.
2. The location of the operation or activity.
3. The names of the persons who are engaging or who propose to engage in the operation or activity.
4. A description of the operation or activity.
5. A description of the chemical composition and characteristics of materials stored, handled, used or disposed of in the operation or activity.
6. Any other information required by the Director to make the determination of applicability.

C. Within 45 days after receipt of a request for a determination of applicability, the Department shall advise in writing the person making the request that the operation or activity is described by any one of the following:

1. Is not subject to the requirements of A.R.S. 49-241 through 251 and this Article because the operation or facility does not discharge as described by A.R.S. 49-241.
2. Is not subject to the requirements of A.R.S. 49-241 through 251 and this Article because the operation or activity is exempted by A.R.S. 49-250 or R18-9-105.
3. Is subject to the general permit requirements of A.R.S. 49-241 through 251 and this Article.
4. Is subject to the individual permit requirements of A.R.S. 49-241 through 251 and this Article.

D. If, after issuing a determination under this Section, the Department concludes that its determination of applicability or the information relied upon for a determination of applicability is inaccurate, the Department may modify or withdraw its determination after written notice to the person who requested the determination of applicability.

R18-9-107. Individual permits: Application process

A. Any person who owns or operates a facility that discharges shall obtain an Individual Aquifer Protection Permit unless the facility is subject to a general permit issued by this Article, or is exempted by either A.R.S. 49-250.B. or R18-9-105. A person who is required to obtain an Individual Aquifer Protection Permit and who is not subject to R18-9-103 A. and B., C., or D. shall not discharge after the effective date of this Article without an Individual Aquifer Protection Permit.

B. A person who is required to obtain an Individual Aquifer Protection Permit shall submit a permit application to the Department according to the following:

1. For a new facility for which the owner or operator is not subject to R18-9-103 A. and B., C., or D., not later than 180 days before the date on which the facility is expected to begin discharging.
2. For a new facility for which the owner or operator is subject to R18-9-103 A. and B., C., or D., within 90 days after receipt of a written request from the Director.
3. For an existing facility, within 90 days after receipt of a written request from the Director.

C. In the case of a permit application to be submitted at the request of the Director, the Director may establish a permit application schedule upon the request of the applicant if the

4. The annual application of cadmium shall not exceed 0.5 Kg/ha or 0.45 pounds per acre.

5. The application of sludge shall not result in an application of nitrogen that exceeds the nitrogen requirement of the crop to be grown with that sludge application.

6. The application of the sludge shall not result in a hydraulic loading rate that exceeds 27,000 gallons per acre per application.

7. The sampling required to determine the application rates described in this Section shall be performed no more than one month prior to the application.

8. The analyses required to determine the application rates described in this Section shall be performed by laboratories certified by the State if such certification procedures exist.

G. Records relating to sludge application shall be kept and shall be available as follows:

1. Copies of any soil, crop, sludge, or water monitoring record shall be made available to the owner of the wastewater treatment facility from which the sludge was obtained and to the Department.

2. A record of the sludge application at each site shall be kept and submitted monthly to the owner of the wastewater treatment facility and made available to the Department. The record shall include the dates of sludge application and weather conditions on those dates; the amounts, quality, and source of the sludge; the location within the site where the sludge was applied; and the cumulative amounts of nutrients and heavy metals applied to each field.

H. The irrigation of the application site with fresh water shall not exceed the consumptive use of the crop and evapotranspiration needs.

R18-9-129. General permits: other facilities

A. A General Permit is issued for the discharge of wash water from sand and gravel operations, and placer mining operations, if only physical processes are employed and no hazardous substances, other than those naturally existing in the sand and gravel or the placer material, have been added or exposed during the processing or removal of the sand and gravel.

B. A General Permit is issued for discharges from hydrostatic tests of drinking water distribution systems, and of other pipelines not previously used for the transmission of fluids, if all of the following conditions are met:

1. The quality of the source water does not violate any Aquifer Water Quality Standard.
2. The discharge is not to a Water of the United States, as defined in 40 CFR Part 122.2.
3. The test site is restored to its natural grade.

C. A General Permit is issued for discharges from hydrostatic tests of pipelines previously used for transmission of fluids, other than those previously used for drinking water distribution systems, if all of the following conditions are met:

1. All liquid discharged is contained in an impoundment which is lined with flexible geomembrane material having a thickness of at least 10 mils.
2. The liner material is placed over a layer, at least three inches in thickness, consisting of well-sorted sand or finer grained material, or over an underliner determined by the Director to provide equal or better protection.
3. Within 60 days after the end of the hydrostatic test, all test waters are evaporated, or removed from the impoundment to a treatment works or landfill approved to accept such material. Other methods for removal of the test waters must have the prior written approval of the Director.
4. The liner is removed and disposed of at an approved

Stat. 2767; 42 United States Code sections 9601 et. seq., as amended), or any known location of a hazardous substance disposal.

B. Pilot projects shall be limited to a duration of two years commencing with the first application or injection of water at the facility site. Upon written request, the Department may issue an extension of this time limit, not to exceed one year, if the water to be recharged or stored has not been available to conduct the project.

C. Unless an extension described in Subsection B. has been granted, the applicant shall submit to the Department, a closure plan or a notice of intent to apply for an individual permit at least 30 days prior to the end of the time limit prescribed in Subsection B. A notice of intent to apply for an individual Aquifer Protection Permit shall include a schedule for the timely submittal of the permit application.

R18-9-126. General Permits: Agricultural application of wastewater sludge

A. A General Permit is issued for agricultural applications of wastewater sludge meeting all of the conditions described in this section.

B. Any sludge stored at the application site for more than 24 hours shall be stored in water-tight manner.

C. The site at which the sludge is applied is subject to the following conditions:

1. The sludge shall not be stored or applied closer than 250 feet from any water well, other than a public or semi-public drinking water well, or closer than 1,000 feet from any public or semi-public drinking water supply well.

2. The sludge shall not be applied to land with slopes greater than six percent.

3. Application sites within the 100-year floodplain shall be approved by the local floodplain administrator.

4. The sludge shall not be applied to land where the mean annual groundwater elevation is less than 40 feet below the land surface.

D. The sludge shall be applied as follows:

1. All sludge shall be uniformly distributed and incorporated.

2. A new crop shall be grown with each application of sludge.

3. The sludge shall not be applied to frozen or snow-covered ground or to saturated soils.

E. The rate at which the sludge is applied is subject to all of the following:

1. The sludge shall be applied at a rate not to exceed eight dry tons per acre.

2. The sludge shall not be applied to soil with pH of less than 6.5 at the time of the sludge application.

3. No more than 10% of the maximum allowable cumulative metal application shall be applied annually. The maximum allowable cumulative metal application varies with the cation exchange capacity (CEC) of the soil and shall be determined based on the following table:

CEC METAL	Max. Allowable Cumulative Metals Application (lbs/ac)		
	Less Than 5	5 to 15	Greater than 15
Lead	500	1000	2000
Zinc	250	500	1000
Copper	125	250	500
Nickel	50	100	200

applicant can show that more time is needed to gather and compile data as required by R18-9-106. A permit application schedule established by the Director shall require the submission of information as expeditiously as is practicable. If a permit application schedule provides that actions be taken during a period that exceeds 90 days after the date of receipt of a written request for the submission of an application, the schedule shall set forth interim requirements and the dates for their achievement. If the time necessary for completion of any interim requirements is more than six months and is not readily divisible into stages for completion, the schedule shall contain interim dates for submission of reports on progress toward completion of the interim requirements and shall indicate a projected completion date. Within 30 days after a date specified in a permit application schedule, an applicant shall submit to the Department a report indicating whether the action or actions to be taken as of that date were taken.

D. Upon request by the applicant, the Department shall schedule and hold a preapplication conference with an applicant to discuss any of the requirements of this Article. In addition, an applicant may submit to the Department for review and comment a proposal for meeting any of the informational requirements of this Article. The Department shall comment on the proposal within 30 days after receipt of the proposal.

E. Within 30 days after receipt of an application for an individual Aquifer Protection Permit, the Director shall notify the applicant in writing whether the application is complete. If the application is incomplete, the notification shall include a listing of additional information which is required to process the application and a time for the submission of the additional information. Within 20 days of receipt of the resubmitted application, the Director shall determine if the resubmitted application is complete.

F. Within 90 days after receipt of a complete application, the Director shall notify the applicant, in writing and by certified mail, of the preliminary decision either to deny the application or to issue an individual Aquifer Protection Permit. If, during this 90 day period, the Director determines there to be technical deficiencies in the application, the Director immediately shall give the applicant written notification of these deficiencies and give the applicant an opportunity to cure the deficiencies. The number of days between notification of the applicant and the submission of additional information or a response by the applicant shall not be included within the 90 days allowed the Director for notification of the applicant of the Director's decision to deny an application or to issue an individual Aquifer Protection Permit.

G. At its earliest opportunity, the Department shall make available to the applicant a copy of the draft of the individual Aquifer Protection Permit.

H. Within 30 days after the notification of the applicant required by Subsection F., the Director, in accordance with R18-1-401 and R18-9-126, shall cause to be published a notice of the preliminary decision to issue or deny an individual Aquifer Protection Permit.

I. Within 45 days after the publication of the public notice, a decision whether to conduct a public hearing shall be made by the Department. If a hearing is to be held, the Department shall schedule the hearing to begin on or before 75 days from the close of public comment established in the public notice required by subsection H. The hearing record shall be closed within seven days after the close of the hearing.

J. Except as otherwise provided in this subsection, the Director shall issue or deny an individual Aquifer Protection Permit within 30 days after the close of the public comment period established in the public notice required by Subsection H., or, if a public hearing is held, within 45 days after the public hearing

record is closed. The Director immediately shall give the applicant written notification of the final decision to issue or deny an Individual Aquifer Protection Permit. The Director may extend the final decision deadline for not more than 90 days after the close of the public comment period, or, if a public hearing is held, after the public hearing record is closed, if the Director determines that additional information is required to make the decision whether to issue or deny a permit. The Director shall give the applicant written notification of a decision to extend the final decision deadline.

K. If an Individual Aquifer Protection Permit is denied, the Director shall advise the applicant of the reasons for the decision in writing.

R18-9-108. Individual permits: Application requirements

A. A person applying for an Individual Aquifer Protection Permit shall provide the Director with all of the following information on a form provided by the Department:

1. The name and mailing address of the applicant.
2. The name and mailing address of the owner of the facility.
3. The name and mailing address of the operator of the facility.
4. The legal description of the location of the facility.
5. Expected operational life of the facility.
6. Any other federal or state environmental permits issued to the applicant.

B. For purposes of this Subsection and Subsection C., "know" means that knowledge that the applicant actually has, or could reasonably be expected to have. Except as otherwise provided in R18-9-109.A, a person applying for an Individual Aquifer Protection Permit shall provide the Director with all of the following information as attachments to the form described in Subsection A.:

1. Two copies of a topographic map, or other appropriate map approved by the Department, of the facility location and contiguous land area, showing the known use of adjacent properties and all known water well locations found within one-half mile of the facility, and accompanied by a description of well construction details and well uses, if available.
2. Two copies of a facility site plan which shows all known property lines, structures, water wells, injection wells, and drywells and their uses, topography and the location points of discharge. The facility site plan shall also include all known borings unless the Director determines that borings are numerous and that the requirement can be satisfied by a narrative description of the number and location of the borings.
3. Two copies of the facility design plans indicating proposed or as-built design details and proposed or as-built configuration of basins, ponds, waste storage areas, drainage diversion features, or other engineered elements of the facility affecting discharge.
4. A summary of the known past facility discharge activities and the proposed facility discharge activities, indicating all of the following:
 - a. The chemical, biological, and physical characteristics of the discharge.
 - b. The rates, volumes, and frequency of the discharge for each facility.
 - c. The location of the discharge.
5. A description of the BADCCT to be employed in the facility. The applicant shall submit in support of the proposed BADCCT a statement of the technology which will be employed to meet the requirements of A.R.S. 49-243.B. This statement shall describe the alternative discharge control measures considered, the

3. The bottom of subsurface disposal system is at least:

- a. 40 feet above the static groundwater level where the soil percolation rate is slower than or equal to one minute per inch but faster than 10 minutes per inch.

- b. 10 feet above the static groundwater level where the soil percolation rate is slower than or equal to two minutes per inch but faster than 10 minutes per inch.

- c. 5 feet above the static groundwater level where the soil percolation rate is slower than or equal to 10 minutes per inch.

D. The materials received by any sewage disposal system subject to a General Permit issued by this Section shall conform to both of the following:

1. The materials are typical sewage and do not include motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers, or other materials not generally associated with toilet flushing, food preparation, laundry and personal hygiene.

2. Commercial operations utilizing hazardous substances or creating hazardous wastes, as defined in A.R.S. 49-921.5., do not dispose of such materials into the system.

R18-9-127. General permits: recharge pilot projects and underground storage and recovery pilot projects

A. A General Permit is issued for recharge pilot projects and underground storage and recovery pilot projects which meet all of the following conditions:

1. Not more than 10,000 acre feet of water shall be applied or injected at the facility site over a two-year period.

2. Site-specific hydrogeologic data for the development of an Individual Aquifer Protection Permit for the project is obtained in the course of operating the facility. This condition is satisfied if the permittee does both of the following:

- a. Drills, and completes by the end of the first quarter after the first application or injection of water at the facility site, a sufficient number of monitoring wells to adequately assess the impact of the discharge on aquifer water quality.

- b. Samples quarterly by the monitoring wells described in Subparagraph a.

3. The source water to be used for recharge or underground storage is either of the following:

- a. Water conveyed by way of the Central Arizona Project Aqueduct or through a natural river drainage system.

- b. Any water, other than that described in Subparagraph a., which does not violate Aquifer Water Quality Standards or any applicable surface water quality standards, except that water that is not delivered directly to the saturated zone may exceed any standards for bacteria and turbidity.

4. The source water to be used for recharge or underground storage is not effluent dominated water, as defined by R18-11-201.7, at the point of diversion.

5. The point of diversion to the recharge or underground storage and recovery facility is not within five miles downstream from the surface discharge from a wastewater treatment plant.

6. Prior to commencement of operation, the operator notifies the Department of the intent to conduct a pilot recharge project or underground storage and recovery project.

7. Prior to commencement of operation, the operator identifies the information to be collected in coordination with the Department of Water Resources and the Department.

- B. The operator holds a permit issued according to Title 45, Chapter 2, Article 13, or Chapter 3, Article 1 of the Arizona Revised Statutes.

9. The project is not located within one-half mile from any hazardous waste landfill, sanitary landfill, any site on the National Priority List under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510; 94

comments or attended a public hearing on the permit action, or who made written requests to receive the final permit determination.

1. The Director shall respond in writing to all written comments submitted during the written public comment period.

R18-9-125. General permits: general provisions

A. The Director may revoke a person's general permit and require the person to obtain an Individual Aquifer Protection Permit pursuant to A.R.S. 49-245.B and this Article for any of the following reasons:

1. The person has failed to comply with the terms and conditions of the General Permit as described in this Article.

2. The discharge from a facility, subject to a General Permit causes or contributes to the violation of an Aquifer Water Quality Standard.

B. The Director may revoke a General Permit for all facilities within a specific geographic area if the Director determines that the cumulative effects of the facilities subject to the general permit are such that any water quality standard established pursuant to A.R.S. 49-221 and 49-223 may be violated due to geologic or hydrologic conditions.

C. The Director shall notify a permittee, by certified mail, of the Department's decision to revoke a person's General Permit, and of the requirement to apply for an Individual Aquifer Protection Permit pursuant to this Article.

D. The issuance of a General Permit under this Article pursuant to A.R.S. 49-245, does not affect or modify in any way the obligations or liability of any person for any damages, injury, or loss, resulting from a discharge.

R18-9-126. General permits: sewage disposal systems

A. A General Permit is issued for sewage disposal systems which have flows of less than 2000 gallons per day, which are in compliance with R18-9-801 through R18-9-819, and which receive materials which conform to Paragraph 1. of Subsection D.

B. A General Permit is issued for sewage disposal systems which have flows greater than or equal to 2000 gallons per day but less than 20,000 gallons per day, which are approved by the Department, the Arizona Department of Health Services, or a county health department pursuant to R18-9-804 and R18-9-805 prior to the effective date of this article and which are in compliance with the provisions of R18-9-804 and R18-9-805.

C. A general permit is issued for sewage disposal systems which have flows greater than or equal to 2000 gallons per day but less than 20,000 gallons per day, which are approved pursuant to R18-9-804 and R18-9-805 after the effective date of this Article, and which meet all of the following conditions:

1. The subsurface disposal system is located in a soil which has a percolation rate faster than 60 minutes per inch, but not faster than one minute per inch.

2. The discharge density of effluent from the sewage disposal system, when based on the average daily sewage flow figures found in Appendix 1, is not greater than:

a. 1,200 gallons, or the equivalent of 0.4002 lbs. of total nitrogen, per day per acre, where the nitrate concentration (as nitrogen) of the ambient groundwater is 3.0 mg/l or less;

b. 800 gallons, or the equivalent of 0.2668 lbs. of total nitrogen, per day per acre, where the nitrate concentration (as nitrogen) of the ambient groundwater is greater than 3.0 mg/l and less than or equal to 5.0 mg/l; or

c. 400 gallons, or the equivalent of 0.1334 lbs. of total nitrogen, per day per acre, where the nitrate concentration (as nitrogen) of the ambient groundwater is greater than 5.0 mg/l and less than or equal to 7.0 mg/l.

technical and economic advantages and disadvantages of each alternative, and the justification for selection or rejection of each alternative. The applicant shall evaluate each alternative discharge control technology, relative to the amount of discharge reduction achievable, site specific hydrologic and geologic characteristics, other environmental impacts, and water conservation or augmentation. The economic impact of implementation of each alternative control technology shall be evaluated on an industry-wide basis. In addition, a statement for a facility in existence on the effective date of this Article shall reflect consideration of the factors listed in A.R.S. 49-243.B.1.(a) through (h).

6. A demonstration that the facility will not cause or contribute to a violation of Aquifer Water Quality Standards at the applicable point of compliance. The demonstration shall propose the point or points of compliance for the facility based on A.R.S. 49-244. If an Aquifer Water Quality Standard for a pollutant has been exceeded in an aquifer, the application shall also include a demonstration that no additional degradation of the aquifer, relative to that pollutant and determined at the applicable point of compliance will occur as a result of the discharge from the proposed facility.

7. A demonstration that the person applying for the Individual Aquifer Protection Permit is technically capable of fully carrying out the conditions of the permit. A person applying for an Individual Aquifer Protection Permit may make the demonstration required by this Subsection by submitting the following information for each person principally responsible for designing, constructing, or operating the facility:

a. Any pertinent licenses or certifications held by the person.

b. Any professional training relevant to the design, construction, or operation of the facility.

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

8. A demonstration that the person applying for the Individual Aquifer Protection Permit is financially capable of constructing, operating, closing, and assuring proper post-closure care of the facility in compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, this Article, and the conditions of the Individual Aquifer Protection Permit. The person applying for an Individual Aquifer Protection Permit shall submit all of the following in support of the demonstration of financial capability as described in this paragraph:

a. An estimate of the total cost of constructing, operating, closing, and assuring proper post-closure care in compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, this Article, and the conditions of the Individual Aquifer Protection Permit.

b. A statement by the chief financial officer of the applicant that the applicant is financially capable of meeting the costs described in Subparagraph a. The statement shall specify in detail the financial arrangements for meeting the closure and post-closure plans submitted pursuant to Paragraph 2. of Subsection C.

c. For a person other than a state or federal agency or a county, city, town or other local governmental entity, the demonstration of financial capability shall be further supported by any one of the following:

1. The most recent copy of the person's 10K form filed pursuant to section 13 or 15(d) of the Federal Securities and Exchange Act of 1934 (c. 404, Title 1; 48 Stat. 894-95; 15 United States Code sections 78m and 78o, as amended).

11. A report that contains all of the following information:

(a) A description of the person's status as a corporation, partnership, or other legal entity.

(b) A description of the person's business.

(c) An indication of the person's net worth, including a description of major assets and liabilities.

(d) A brief description of any judgment exceeding \$100,000.00 rendered against the person during the five years preceding the date of the application.

(e) A brief description of any bankruptcy or insolvency proceedings instituted by the person during the five years preceding the date of the application.

(f) If the person is a corporation, the names of its executive officers and their dates of birth.

iii. 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 Individual Aquifer Protection Permit.

9. A brief description of any action for the enforcement of any 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 person during the five years preceding the date of application.

10. Evidence that the facility complies with applicable municipal or county zoning ordinances and regulations.

C. In addition to the information required by Subsection A. and B., a person applying for an Individual Aquifer Protection Permit shall provide any of the following information which the Director may request if necessary in order to determine whether to issue an Individual Aquifer Protection Permit.

1. A hydrogeologic study which defines the discharge impact area for the operational life of the facility and which demonstrates that the facility will not cause or contribute to a violation of an Aquifer Water Quality Standard at the applicable point of compliance. If an Aquifer Water Quality Standard for a pollutant has been exceeded in an aquifer, the hydrogeologic study shall also include a demonstration that no additional degradation of the aquifer, relative to that pollutant and determined at the applicable point of compliance, will occur as a result of the discharge of the proposed facility. The hydrogeologic study, as requested by the Director, shall include any of the following:

a. A description of the surface and subsurface geology including a description of all borings.

b. The location of any perennial or ephemeral surface water bodies.

c. The characteristics of the aquifer and geologic units with limited permeability, including depth, hydraulic conductivity, and transmissivity.

d. Rates, volumes, and directions of surface water and groundwater flow, including hydrographs, if available, and equipotential maps.

e. The location of the 100-year flood plain and an assessment of the 100-year flood surface flow and potential impacts on the facility.

f. A documentation of the existing quality of the water in the aquifers underlying the site, including, where available, the method of analysis and quality assurance and quality control procedures associated with the documentation.

g. A documentation of the extent and degree of any known soil contamination in the vicinity of the facility.

h. An assessment of the potential of the discharge to cause the leaching of pollutants from surface soils or vadose materials.

i. Any anticipated changes in the water quality expected as a result of the discharge.

j. A description of any expected changes in the elevation and flow directions of the groundwater that may be caused by the facility.

k. A map of the facility's discharge impact area.

l. The criteria and methodologies used to determine the discharge impact area.

Fee

Permit modification that constitutes a major modification as described in A.R.S. 49-201.1B	\$ (Same as that required under subsection A)
Permit modification that is described as a minor modification under R18-9-121.D.	0
Permit modification that is neither a major modification nor a minor modification	200
Permit transfer	200

R18-9-124. Public participation

A. On a monthly basis, the Director shall cause to be posted in the offices of each county department of health and each council of governments lists of all applications for Individual Aquifer Protection Permits, of the notifications received pursuant to R18-9-116.C., and of the proposed permit actions, received or initiated by the Department during the previous month.

B. In addition to the information required to be published in a public notice, any public notice issued under this Article shall include a description of the procedure for requesting a public hearing regarding a proposed permit action specifying both of the following:

1. That any request for a public hearing shall be submitted in writing to the Department prior to the close of the public comment period.

2. That any request for a public hearing shall identify the proposed permit action and shall state specifically the reason for making the request.

C. Except as otherwise provided in Subsection G., any written public comment period established in a public notice issued under this Article shall extend for no more than 30 calendar days after the date of the first publication of the public notice.

D. Each public notice issued under this Article shall be mailed to the permit applicant, affected federal, state and local agencies, and to persons who have requested, in writing, copies of particular proposed permit action notices.

E. If two or more proposed permit actions have similar effective dates, and are located in the same vicinity, public notices of the proposed actions may be combined and issued as a single notice.

F. The Department shall conduct a public hearing on a proposed permit action if the Director determines either of the following:

1. That significant public interest exists.

2. That significant issues or information have been brought to the attention of the Department which have not been considered previously in the permitting process.

G. Public notice of any public hearing held pursuant to this Article shall be made according to R18-1-401 and the public hearing shall be conducted as a general public hearing pursuant to R18-1-402. When a public hearing is conducted, written public comment shall be accepted until the close of the hearing record as specified by the person presiding at the public hearing.

H. At the same time that the Department notifies an applicant of the final permit determination, the Department shall send notice of such determination, through regular mail, to affected State and local agencies, and to persons who submitted

facilities for which the permits are sought are part of the same project or operation, if the facilities are located in a contiguous geographic area, and if the applications for the facilities are submitted simultaneously. Under the circumstances described in this Section, the Director may also consolidate those permit conditions that have general applicability to the facilities for which permits are sought.

R18-9-123. Fees

A. With each application for an Individual Aquifer Protection Permit, the applicant shall remit a fee, payable to the State of Arizona, which is not refundable and which shall be deposited in the state general fund, according to the following schedule, except as otherwise provided in Subsections B., C. and D.

Categories	Fee (In U.S. dollars)
On-Site Sewage Disposal Systems (less than 20,000 gpd)	\$1200
Wastewater Treatment Plants Where Influent is Predominantly Sewage	
Surface Impoundment	1400
Discharge to Water of the U.S.	1600
Subsurface Discharge	1400
Recharge and Underground Storage and Recovery without Effluent	2200
Recharge and Underground Storage and Recovery using Effluent	2800
Solid Waste Disposal Facility (Landfills)	2200
Construction Debris Landfills	1200
Mines	
Surface Impoundments	1800
Tailings Piles or Ponds	2200
Base Metal Leaching Operations Including Collection and Process Ponds	2300
Cyanide Leaching Including Collection and Process ponds	1500
In-Situ Leaching	3400
Discharge to Water of U.S.	1900
Drywells	900
Industrial Wastewater Discharges	
Surface Impoundment	2200
Discharge to Water of U.S.	1700
Subsurface Discharge	1900
Other Discharging Facilities	1800

B. For individual Aquifer Protection Permits which are consolidated pursuant to R18-9-122, and unless the applicant qualifies for the fee provision described in Subsection C., the applicant shall remit a fee which equals the sum of the greatest fee among the facilities, and the fee applicable to each additional facility reduced by 40%.

C. An applicant applying for individual permits for two or more facilities of the same category of facilities that, in addition, are engaged in similar operations, and have discharges of similar chemical characteristics, and are geographically contiguous is required to remit only that fee applicable to a single such facility.

D. With an application that is a request for modification to an individual Aquifer Protection Permit or for a transfer of an individual Aquifer Protection Permit, the applicant shall remit a fee in the same manner as described in subsection A., and according to the following schedule:

- m. The proposed location of each point of compliance.
2. A detailed proposal indicating the alert levels, discharge limitations, monitoring requirements, contingency plans, compliance schedules, and temporary closure, closure, and post-closure plans which the applicant proposes to satisfy the requirements of title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and this Article.
3. Any other relevant information needed by the Director to determine whether to issue a permit.
- D. A person applying for an Individual Aquifer Protection Permit shall certify in writing that the information submitted in the application is true and accurate, to the best of the applicant's knowledge.

R18-9-109. Special provisions: Recharge and Underground Storage and Recovery

- A. A person who is applying for an Individual Aquifer Protection Permit for a facility that is a recharge or an underground storage and recovery project shall provide the Director with the information described in R18-9-108.A., B., and C., except for that information described in R18-9-108.B.5.
- B. When the Department receives an application for an individual Aquifer Protection Permit for a facility that is a recharge project or an underground storage and recovery project, the Department shall administer the application process described in this Article in coordination with the recharge and underground storage and recovery permit processes administered by the Department of Water Resources. The Department shall advise the Department of Water Resources of each permit application received for an Individual Aquifer Protection Permit for a facility that is a recharge project or an underground storage and recovery project.

R18-9-110. Individual permit conditions: Alert levels

- A. An individual Aquifer Protection Permit shall prescribe an alert level based on the site-specific conditions described by the applicant in the application submitted pursuant to R18-9-108, or otherwise known by the Director.
- B. An alert level prescribed in an individual permit may be based on a pollutant which indicates the potential appearance of another pollutant.
- C. An individual permit may prescribe the measurement of an alert level at the point of release, the point of compliance, or any intervening point.
- D. An Individual Aquifer Protection Permit shall require notification of the Department as described by R18-9-113 and the implementation of the appropriate parts of the contingency plan as described in R18-9-114 if an alert level is exceeded.

R18-9-111. Individual permit conditions: Discharge limitations

- A. An Individual Aquifer Protection Permit shall prescribe discharge limitations based on the considerations described in A.R.S. 49-263 A., B., C., and D.
- B. An Individual Aquifer Protection Permit shall require notification of the Department as described in R18-9-113 and the implementation of the appropriate parts of a contingency plan as described in R18-9-114 if a discharge limitation is exceeded.

R18-9-112. Individual permit conditions: monitoring requirements

- A. An Individual Aquifer Protection Permit shall require that the permittee conduct any monitoring activity necessary to assure compliance with any other Aquifer Protection Permit condition, with the applicable water quality standards established

pursuant to A.R.S. 49-221 and 49-223, and with A.R.S. 49-241 through 49-251.

B. An Individual Aquifer Protection Permit shall specify all of the following:

1. The type and method of monitoring to be conducted.
 2. The frequency of monitoring.
 3. Any requirements for the installation, use, or maintenance of monitoring equipment.
 4. The intervals at which monitoring results shall be reported to the Department.
- C. An Individual Aquifer Protection Permit shall require that a permittee make, for each sample taken or measurement made as required by the Individual Aquifer Protection Permit, a monitoring record consisting of all of the following:
1. The date, time, and exact place of a sampling or measurement and the name of each individual who performed the sampling or measuring.
 2. The procedures used to collect the sample or make the measurement.
 3. The date on which sample analysis was completed.
 4. The name of each individual or laboratory who performed the analysis.
 5. The analytical techniques or methods used to perform the sampling and analysis.
 6. The chain of custody records.
 7. Any field notes relating to the information described in Paragraphs 1. through 6.
- D. An Individual Aquifer Protection Permit shall require that a permittee retain or have access to a monitoring record made pursuant to Subsection C. for a period of 10 years after the date of the sample or measurement.

R18-9-113. Individual permit conditions: Reporting requirements

- A. An Individual Aquifer Protection Permit shall require that a permittee give written notice to the Director 180 calendar days before any major modification to the facility, as described in A.R.S. 49-201.18.
- B. Except as otherwise provided in R18-9-114.B., an Individual Aquifer Protection Permit shall require that a permittee notify the Director within five days after becoming aware of a violation of a permit condition or that an alert level has been exceeded.
- C. An Individual Aquifer Protection Permit shall require that a permittee submit a written report within 30 days after the permittee becomes aware of the violation of a permit condition. The report shall document all of the following:
1. A description of the violation and its cause.
 2. The period of violation, including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
 3. Any action taken or planned to mitigate the effects of the violation, or to eliminate or prevent recurrence of the violation.
 4. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard.
 5. Any malfunction or failure of pollution control devices or other equipment or process.
- D. An Individual Aquifer Protection Permit shall require that a permittee shall notify the Director within five days after the occurrence of any one of the following:
1. The filing of bankruptcy by the permittee.
 2. The entry of any order or judgment against the permittee for the enforcement of any environmental protection statute and in which monetary damages or civil penalties are imposed.

any relevant information which is otherwise developed or acquired by the Department.

3. That the applicant has provided false or misleading information to the Department.
- C. The Director may modify an Individual Aquifer Protection Permit based upon a request or upon the Director's initiative. A request for permit modification shall be in writing and shall contain the facts and reasons which justify the request. The Director may modify an Individual Aquifer Protection Permit if the Director determines any one or more of the following:
 1. That material and substantial alterations or additions to a permitted facility justify a change in permit conditions.
 2. That the discharge from the facility violates or could reasonably be expected to violate any Aquifer Water Quality Standard.
 3. That rule or statutory changes have occurred, such as to require a change in the permit.
 4. That there has been a change of an applicable point of compliance.
- D. Notwithstanding Subsection C. and R18-9-124.F., and with the written concurrence of the permittee, the Director may make minor modifications to the Individual Aquifer Protection Permit without giving public notice or conducting a public hearing, for any of the following reasons:
 1. To correct typographical errors.
 2. To increase the frequency of monitoring or reporting.
 3. To change an interim compliance date in a compliance schedule if the permittee can show just cause and that the new date does not interfere with the attainment of a final compliance date requirement.
 4. To change construction requirements, if the alteration complies with the requirements of this Article and provides equal or better performance.
 5. To replace monitoring equipment, including wells, if such replacement results in equal or greater monitoring effectiveness.
- E. The Director may transfer an Individual Aquifer Protection Permit if the Director determines that the proposed transferee will comply with A.R.S. 49-241 through 251 and this Article. A permittee is responsible for complying with permit conditions, A.R.S. 49-241 through 251, and this Article, regardless of whether the permittee has sold or otherwise disposed of the facility, until the Director transfers a permit pursuant to this Subsection.
 7. The Director may suspend or revoke an Individual Aquifer Protection Permit or Groundwater Quality Protection Permit, for any of the following reasons:
 1. Non-compliance by the permittee with any applicable provision of Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, this Article, or any permit condition.
 2. The permittee's misrepresentation or omission of any fact, information, or data related to an Aquifer Protection Permit application or permit conditions.
 3. If the Director determines that the permitted activity is causing or may cause a violation of any Aquifer Water Quality Standard.
 4. If a permitted discharge has the potential to cause or will cause imminent and substantial endangerment to public health or the environment.
 6. The Director shall issue a public notice of all proposed permit actions pursuant to R18-9-124.

R18-9-122. Consolidation of individual permits

The Director may consolidate into a single document, and may issue as a single permit, any number of Individual Aquifer Protection Permits for which any one applicant applies if the

R18-9-118. Individual permit duration

Subject to modification or revocation as provided in this Article, and except as otherwise provided in R18-9-119, an individual Aquifer Protection Permit issued under this Article shall be valid for a specified term not to exceed the operational life of the facility and any period during which the facility is subject to a post-closure plan pursuant to R18-9-116. F. through H.

R18-9-119. Temporary permits

A. The Director may waive any or all of the application requirements, the application process, or the individual permit conditions described in this Article in issuing a temporary individual Aquifer Protection Permit to a person for the operation of a facility to be used for the remediation of an accidental discharge of a pollutant.

B. Subject to the other provisions of this Subsection, the Director may postpone any or all of the public notice or public hearing requirements of this Article and issue a temporary individual Aquifer Protection Permit in order to prevent a discharge or if circumstances which could not have been foreseen or controlled by the applicant do not allow the timely preparation and issuance of an individual Aquifer Protection Permit. Public notice shall not be postponed beyond 30 days after the issuance of the temporary individual Aquifer Protection Permit.

C. A temporary individual Aquifer Protection Permit issued under this Section shall be issued for a period not to exceed one year and shall not be renewed.

R18-9-120. Individual permits: Certification of permittee

The Director shall not issue an individual Aquifer Protection Permit unless the permittee certifies that the permittee understands the requirements and conditions of the permit and the penalties for violations of the permit conditions, this Article, and Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes.

R18-9-121. Individual permits: Permit actions

A. The Director shall issue an individual Aquifer Protection Permit if the Director determines, based upon the information obtained by or made available to the Department, that the applicant will comply with A.R.S. 49-241 through 251 and this Article. The Director may issue an individual Aquifer Protection Permit conditioned upon the applicant providing evidence of a bond, an insurance policy, or a trust fund covering the costs of meeting the closure and post-closure requirements of the individual Aquifer Protection Permit if the Director otherwise would have denied the permit under Paragraph 2. of Subsection B. on the basis that the applicant was financially incapable of meeting the closure and post-closure requirements of the individual Aquifer Protection Permit.

B. The director may deny an individual Aquifer Protection Permit if the Director determines upon completion of the application process described in R18-9-107 and R18-9-108 any one of the following:

1. That the applicant has failed or refused to correct deficiencies in the permit application.
2. That the applicant has failed to demonstrate that the facility and the operation thereof will comply with the requirements of A.R.S. 49-241 through 251 and this Article. This determination shall be based on the information submitted in the Aquifer Protection Permit application, in addition to any information submitted to the Department pursuant to a public hearing, or

R18-9-114. Individual permit conditions: Contingency plan requirements

A. An individual Aquifer Protection Permit shall require that a contingency plan specify, in a manner consistent with this section, the actions to be taken in the event of a discharge that results in any one of the following:

1. Violation of a permit condition.
2. Violation of an Aquifer Water Quality Standard.
3. An alert level having been exceeded.
4. An imminent and substantial endangerment to the public health or the environment.

B. An individual Aquifer Protection Permit shall require that a contingency plan contain all of the following:

1. A plan to provide emergency response on a 24-hour basis in the event that a condition arises which results in an imminent and substantial endangerment to the public health or the environment.
2. The designation of an emergency response coordinator to be responsible for activation of the contingency plan and emergency response measures.
3. A requirement that the emergency response coordinator notify the Department immediately in the event that emergency response measures are taken or those portions of a contingency plan that address an imminent and substantial endangerment are activated.
4. A list of names, addresses and telephone numbers of persons to be contacted in the event that an imminent and substantial endangerment to the public health or the environment arises.
5. A general description of the procedures, personnel and equipment to be used to assure appropriate mitigation of unauthorized discharges.

C. Contingency plans required by the Federal Water Pollution Control Act (P.L. 92-500; 86 Stat. 816; 33 United States Code sections 1251, et. seq., as amended) or the Resource Conservation Recovery Act (P.L. 94-580; 90 Stat. 2796; 42 United States Code sections 6901 et. seq., as amended) may be amended to meet the requirements of this section and submitted to the Department for approval in lieu of a separate aquifer protection contingency plan.

D. An individual permit may require that a contingency plan provide for any one or more of the following actions to be taken in the event of a discharge that results in any of the conditions described in Subsection A.:

1. Verification sampling.
2. Further monitoring.
3. The submission of reports describing the causes, impacts, or mitigation of the discharge.
4. Submission of a proposed corrective action plan for approval by the Director as described by this Paragraph. The Director shall approve the proposed corrective action plan if the corrective action plan returns the facility to compliance with the facility's permit conditions, this Article and Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes.

E. A permittee shall maintain at least one copy of the contingency plan required by the individual Aquifer Protection Permit at the location where the day-to-day decisions regarding the operation of the facility are made. A permittee shall advise all employees responsible for the operation of the facility of the location of copies of the contingency plan.

F. A permittee shall revise promptly all copies of the contingency plan upon any change in the information contained in the contingency plan.

R18-9-115. Individual permit conditions: Compliance schedule

A. A compliance schedule established in an Individual Aquifer Protection Permit shall require compliance as expeditiously as is practicable. If a compliance schedule provides that actions be taken during a period that exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement. If the time necessary for completion of any interim requirements is more than one year and is not readily divisible into stages for completion, the permit shall contain interim dates for submission of reports on progress toward completion of the interim requirements and shall indicate a projected completion date. Within 30 days after a date specified in a compliance schedule, a permittee shall submit to the Department a report indicating whether the action or actions to be taken as of that date were taken.

B. In determining the requirements of and length of a compliance schedule for a facility, the Director shall consider all of the following factors:

1. The character and impact of the discharge.
2. The nature of construction or activity required by the permit.
3. The number of persons affected or potentially affected by the discharge.
4. The current state of treatment technology.
5. The age of the facility.

C. An Individual Aquifer Protection Permit shall not establish a compliance schedule for a new facility for which the owner or operator is not subject to R18-9-103.A. and B. unless the facility will employ BADC1 and will not exceed Aquifer Water Quality Standards when the facility begins to discharge. The requirement of this Subsection that a facility employ BADC1 does not apply to a recharge project or an underground storage and recovery project.

R18-9-116. Individual permit conditions: Temporary cessation, closure, post-closure

A. An Individual Aquifer Protection Permit shall require that the permittee notify the Director before any temporary cessation of operations at the facility. An Individual Aquifer Protection Permit shall specify any measures to be taken by the permittee if there is any temporary cessation of operations at a facility.

B. An Individual Aquifer Protection Permit shall require that a permittee notify the Director of the permittee's intent to cease operations prior to ceasing, without intent to resume, an activity for which the facility was designed or operated.

C. An Individual Aquifer Protection Permit shall require that a permittee who ceases, without intending to resume, an activity for which a facility was designed and operated, submit to the Director for approval a closure plan within 90 days following the notification. A closure plan shall describe all of the following:

1. The approximate quantities and the chemical, biological, and physical characteristics of the materials to be removed from the facility.
2. The destination of the materials to be removed from the facility and an indication that placement of the materials at that destination is approved.
3. The approximate quantities and the chemical, biological, and physical characteristics of the materials that will remain at the facility.
4. The methods to be used to treat any materials remaining at the facility.
5. The methods to be used to control the discharge of pollutants from the facility.
6. Any limitations on future land or water uses created as

a result of the facility's operations or closure activities.

7. The methods to be used to secure the facility.
 8. An estimate of the cost of closure.
 9. A schedule for implementation of the closure plan and the submission of a post-closure plan.
- D. Within 60 days after receipt of a complete closure plan, the Director shall approve or reject the closure plan. The Director shall approve a closure plan that eliminates, to the greatest extent practicable, any reasonable probability of further discharge from the facility and of exceeding Aquifer Water Quality Standards at the applicable point of compliance.

E. An Individual Aquifer Protection Permit may prescribe any part of a closure plan submitted pursuant to Subsection C.

F. An Individual Aquifer Protection Permit shall require that a permittee submit to the Director for approval, and shall adhere to, a post-closure monitoring and maintenance plan for a facility, unless the Director determines that the closure of the facility will eliminate to the greatest degree practicable any reasonable probability of further discharge from the facility and of exceeding Aquifer Water Quality Standards at the applicable point of compliance. The post-closure plan shall describe all of the following:

1. The duration of post-closure care.
2. The monitoring procedures to be implemented by the permittee, including monitoring frequency, type, and location.
3. 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.
4. A schedule and description of physical inspections to be conducted at the facility following closure.
5. An estimate of the cost of post-closure maintenance and monitoring.
6. A description of limitations on future land or water uses, or both, at the facility site as a result of facility operations.

G. Within 60 days after receipt of complete post-closure plan, the Director shall approve or reject the post-closure plan. The Director shall approve a post-closure plan that eliminates, to the greatest extent practicable, any reasonable probability of further discharge from the facility and of exceeding Aquifer Water Quality Standards at the applicable point of compliance.

H. An Individual Aquifer Protection Permit may prescribe any part of a post-closure plan submitted pursuant to Subsection F.

I. An Individual Aquifer Protection Permit shall require that the permittee give the Department written notice that a closure plan or a post-closure plan has been implemented fully.

R18-9-117. Individual permit conditions: Technical and financial capability

A. An Individual Aquifer Protection Permit shall require that a permittee have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of the permit.

B. The Director may establish any of the permit conditions described in R18-9-109 through R18-9-116 on the basis of the Director's evaluation of the permittee's technical or financial capability necessary to carry out the terms and conditions of the Individual Aquifer Protection Permit.

C. An Individual Aquifer Protection Permit shall require that a permittee maintain any bond, insurance policy, or trust fund provided under R18-9-108.B.B.c.iii. or R18-9-121.A. A bond, insurance policy, or trust fund required to be maintained under this Subsection shall remain in effect for the duration of the permit.

Pre-Application Meeting Requested Information

An applicant for an Aquifer Protection Permit should bring the following information to the pre-application meeting.

- Location Map - such as a state road map, showing general location of the facility.
- Topographic Map - showing location of the facility. (7.5 min. USGS quadrangle map if available. Map must show Township, Range, and Section.)
- Site Map - showing all existing and planned features of the site, if known.
- Hydrogeologic Information
 - ✓ ○ Depth to groundwater, if known.
 - ✓ ○ Groundwater flow direction, if known.
 - ✓ ○ Rock and soil types in site vicinity, if known.
 - ✓ ○ Subsurface lithology, if known (driller's logs may be available from ADWR)
 - Wells within one-half mile radius of site (available from ADWR). Nearest well to the site if no wells are within ½ mile.
 - ✓ ○ Location of surface water bodies in the site vicinity.
 - ✓ ○ Groundwater Quality data, if available.
- Discharge Characterization
 - Discharge rate
 - Chemical composition of discharge
- Proposed (conceptual) or as-built design features of discharge control measures.
- Planned Life of Facility
- Information on Past Land Use
 - ✓ ○ Previous facility discharges (quantity and quality)
 - Other activities in the area that might have affected groundwater quality

NOTICE

AQUIFER PROTECTION PERMIT APPLICATION FEES

To All Interested Parties:

Effective April 12, 1992, the Arizona Department of Environmental Quality has repealed A.A.C. R18-9-123, relating to aquifer protection permit (APP) application fees and enacted a new R18-9-123 and R18-9-123.1, attached, pursuant to the authority of A.R.S. § 49-203(A)(7) and 1991 Arizona Session Laws, chapter 280, section 5. A copy with the changes from the last proposed version marked approximately by underline and strikeout is available on request.

The rules reflect changes made in response to comments received through January, 1992, as well as lower initial and maximum fees, and a lower hourly rate for processing APP's. The lower hourly rate and fees result from DEQ deciding not to include any indirect administrative expenses as costs to be recovered.

A summary of written and oral comments and DEQ's response to them is in a rulemaking docket at the agency at 3033 N. Central Ave., Phoenix.

If you have any questions regarding these rules, please call Mark Lewandowski at DEQ at 207-2230 or 1-800-234-5677, x2230.

R18-9-123. Aquifer Protection Permit Application Fees

A. With each application for an individual Aquifer Protection Permit under R18-9-107, the applicant shall remit an initial fee according to the following schedule, except as otherwise provided in subsections H, I and J. The fee shall be payable to the State of Arizona, and shall be deposited in the state general fund, or if otherwise required by law, in the Water Quality Assurance Fund, or a fund established specifically for aquifer protection permit fees.

Categories	Initial Fee (In U.S. dollars)	Maximum Fee
Wastewater Treatment Plants		
On-Site Sewage Disposal Systems (less than 20,000 gpd) -----	\$1550	3450
Wastewater Treatment Plants Where Influent is Predominantly Sewage		
Lined Surface Impoundment (Evapotranspiration) -----	3300	6500
Discharge to Water of the U.S. -----	4800	7950
Subsurface Discharge -----	4150	7950
Landfills		
Municipal solid waste -----	4500	15750
Construction Debris -----	2850	6950
Other -----	5100	14600
Mines		
Tailings Piles or Ponds -----	7150	15400
Base Metal Leaching Operations with Chemical Process -----	4600	10550
Precious Metals Processing -----	4150	10200
In-Situ Leaching -----	8950	14600
Other -----	5900	14400
Drywells -----	1350	4250
Industrial Wastewater Discharges		
Surface Impoundment -----	3650	9900
Discharge to Water of U.S. -----	5050	9700
Subsurface Discharge -----	4600	10250
Other Discharging Facilities -----	4850	15900

- B. If the actual cost of processing the application identified in subsection A or J is less than the initial fee paid, the difference between the actual cost and the amount listed and paid shall be returned to the applicant with a final itemized bill within 30 days of the issuance or denial of the permit. If the actual cost of processing the application is greater than the corresponding amount listed, the department shall send the applicant a final itemized bill for the difference between the initial fee paid and the actual cost of processing the application, except that the final bill shall not exceed the applicable maximum fee in subsection A or J. Such difference shall be paid in full before issuance of the permit.
- C. The Department shall keep a record of the costs associated with denied applications. If there is an amount not covered by the initial fee and that is not paid, the Department shall add the product of the unpaid hours multiplied by the hourly rate in subsection G at the time of denial to the initial fee of a permit applied for under R18-9-107 by the same entity at a later date.
- D. When determining actual cost under subsection B, the Department shall use a flat hourly rate for all direct labor hours spent working on the permit. The hourly rate shall be based on an annual sum of the following aquifer protection permit program related costs divided by the direct labor hours allocated for aquifer protection permit processing for the same year.
1. Salary and personnel benefit costs of aquifer protection permit program employees directly involved in processing permits.

2. Salary and personnel benefit costs of aquifer protection permit program employees indirectly involved in processing permits, such as supervisory and clerical personnel.
 3. Department overhead and other operating expenses attributable to all aquifer protection permit program employees.
 4. Per diem expenses.
 5. Transportation costs.
 6. Reproduction costs.
 7. Laboratory analysis charges.
 8. Public notice advertising and mailing costs.
 9. Presiding officer expenses.
 10. Court reporter expenses.
 11. Facility rentals.
 12. Other reasonable, direct, permit-related expenses documented in writing by the Department.
- E. Direct labor hours spent working on the permit shall consist of time spent by aquifer protection permit program technical staff or consultants on tasks specifically related to the processing, issuance, or denial of a particular permit, including time at a facility inspecting the facility, time at a public hearing, or time at a preapplication conference held pursuant to R18-9-107.D.
- F. Direct labor hours shall not include any of the following:
1. training.
 2. travel to or from any facility or permit hearing.
 3. time by clerical or supervisory staff, unless the supervisory staff is filling in for a particular technical staff member in that person's absence.
- G. From the effective date of this subsection, the flat hourly rate shall be \$31.84 per hour. The Director shall annually publish the fee schedules under subsections A and J and the flat hourly rate under this subsection which will be applicable for the following 12 months. The fee schedules and hourly rate shall be based on the Department's costs for the previous full fiscal year.
- H. For individual Aquifer Protection Permits which are consolidated pursuant to R18-9-122, and unless the applicant qualifies for the fee provision described in subsection I, the applicant shall remit an initial fee which equals the sum of the greatest initial fee among the facilities, and the initial fee applicable to each additional facility reduced by 40%. The maximum fee to the applicant for consolidated permits shall be equal to the greatest maximum fee among the facilities, plus the maximum fee applicable to each additional facility reduced by 40%.
- I. For purposes of subsection A, an applicant applying for individual permits for two or more facilities of the same category of facilities that, in addition, are engaged in similar operations, and have discharges of similar chemical characteristics, and are geographically contiguous, is required to remit only the initial fee, and shall be charged no more than the maximum fee, applicable to a single such facility.
- J. With an application that is a request for modification to an individual Aquifer Protection Permit or for a transfer of an individual Aquifer Protection Permit, the applicant shall remit an initial fee in the same manner as described in subsection A, and according to the following schedule:

Categories	Initial Fee (In U.S. dollars)	Maximum Fee
Permit modification as described in R18-9-121.C(1) or (2) or that results from a major modification to a facility as described in A.R.S. § 49-201.18	1000	(Same as that allowed under subsection A)
Permit modification that is described as a minor modification under R18-9-121.D.	0	100
Any other permit modification including those described in R18-9-121.C(3) or (4)	300	1000
Permit transfer	300	500

K. This rule is effective April 12, 1992. Persons who have submitted complete applications for permits, modifications or transfers before the effective date of this rule shall be required to remit only the permit application fee that was in effect when the application was submitted. Persons who have submitted applications before the effective date of this rule that are incomplete as of the effective date of this rule shall be subject to an initial fee equal to the permit fee for the appropriate category at the time of submission. The final itemized bill for an application that is incomplete on the effective date of this rule shall include only direct labor hours incurred after the effective date of this rule.

R18-9-123.1 Review of Bill

- A. Any person who receives a final bill from the department for the processing, and issuance or denial of a permit under this article may request an informal review of the hours billed and may pay the bill under protest. If the bill is paid under protest, the department shall issue the permit if it would be otherwise issuable after normal payment. The request shall specify the areas of dispute and be made in writing to the assistant director of the department for the office of water quality within 10 working days of the date of receipt of the final bill. Unless the department and applicant agree otherwise, the informal review shall take place within 30 days of the department's receipt of the request. Notice of the time and place of informal review shall be mailed to the requester at least ten working days prior to the informal review. The assistant director shall review whether the time billed is correct and reasonable for the tasks involved. Disposition of the informal review shall be mailed to the requester within ten working days after the informal review.
- B. The assistant director's decision after the informal review shall become final unless within thirty days after receipt of the decision the applicant requests a hearing before an administrative law judge appointed by the department of administration. The hearing, and any appeal of the decision, shall be governed by A.R.S. § 49-321. Any final agency decision issued pursuant to this section is subject to judicial review pursuant to title 12, chapter 7, article 6.

Historical Note

Adopted effective February 18, 1992 (Supp. 92-1).

ARTICLE 2. DISCHARGE LIMITATIONS

R18-11-201. Repealed

Historical Note

Amended effective January 29, 1980 (Supp. 80-1). Amended Subsection A. effective April 17, 1984 (Supp. 84-2). Former Section R9-21-201 repealed, former Section R9-21-203 renumbered as Section R9-21-201 and amended effective January 7, 1985 (Supp. 85-1). Amended effective August 12, 1986 (Supp. 86-4). Former Section R9-21-201 renumbered without change as Section R18-11-201 (Supp. 87-3). Amended effective December 1, 1988 (Supp. 88-4). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-202. Discharge limitations for phosphates

- A. Any discharge of wastewater to Show Low Creek and tributaries upstream of and including Fools Hollow Lake shall not exceed 0.16 mg/l total phosphates as P.
- B. Any discharge of wastewater to the following navigable waters shall not exceed 1.0 mg/l total phosphates as P.
 1. San Francisco River and tributaries upstream of Luna Lake Dam.
 2. White River and tributaries.

Historical Note

Former Section R9-21-202 repealed, former Section R9-21-102 renumbered as Section R9-21-202 and amended effective January 7, 1985 (Supp. 85-1). Amended Subsections (B), (D), and (E) effective August 12, 1986 (Supp. 86-4). Former Section R9-21-202 renumbered without change as Section R18-11-202 (Supp. 87-3). Section repealed, new Section adopted effective February 18, 1992 (Supp. 92-1).

R18-11-203. Prohibitions on discharge

The discharge of treated wastewater to Sabino Creek is prohibited.

Historical Note

Amended effective January 29, 1980 (Supp. 80-1). Amended subsection (B) by adding paragraphs (27) and (28) effective October 14, 1981 (Supp. 81-5). Former Section R9-21-203 renumbered as Section R9-21-201, former Section R9-21-204 renumbered as Section R9-21-203 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-203 renumbered and amended as Section R9-21-204, new Section R9-21-203 adopted effective August 12, 1986 (Supp. 86-4). Former Section R9-21-203 renumbered without change as Section R18-11-203 (Supp. 87-3). Amended subsection (B) effective December 1, 1988 (Supp. 88-4). Section repealed, new Section adopted effective February 18, 1992 (Supp. 92-1).

R18-11-204. Repealed

Historical Note

Former Section R9-21-204 renumbered and amended as Section R9-21-207, former Section R9-21-206 renumbered and amended as Section R9-21-204 effective January 29, 1980 (Supp. 80-1). Former Section R9-21-204 renumbered as Section R9-21-203, former Section R9-21-205 renumbered as Section R9-21-204 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-204 renumbered and amended as Section R9-21-205, former Section R9-21-203 renumbered and amended as Section R9-21-204 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-204 renumbered without change as Section R18-11-204 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-205. Discharges to ephemeral waters

The water quality standards that apply to effluent dominated waters shall be used to derive discharge limitations for a point source discharge to an ephemeral water. This provision does not apply to point source discharges of storm water.

Historical Note

Former Section R9-21-205 repealed, new Section R9-21-205 adopted effective January 29, 1980 (Supp. 80-1). Former Section R9-21-205 renumbered as Section R9-21-204, former Section R9-21-206 renumbered as Section R9-21-205 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-205 renumbered and amended as Section R9-21-206, former Section R9-21-204 renumbered and amended as Section R9-21-205 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-205 renumbered without change as Section R18-11-205 (Supp. 87-3). Section repealed, new Section adopted effective February 18, 1992 (Supp. 92-1).

R18-11-206. Repealed

Historical Note

Former Section R9-21-206 renumbered and amended as Section R9-21-204, new Section R9-21-206 adopted effective January 29, 1980 (Supp. 80-1). Amended by adding subsection (B) effective October 14, 1981 (Supp. 81-5). Amended subsection (B) and Table 1 effective January 29, 1982 (Supp. 82-1). Amended subsection (B) and Table 1 effective August 13, 1982 (Supp. 82-4). Former Section R9-21-206 renumbered as Section R9-21-205, former Section R9-21-207 renumbered as Section R9-21-206 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-206 renumbered and amended as Section R9-21-207, former Section R9-21-205 renumbered and amended as R9-21-206 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-206 renumbered without change as Section R18-11-206 (Supp. 87-3).

R18-11-207. Repealed

Historical Note

Former Section R9-21-207 repealed, former Section R9-21-204 renumbered and amended as Section R9-21-207 effective January 29, 1980 (Supp. 80-1). Former Section R9-21-207 renumbered as Section R9-21-206, former Section R9-21-208 renumbered as Section R9-21-207 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-207 renumbered without change as Section R9-21-208, former Section R9-21-206 renumbered and amended as Section R9-21-207 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-207 renumbered without change as Section R18-11-207 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-208. Repealed

Historical Note

Former Section R9-21-208 repealed, new Section R9-21-208 adopted effective January 29, 1980 (Supp. 80-1). Former Section R9-21-208 renumbered as Section R9-21-207, Appendices 1 thru 9 amended as Appendix A (now shown following R9-21-213), former Section R9-21-209 renumbered as R9-21-208 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-208 renumbered and amended as Section R9-21-209, former Section R9-21-207 renumbered without change as Section R9-21-208 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-208 renumbered without change as Section R18-11-208 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-209. Repealed**Historical Note**

Former Section R9-21-209 renumbered and amended as Section R9-21-210, new Section R9-21-209 adopted effective January 29, 1980 (Supp. 80-1). Former Section R9-21-209 renumbered as Section R9-21-208, Tables I and II amended as Appendix B (now shown following R9-21-213 and Appendix A), former Section R9-21-210 renumbered as Section R9-21-209 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-209 renumbered and amended as Section R9-21-210, former Section R9-21-208 renumbered and amended as Section R9-21-209 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-209 renumbered without change as Section R18-11-209 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-210. Repealed**Historical Note**

Former Section R9-21-210 renumbered and amended as Section R9-21-211, former Section R9-21-209 renumbered and amended as Section R9-21-210 effective January 29, 1980 (Supp. 80-1). Amended Subsection (A) effective April 17, 1984 (Supp. 84-2). Former Section R9-21-210 renumbered as Section R9-21-209, former Section R9-21-211 renumbered as Section R9-21-210 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-210 renumbered and amended as Section R9-21-211, former Section R9-21-209 renumbered and amended as Section R9-21-210 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-210 renumbered without change as Section R18-11-210 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-211. Repealed**Historical Note**

Former Section R9-21-210 renumbered and amended as Section R9-21-211 effective January 29, 1980 (Supp. 80-1). Amended Subsections (D), (G) thru (I), and added (J) effective October 14, 1981 (Supp. 81-5). Former Section R9-21-211 renumbered as Section R9-21-210, former Section R9-21-212 renumbered as Section R9-21-211 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-211 renumbered and amended as Section R9-21-212, former Section R9-21-210 renumbered and amended as Section R9-21-211 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-211 renumbered without change as Section R18-11-211 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-212. Repealed**Historical Note**

Adopted effective January 29, 1980 (Supp. 80-1). Former Section R9-21-212 renumbered as Section R9-21-211, former Section R9-21-213 renumbered as Section R9-21-212 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-212 repealed, former Section R9-21-211 renumbered and amended as Section R9-21-212 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-212 renumbered without change as Section R18-11-212 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-213. Repealed**Historical Note**

Adopted effective January 29, 1980 (Supp. 80-1). Amended effective April 17, 1984 (Supp. 84-2). Former Section R9-21-213 renumbered as Section R9-21-212, former Section R9-21-103

renumbered as Section R9-21-213 and amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-213 renumbered without change as Section R9-21-214, new Section R9-21-213 adopted effective August 12, 1986 (Supp. 86-4). Former Section R9-21-213 renumbered without change as Section R18-11-213 (Supp. 87-3). Amended effective December 1, 1988 (Supp. 88-4). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-214. Repealed**Historical Note**

Former Section R9-21-213 renumbered without change as Section R9-21-214 effective August 12, 1986 (Supp. 86-4). Former Section R9-21-214 renumbered without change as Section R18-11-214 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

Appendix A. Repealed**Historical Note**

Former Section R9-21-208, Appendices 1 through 9 renumbered and amended as new Appendix A adopted effective January 7, 1985 (Supp. 85-1). Amended effective August 12, 1986 (Supp. 86-4). Appendix repealed effective February 18, 1992 (Supp. 92-1).

Appendix B. Repealed**Historical Note**

Former R9-21-209, Table 1 and Table 2 renumbered and amended as Appendix B adopted effective January 7, 1985 (Supp. 85-1). Amended effective August 12, 1986 (Supp. 86-4). Appendix repealed effective February 18, 1992 (Supp. 92-1).

ARTICLE 3. REPEALED**R18-11-301. Repealed****Historical Note**

Adopted effective July 9, 1981 (Supp. 81-4). Former Section R9-21-301 renumbered without change as Section R18-11-301 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-302. Repealed**Historical Note**

Adopted effective June 8, 1981 (Supp. 81-3). Amended effective January 7, 1985 (Supp. 85-1). Former Section R9-21-302 renumbered without change as Section R18-11-302 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-303. Repealed**Historical Note**

Adopted effective January 7, 1985 (Supp. 85-1). Amended effective August 12, 1986 (Supp. 86-4). Former Section R9-21-303 renumbered without change as Section R18-11-303 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

R18-11-304. Repealed**Historical Note**

Adopted effective January 7, 1985 (Supp. 85-1). Amended effective August 12, 1986 (Supp. 86-4). Former Section R9-21-304 renumbered without change as Section R18-11-304 (Supp. 87-3). Section repealed effective February 18, 1992 (Supp. 92-1).

ARTICLE 4. AQUIFER WATER QUALITY STANDARDS**R18-11-401. Definitions**

In addition to the definitions contained in A.R.S. §§ 49-101 and 49-201, the terms of this Article shall have the following meanings:

Department of Environmental Quality – Water Quality Boundaries and Standards

1. "Beta particle and photon radioactivity from man-made radionuclides" means all radionuclides emitting beta particles or photons, except Thorium-232, Uranium-235, Uranium-238 and their progeny.
2. "Dose equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements.
3. "Drinking water protected use" means the protection and maintenance of aquifer water quality for human consumption.
4. "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.
5. "Mg/l" means milligrams per liter.
6. "Millirem" means 1/1000 of a rem. A rem means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system.
7. "Non-drinking water protected use" means the protection and maintenance of aquifer water quality for a use other than for human consumption.
8. "pCi" means picocurie, or the quantity of radioactive material producing 2.22 nuclear transformations per minute.
9. "Total trihalomethanes" means the sum of the concentrations of the following trihalomethane compounds: trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform).

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-402. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

R18-11-403. Analytical Methods

Analysis of a sample to determine compliance with an aquifer water quality standard shall be in accordance with an analytical method specified in A.A.C. Title 9, Chapter 14, Article 6 or an alternative analytical method that is approved by the Director of the Arizona Department of Health Services pursuant to A.A.C. R9-14-607(B).

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-404. Laboratories

A test result from a sample taken to determine compliance with an aquifer water quality standard shall be valid only if the sample has been analyzed by a laboratory that is licensed by the Arizona Department of Health Services for the analysis performed.

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-405. Narrative Aquifer Water Quality Standards

- 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 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.

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-406. Numeric Aquifer Water Quality Standards: Drinking Water Protected Use

- A. The aquifer water quality standards in this Section apply to aquifers that are classified for drinking water protected use.
- B. The following are the aquifer water quality standards for inorganic chemicals:

Pollutant	(mg/L) ^{PPM}
Arsenic	0.05
Asbestos	7 million fibers/liter (longer than 10 µm)
Barium	1.0
Cadmium	0.005
Chromium	0.1
Fluoride	4.0
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Total nitrate and nitrite (as N)	10.0
Selenium	0.05

- C. The following are the aquifer water quality standards for organic chemicals:

Pollutant	(mg/L)
Benzene	0.005
Carbon Tetrachloride	0.005
o-Dichlorobenzene	0.6
para-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1.0
Trihalomethanes (Total)	0.10
1,1,1-Trichloroethane	0.20
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes (Total)	10.0

- D. The following are the aquifer water quality standards for pesticides and polychlorinated biphenyls (PCBs):

Pollutant	(mg/L)
Alachlor	0.002
Atrazine	0.003
Carbofuran	0.04
Chlordane	0.002
1,2-Dibromo-3-Chloropropane (DBCP)	0.0002
Ethylene Dibromide (EDB)	0.00005
Heptachlor	0.0004
Heptachlor Epoxide	0.0002
Endrin	0.0002
Lindane	0.0002
Methoxychlor	0.04
Polychlorinated Biphenols (PCBs)	0.0005
Toxaphene	0.003

2,4,-Dichlorophenoxyacetic Acid (2,4-D)	0.07
2,4,5-Trichlorophenoxypropionic Acid (2,4,5-TP or Silvex)	0.05

E. The following are the 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/l.
2. The maximum concentration for combined Radium-226 and Radium-228 shall not exceed 5 pCi/l.
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 radionuclides 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

F. The aquifer water quality standard for microbiological contaminants is based upon the presence or absence of total coliforms in a 100-milliliter sample. If a sample is total coliform-positive, a 400-milliliter repeat sample shall be taken within two weeks of the time the sample results are reported. Any total coliform-positive repeat sample following a total coliform-positive sample constitutes a violation of the aquifer water quality standard for microbiological contaminants.

G. The following are the 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.

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-407. Aquifer Water Quality Standards in Reclassified Aquifers

- A. All aquifers in the state are classified for drinking water protected use except for aquifers which are reclassified to a non-drinking water protected use pursuant to A.R.S. § 49-224 and A.A.C. R18-11-503.
- B. Aquifer water quality standards for drinking water protected use apply to reclassified aquifers except where expressly superseded by aquifer water quality standards adopted pursuant to subsection (C) of this Section.

- C. The Director shall adopt, by rule, aquifer water quality standards for reclassified aquifers within one year of the date of the order reclassifying the aquifer to a nondrinking water protected use. The Director shall adopt aquifer water quality standards for reclassified aquifers only for pollutants that are specifically identified in a petition for reclassification as prescribed by A.R.S. § 49-223(D) and A.A.C. R18-11-503(B). Aquifer water quality standards for reclassified aquifers shall be sufficient to protect the use of the reclassified aquifer.

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Amended effective August 14, 1992 (Supp. 92-3).

R18-11-408. Petition for Adoption of a Numeric Aquifer Water Quality Standard

- A. Any person may petition the Director to adopt, by rule, a numeric aquifer water quality standard for a pollutant for which no numeric aquifer water quality standard exists.
- B. Petitions for adoption of a numeric aquifer water quality standard shall be filed with the Department and shall comply with the requirements applicable to petitions for rule adoption as provided by A.R.S. § 41-1033 and A.A.C. R18-1-302, except as otherwise provided by A.R.S. § 49-223 or this Section.
- C. In addition to the requirements of A.A.C. R18-1-302, a petition for rule adoption to establish a numeric aquifer water quality standard shall include specific reference to:
 1. Technical information that the pollutant is a toxic pollutant.
 2. Technical information upon which the Director reasonably may base the establishment of a numeric aquifer water quality standard.
 3. Evidence that the pollutant that is the subject of the petition is or may in the future be present in an aquifer or part of an aquifer that is classified for drinking water protected use. Evidence may include, but is not limited to, any of the following:
 - a. A laboratory analysis of a water sample by a laboratory licensed by the Arizona Department of Health Services which indicates the presence of the pollutant in the aquifer.
 - b. A hydrogeological study which demonstrates that the pollutant that is the subject of the petition may be present in an aquifer in the future. The hydrogeological study shall include the following:
 - i. A description of the use that results in a discharge of the pollutant that is the subject of the petition.
 - ii. A description of the mobility of the pollutant in the vadose zone and in the aquifer.
 - iii. A description of the persistence of the pollutant in the vadose zone and in the aquifer.
- D. Within 180 calendar days of the receipt of a complete petition for rule adoption to establish a numeric aquifer water quality standard, the Director shall make a written determination of whether the petition should be granted or denied. The Director shall give written notice by regular mail of the determination to the petitioner.
- E. If the petition for rule adoption is granted, the Director shall initiate rulemaking proceedings to adopt a numeric aquifer water quality standard. The Director shall, within one year of the date that the petition for adoption of a numeric aquifer water quality standard is granted, either adopt a rule establishing a numeric aquifer water quality standard or publish a notice of termination of rulemaking in the *Arizona Administrative Register*.
- F. If the petition for rule adoption is denied, the Director shall issue a denial letter to the petitioner which explains the reasons for the

denial. The denial of a petition for rule adoption to establish a numeric aquifer water quality standard is not subject to judicial review.

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1).

Appendix 1. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 2. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 3. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 4. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 5. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 6. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

Appendix 7. Repealed

Historical Note

Adopted effective January 4, 1990 (Supp. 90-1). Repealed effective August 14, 1992 (Supp. 92-3).

ARTICLE 5. AQUIFER BOUNDARY AND PROTECTED USE CLASSIFICATION

R18-11-501. Definitions

In addition to the definitions contained in A.R.S. § 49-201, the words and phrases of this Article shall have the following meaning:

1. "Drinking water protected use" means the protection and maintenance of aquifer water quality for consumption.
2. "Hardrock areas containing little or no water" means areas of igneous or metamorphic rock which do not yield usable quantities of water.
3. "Nondrinking water protected use" means the protection and maintenance of aquifer water quality for a use other than human consumption.
4. "Usable quantities" means five gallons of water per day.

Historical Note

Adopted effective October 22, 1987 (Supp. 87-4).

R18-11-502. Aquifer boundaries

- A. Except as provided in subsection (B) of this rule, aquifer boundaries for the aquifers in this state are identified and defined as being identical to the hydrologic basin and subbasin boundaries, as found by the Director of the Department of Water Resources, Findings and Order In the Matter of The Designation of Groundwater Basins and Subbasins In The State of Arizona (dated June 21, 1984), pursuant to A.R.S. §§ 45-403 and 45-404, which is incorporated herein by reference and on file with the Department of Environmental Quality and the Office of the Secretary of State.
- B. Excluded from the boundaries of the aquifers are hard rock areas which contain little or no water, as identified in Plate 1 of the Department of Water Resources, Water Resource Hydrologic Map Series Report Number 2 (dated January 1981) and as further identified in the Bureau of Mines, University of Arizona County Geologic Map Series (individual county maps dated 1957 through 1960), which are incorporated herein by reference and on file with the Department of Environmental Quality and the Office of the Secretary of State.
- C. The Director may, by rule, modify or add an aquifer boundary provided that one or more of the following applies:
 1. The Department of Water Resources modifies the boundaries of its basins or subbasins.
 2. The Director is made aware of new technical information or data which supports refinement of an aquifer boundary.
- D. Facilities located outside of the boundaries defined in these rules shall be subject to A.R.S. § 49-241 except as provided therein.

Historical Note

Adopted effective October 22, 1987 (Supp. 87-4).

R18-11-503. Petition for reclassification

- A. Any person may petition the Director to reclassify an aquifer from a drinking water protected use to a nondrinking water protected use pursuant to A.R.S. § 49-224(C).
- B. A written petition for reclassification pursuant to A.R.S. § 49-224(C) or A.R.S. § 49-224(D) shall be filed with the Department and shall include the following categories of information:
 1. The proposed protected use for which the reclassification is being requested.
 2. The pollutant and affected aquifer water quality standards for which the reclassification is being requested.
 3. A hydrogeologic report which demonstrates that the aquifer proposed for reclassification is or will be hydrologically isolated, to the extent described in A.R.S. § 49-224(C)(1). This report and demonstration of hydrologic isolation for the area containing such aquifer, and immediate adjacent geologic units, shall include at least the following:
 - a. Hydrogeologic area maps and cross sections.
 - b. An analysis of subsurface geology, including geologic and hydrologic separation.
 - c. Water level elevation or piezometric level contour maps.
 - d. Analysis of hydrologic characteristics of the aquifer and the immediate adjacent geologic units.
 - e. Description of existing water quality and analysis of water chemistry.
 - f. Projected annual quantity of water to be withdrawn.
 - g. Identification of pumping centers, cones of depression and areas of recharge.
 - h. A water balance.
 - i. Existing flow direction and evaluation of the effects of seasonal and future pumping on flow.

- j. An evaluation as to whether the reclassification will contribute to or cause a violation of aquifer water quality standards in other aquifers, or in parts of the aquifer not being proposed for reclassification.
4. Documentation demonstrating that water from the aquifer or part of the aquifer for which reclassification is proposed is not being used as drinking water. This documentation shall include at least the following:
- A list of all wells or springs including their location, ownership and use within the aquifer or part of the aquifer being proposed for reclassification.
 - Identification of groundwater withdrawal rights, on file with the Department of Water Resources, within the aquifer or part of the aquifer being proposed for reclassification.
 - A comprehensive list of agencies, persons and other information sources consulted for aquifer use documentation.
5. A cost-benefit analysis developed pursuant to the requirements of A.R.S. § 49-224(C)(3), except for petitions submitted pursuant to A.R.S. § 49-224(D). This analysis shall identify potential future uses of the aquifer being proposed for reclassification, as well as other opportunity costs associated with reclassification, and shall contain a description of the cost-benefit methodology used, including all assumptions, data, data sources and criteria considered and all supporting statistical analyses.

Historical Note

Adopted effective October 22, 1987 (Supp. 87-4).

R18-11-504. Agency action on petition

- A. Upon receipt of a petition for reclassification, the Director shall review the petition for compliance with the requirements of R18-11-503. If additional information is necessary, the petitioner shall be notified of specific deficiencies in writing within 30 calendar days of receipt of the petition.

- B. Within 120 calendar days after receipt of a complete petition, and after consultation with the appropriate advisory council pursuant to A.R.S. §§ 49-224(C) and 49-204, the Director shall make a final decision to grant or deny the petition and shall notify the petitioner of such decision and the reason for such determination in writing.
- C. Upon a decision to grant a petition for aquifer reclassification, the Director shall initiate proceedings for promulgation of aquifer water quality standards and, if applicable, for aquifer boundary designation for the reclassified aquifers

Historical Note

Adopted effective October 22, 1987 (Supp. 87-4).

R18-11-505. Public participation

- A. Within 30 days of receipt of a complete petition for reclassification filed pursuant to A.R.S. § 49-224(D), or if the Director deems it necessary to consider a reclassification under A.R.S. § 49-224(C), the Director shall give public notice of the proposed reclassification pursuant to A.A.C. R18-1-401.
- B. The Director shall hold at least one public hearing at a location as near as practicable to the aquifer proposed for reclassification. The Director shall give notice of each public hearing and conduct the public hearing in accordance with the provisions of A.A.C. R18-1-402.

Historical Note

Adopted effective June 29, 1989 (Supp. 89-2).

R18-11-506. Rescission of reclassification

The Director may, by rule, rescind an aquifer reclassification and return an aquifer to a drinking water protected use if he determines that any of the conditions under which the reclassification was granted are no longer valid. If the Director initiates a change under this paragraph, he shall consult with the appropriate advisory council pursuant to A.R.S. §§ 49-224(C) and 49-204.

Historical Note

Adopted effective October 22, 1987 (Supp. 87-4).

APP DETERMINATION
OF APPLICABILITY

1st piece

Arizona Department of Environmental Quality

AQUIFER PROTECTION PERMITS
DETERMINATION OF APPLICABILITY

NAME OF THE OPERATION

NAME OF OWNER

NAME OF OPERATOR

LOCATION OF OPERATION (STREET ADDRESS)

LATITUDE AND LONGITUDE

TOWNSHIP, RANGE, SECTION, QUARTER SECTION

MAILING ADDRESS

NAME

NUMBER, STREET OR POST OFFICE BOX NUMBER

CITY, STATE, ZIP CODE

CONTACT PERSON NAME AND TELEPHONE NUMBER

Provide a description of the operation (the nature of the business or activity), noting any discharges. See attached definitions.

Return to:

Arizona Department of Environmental Quality
Plan Review & Permits Section
3003 N. Central Ave., 5 Floor
P.O. Box 600
Phoenix, AZ 85001-0600

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WORK COPY
OK to use

The purpose of this form is to help enable the staff of the Water Permits Unit of the Arizona Department of Environmental Quality to determine which, if any, regulatory programs may apply to an activity in which you are engaged or in which you may become engaged. The Department regulates many kinds of activities; therefore, many of the kinds of facilities or activities listed below may not apply to your operation or property. None of the questions below pertain to non-commercial use of products generally available to the public. Please answer all questions and, where applicable, explain with sufficient detail in the requested description. Attach additional sheets and reference sheets as needed. Please attach any design plans, site plans, maps etc., that may assist in this review.

Is the operation involved in any of the following?

If yes, Describe. Attach additional sheets as needed.

Industrial Wastewater Disposal	Yes No	_____
Industrial Wastewater Treatment	Yes No	_____
Sanitary Wastewater Disposal	Yes No	_____
Sanitary Wastewater Treatment	Yes No	_____
Settling, Flocculation or Filtration	Yes No	_____
Release or Storage of Liquids or Semi-liquids to a Ditch, Pit, Pond, or Land Surface	Yes No	_____
Disposal of Waste Solvents or Oil to a Ditch, Pit, Pond, or Land Surface	Yes No	_____
Reuse of Industrial or Commercial Process Wastewater	Yes No	_____
Reuse of Sanitary Wastewater	Yes No	_____
Discharge to a Community Sewer System	Yes No	_____
Pre-Treatment of Wastewater before Discharge to Sewer	Yes No	_____
Release of Water or Wastewater to a Lake, Stream, River, Dry Wash or other Surface Water Body	Yes No	_____
Groundwater Recharge Project	Yes No	_____
Underground Storage and Recovery Project	Yes No	_____
Operations that Add a Pollutant to a Salt Dome or Salt Bed Formation	Yes No	_____
Operations that Add a Pollutant to a Drywell	Yes No	_____
Operations that Add a Pollutant to an Underground Cave or Mine	Yes No	_____
Bioremediation	Yes No	_____
Application of Materials to the Land Surface	Yes No	_____

If yes, describe. Attach additional sheets as needed.

Land Treatment of Wastewater	Yes No	_____
Burying of Wastes	Yes No	_____
Disposal of Garbage, Trash, Refuse, Manure, Process Waste, Rubbish, Construction Debris, or other Solid Waste	Yes No	_____
Sludge Disposal	Yes No	_____
Mining	Yes No	_____
Milling	Yes No	_____
Ore Processing	Yes No	_____
Leaching Operations	Yes No	_____
Placer Mining	Yes No	_____
Sand and Gravel Extraction or Washing	Yes No	_____
Chemical Use	Yes No	_____
Chemical Storage	Yes No	_____
Chemical Production	Yes No	_____
Fuel Storage	Yes No	_____
Use of Hazardous Substances	Yes No	_____
Storage of Hazardous Substances	Yes No	_____
Generation of Hazardous Wastes	Yes No	_____
Treatment, Storage, or Disposal of Hazardous Wastes	Yes No	_____
Dust Control	Yes No	_____
Truck or Car Washing	Yes No	_____
Aircraft or Automobile Servicing	Yes No	_____
Printing	Yes No	_____
Waste Recycling	Yes No	_____
Manufacturing	Yes No	_____
Parts Assembly	Yes No	_____
Photographic Processing	Yes No	_____
Drilling	Yes No	_____
Well Development	Yes No	_____

If yes, describe. Attach additional sheets as needed.

Groundwater or Vadose Zone Monitoring	Yes No	_____
Agricultural Production	Yes No	_____
Tree Farming	Yes No	_____
Horticulture	Yes No	_____
Silviculture	Yes No	_____
Aquaculture	Yes No	_____
Animal Feeding Operations	Yes No	_____
Raising Livestock	Yes No	_____
Agricultural Application of Sludge	Yes No	_____
Irrigation	Yes No	_____
Boarding Animals	Yes No	_____
Tick-Dipping of Animals	Yes No	_____
Food Preparation	Yes No	_____
Dry Cleaning	Yes No	_____
Painting	Yes No	_____
Paint Stripping	Yes No	_____
Medical, Dental or Veterinary Services	Yes No	_____
Mortician Services	Yes No	_____
Other Activity (Other than Household Activity)	Yes No Describe:	_____

If you answered yes to any of the above please provide a brief description of the type, composition, quantity of any materials used, stored, handled or disposed of. (Attach additional sheets and reference sheets as needed)

Does the Operation include any of the following features?

	Indicate number and type of features and describe briefly	
Surface Impoundments	Yes No	_____
Evaporation Ponds	Yes No	_____
Holding, Storage or Retention Basins or Ponds	Yes No	_____
Treatment or Disposal Pits	Yes No	_____
Sewage Treatment Ponds or Lagoons	Yes No	_____
Settling Ponds	Yes No	_____
Percolation Ponds	Yes No	_____
Sludge Ponds	Yes No	_____
Sludge Drying Beds	Yes No	_____
Evapotranspiration Beds	Yes No	_____
Wisconsin Mounds (Mound Disposal Systems)	Yes No	_____
Septic Tanks	Yes No	_____
On-Site Sewage Disposal System	Yes No	_____
Leach Lines/Leach Field	Yes No	_____
Disposal or Seepage Pits	Yes No	_____
Wastewater Treatment Plant	Yes No	_____
Storm Sewer	Yes No	_____
Storm Water Impoundments or Containment Features	Yes No	_____
Storm Water Diversion Features	Yes No	_____
Canals, Ditches or Other Facilities for Surface Transportation of Water	Yes No	_____
Swimming Pool	Yes No	_____
Drywell Which Receives Storm Water Runoff	Yes No	_____
Drywell Which Receives Storm Water in an Area Where Chemicals are Used, Stored, Treated, Handled, or Manufactured	Yes No	_____
Injection Wells	Yes No	_____
Water Wells	Yes No	_____
Monitor Wells	Yes No	_____

Indicate number and type of features and describe briefly.

Oil, Gas, Geothermal or Helium Wells	Yes No	_____
Mine Tailings Piles	Yes No	_____
Mine Tailings Pads	Yes No	_____
Mine Tailings Ponds	Yes No	_____
Mine Leaching Pads	Yes No	_____
Mine Leaching Ponds	Yes No	_____
Above Ground Storage Tanks	Yes No	_____
Underground Storage Tanks	Yes No	_____
Landfill or Solid Waste Disposal Facility	Yes No	_____

Are there any wastes or by-products created in the operation or activity?

- If yes, what are they?
- How are they discharged or disposed?
- Where is the location of the discharge?
- What is the frequency and volume of discharge?
- Is there any treatment before discharge? If yes, describe.

Do you own or operate any land, building, installation, structure, conveyance, area or source associated with the discharging or disposal activity, operation, or facility in question?

- If yes,
- When was it constructed?
 - Have there been any modifications since the original construction?
 - If yes, when?
 - What was the nature of the change? (provide details regarding changes in quality or quantity)
 - Are there any wastes or by-products that resulted from the modification?
 - How are they disposed?

Are there any wastes or by-products stored on-site?

- If yes, describe type, quantity and nature of storage.

Does the operation or activity involve sewage disposal or reuse of reclaimed wastewater?

a. If yes, describe. Attach additional sheets as needed.

b. Attach copies of an Approval to Construct and Approval to Operate from authorized agency.

Are there any industrial or non-domestic sources of sewage or wastewater?

a. If yes, describe.

How long has the facility operation or activity been at it's present location?

Is the facility in operation now?

a. If no, when did operations cease?

or: b. When are operations expected to begin?

List any environmental permits held by the operation, facility or activity. Provide the permit number and the name of the issuing entity.

What is the depth to groundwater beneath the operation or activity?

a. Source and date of data:

Does the operation involve any groundwater monitoring or environmental remediation?

a. If yes, describe

b. Attach most recent groundwater analyses

c. Attach any wastewater or effluent analyses, waste characterization studies or ambient groundwater analyses.

I _____, certify that the information provided in this form is true to the best of my knowledge.

Signature, Date, Title

Return to: _____

Evaluator's Name

1st Piece

Arizona Department of Environmental Quality

AQUIFER PROTECTION PERMITS
DETERMINATION OF APPLICABILITY

NAME OF THE OPERATION

NAME OF OWNER

NAME OF OPERATOR

LOCATION OF OPERATION (STREET ADDRESS)

LATITUDE AND LONGITUDE

TOWNSHIP, RANGE, SECTION, QUARTER SECTION

MAILING ADDRESS

NAME

NUMBER, STREET OR POST OFFICE BOX NUMBER

CITY, STATE, ZIP CODE

CONTACT PERSON NAME AND TELEPHONE NUMBER

Provide a description of the operation (the nature of the business or activity), noting any discharges. See attached definitions.

Return to:

Arizona Department of Environmental Quality
Plan Review & Permits Section
3003 N. Central Ave., 5 Floor
P.O. Box 600
Phoenix, AZ 85001-0600

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The purpose of this form is to help enable the staff of the Water Permits Unit of the Arizona Department of Environmental Quality to determine which, if any, regulatory programs may apply to an activity in which you are engaged or in which you may become engaged. The Department regulates many kinds of activities; therefore, many of the kinds of facilities or activities listed below may not apply to your operation or property. None of the questions below pertain to non-commercial use of products generally available to the public. Please answer all questions and, where applicable, explain with sufficient detail in the requested description. Attach additional sheets and reference sheets as needed. Please attach any design plans, site plans, maps etc., that may assist in this review.

Is the operation involved in any of the following?

If yes, Describe. Attach additional sheets as needed.

Industrial Wastewater Disposal	Yes No	_____
Industrial Wastewater Treatment	Yes No	_____
Sanitary Wastewater Disposal	Yes No	_____
Sanitary Wastewater Treatment	Yes No	_____
Settling, Flocculation or Filtration	Yes No	_____
Release or Storage of Liquids or Semi-liquids to a Ditch, Pit, Pond, or Land Surface	Yes No	_____
Disposal of Waste Solvents or Oil to a Ditch, Pit, Pond, or Land Surface	Yes No	_____
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Reuse of Sanitary Wastewater	Yes No	_____
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Bioremediation	Yes No	_____
Application of Materials to the Land Surface	Yes No	_____

If yes, describe. Attach additional sheets as needed.

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Chemical Use	Yes No	_____
Chemical Storage	Yes No	_____
Chemical Production	Yes No	_____
Fuel Storage	Yes No	_____
Use of Hazardous Substances	Yes No	_____
Storage of Hazardous Substances	Yes No	_____
Generation of Hazardous Wastes	Yes No	_____
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Truck or Car Washing	Yes No	_____
Aircraft or Automobile Servicing	Yes No	_____
Printing	Yes No	_____
Waste Recycling	Yes No	_____
Manufacturing	Yes No	_____
Parts Assembly	Yes No	_____
Photographic Processing	Yes No	_____
Drilling	Yes No	_____
Well Development	Yes No	_____

If yes, describe. Attach additional sheets as needed.

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- Tree Farming Yes No _____
- Horticulture Yes No _____
- Silviculture Yes No _____
- Aquaculture Yes No _____
- Animal Feeding Operations Yes No _____
- Raising Livestock Yes No _____
- Agricultural Application of Sludge Yes No _____
- Irrigation Yes No _____
- Boarding Animals Yes No _____
- Tick-Dipping of Animals Yes No _____
- Food Preparation Yes No _____
- Dry Cleaning Yes No _____
- Painting Yes No _____
- Paint Stripping Yes No _____
- Medical, Dental or Veterinary Services Yes No _____
- Mortician Services Yes No _____
- Other Activity (Other than Household Activity) Yes No Describe: _____

If you answered yes to any of the above please provide a brief description of the type, composition, quantity of any materials used, stored, handled or disposed of. (Attach additional sheets and reference sheets as needed)

Does the Operation include any of the following features?

Indicate number and type of features and describe briefly

Surface Impoundments	Yes No	_____
Evaporation Ponds	Yes No	_____
Holding, Storage or Retention Basins or Ponds	Yes No	_____
Treatment or Disposal Pits	Yes No	_____
Sewage Treatment Ponds or Lagoons	Yes No	_____
Settling Ponds	Yes No	_____
Percolation Ponds	Yes No	_____
Sludge Ponds	Yes No	_____
Sludge Drying Beds	Yes No	_____
Evapotranspiration Beds	Yes No	_____
Wisconsin Mounds (Mound Disposal Systems)	Yes No	_____
Septic Tanks	Yes No	_____
On-Site Sewage Disposal System	Yes No	_____
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Drywell Which Receives Storm Water in an Area Where Chemicals are Used, Stored, Treated, Handed, or Manufactured	Yes No	_____
Injection Wells	Yes No	_____
Water Wells	Yes No	_____
Monitor Wells	Yes No	_____

Indicate number and type of features and describe briefly.

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Mine Tailings Pads	Yes No	_____
Mine Tailings Ponds	Yes No	_____
Mine Leaching Pads	Yes No	_____
Mine Leaching Ponds	Yes No	_____
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Underground Storage Tanks	Yes No	_____
Landfill or Solid Waste Disposal Facility	Yes No	_____

Are there any wastes or by-products created in the operation or activity?

- a. If yes, what are they?
- b. How are they discharged or disposed?
- c. Where is the location of the discharge?
- d. What is the frequency and volume of discharge?
- e. Is there any treatment before discharge? If yes, describe.

Do you own or operate any land, building, installation, structure, conveyance, area or source associated with the discharging or disposal activity, operation, or facility in question?

- If yes,
- a. When was it constructed?
 - b. Have there been any modifications since the original construction?
 - c. If yes, when?
 - d. What was the nature of the change? (provide details regarding changes in quality or quantity)
 - e. Are there any wastes or by-products that resulted from the modification?
 - f. How are they disposed?

Are there any wastes or by-products stored on-site?

- a. If yes, describe type, quantity and nature of storage.

Does the operation or activity involve sewage disposal or reuse of reclaimed wastewater?

a. If yes, describe. Attach additional sheets as needed.

b. Attach copies of an Approval to Construct and Approval to Operate from authorized agency.

Are there any industrial or non-domestic sources of sewage or wastewater?

a. If yes, describe

How long has the facility operation or activity been at it's present location?

Is the facility in operation now?

a. If no, when did operations cease?

or: b. When are operations expected to begin?

List any environmental permits held by the operation, facility or activity. Provide the permit number and the name of the issuing entity.

What is the depth to groundwater beneath the operation or activity?

a. Source and date of data:

Does the operation involve any groundwater monitoring or environmental remediation?

a. If yes, describe

b. Attach most recent groundwater analyses

c. Attach any wastewater or effluent analyses, waste characterization studies or ambient groundwater analyses.

I _____, certify that the information provided in this form is true to the best of my knowledge.

Signature, Date, Title

Return to: _____

Evaluator's Name

AQUIFER PROTECTION PERMITS DETERMINATION OF APPLICABILITY DEFINITIONS

AMBIENT - conditions as they currently exist in the specified environment.

AQUACULTURE - any operation direction toward the growth and harvest of life forms whose environment is within water.

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

AQUIFER PROTECTION PERMIT - means an individual or general permit issued pursuant to A.R.S. 49-203 and 49-241 through 251, and A.A.C. R19-8-101 through 130.

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 of chapter 2 of Title 49 of the Arizona Revised Statutes, 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.

DISPOSAL PIT (seepage pit) - a type of sidewall absorption system which uses a vertical, cylindrical underground receptacle so constructed as to permit disposal of effluent or clear wastes by soil absorption through its walls.

DISPOSAL SYSTEM - means a system for disposing of wastes, either by surface or underground methods, and includes sewerage systems, treatment works, disposal wells, and other systems.

DISPOSAL TRENCH - a type of sidewall absorption system which uses an area excavated 1 to 3 feet in width and which contains a bedding of aggregate and a single disposal trench.

DISPOSE - means the deposit, injection, dumping, spilling, leaking or placing of any pollutants into or on any land or water so that the pollutant or any constituent of the pollutant may enter the environment or be discharge into any waters, including aquifers.

DRY WELL - means a well which is a bored, drilled or driven shaft or hole whose depth is greater than its width and is designed and constructed specifically for the disposal of storm water. Dry wells do not include class 1, class 2, class 3 or class 4 injection wells as defined by the Federal Underground Injection Control Program (P.L. 93-523, part C), as amended.

EFFLUENT - means wastewater that has completed its passage through a wastewater treatment plant.

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.

EVAPOTRANSPIRATION BED - an alternative on-site disposal system used to dispose of wastewater to the atmosphere so that no discharge to surface or groundwater occurs.

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.

GARBAGE - means all animal and vegetable wastes resulting from the processing, handling, preparation, cooking, and serving of food or food materials.

GROUNDWATER - water below the land surface in the zone of saturation and under pressure equal to or greater than atmospheric pressure.

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.

INDUSTRIAL WASTEWATER - means all wastes that enter a collection, treatment or disposal system from an industrial process.

INJECTION WELL - means a well which receives a discharge through pressure injection or gravity flow.

IRRIGATION - means the application of water or wastewater or both for growing agricultural crops or for landscaping purposes.

LAND TREATMENT - the operation whereby effluent or sludge are applied on, above or into the soil through spray irrigation, land spreading, or other methods for the purpose of treating wastes.

LAGOON - a shallow pond where sunlight, bacterial action and oxygen work to purify wastewater; also used to store wastewaters or to spend nuclear fuel rods.

MANURE - means animal excreta, including cleanings from barns, stables, corrals, pens, or conveyances used for stabling, transporting, or penning of animals or fowls.

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)).

ON-SITE DISPOSAL SYSTEM - means any septic system or alternative disposal system installed at a site to treat and dispose of domestic wastewater generated at that site.

PERCOLATION - the movement of water downward and radially through the sub-surface soil layers, usually continuing downward to the groundwater.

PESTICIDE - means any substance or mixture of substances intended to be used for defoliating plants or for preventing, destroying, repelling or mitigating insects, fungi, bacteria, weeds, rodents, predatory animals or any form of plant or animal life which is, or which may infest or be detrimental to vegetation, humans, animals or households or be present in any environment.

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 waste or any other liquid, solid, gaseous or hazardous substances.

RECHARGE PROJECT - means a facility designed and constructed for the purpose of adding water to an aquifer.

REFUSE - means all putrescible and nonputrescible solid and semisolid wastes, except human excreta, but including garbage, rubbish, ashes, manure, street cleanings, dead animals, abandoned automobiles, and industrial wastes.

REUSE OF RECLAIMED WASTEWATER - means the use of reclaimed wastewater transported from the point of treatment to the point of use without an intervening discharge to the surface waters of the state for which water quality standards have been established.

RUBBISH - means nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes, such as paper, cardboard, waste metal, tin cans, yard clippings, wood, glass, bedding, crockery and similar materials.

SALT BED - any stratified deposit of salt.

SALT DOME - a geologic structure resulting from the upward movement of a salt mass.

SEEPAGE PIT - see disposal pit.

SEPTIC TANK - a water tight container which receives raw sewage and discharges a settled, slightly treated effluent.

SEWAGE - means wastes from toilets, baths, sinks, lavatories, laundries, and other plumbing fixtures in residences, institutions, public and business buildings, mobile homes, water craft, and other places of human habitation, employment, or recreation.

SEWAGE DISPOSAL SYSTEM - means a system for sewage collection, treatment, and discharge by surface or underground methods.

SILVICULTURE - management of forest land for timber.

SLUDGE - a semi-solid residue from any of a number of air or water treatment processes.

SLUDGE POND - a holding pond to contain semi-solid residue from any number of air or water treatment processes.

SURFACE IMPOUNDMENT - means a pit, pond or lagoon, having a surface dimension that is equal to or greater than its depth, which is used for the storage, holding, settling, treatment or discharge of liquid pollutants or pollutants containing free liquids.

STORM SEWER - a system of pipes (separate from sanitary sewers) that carry only storm water runoff from building and land surface.

STORM WATER - means storm water runoff, snow melt runoff, and surface runoff and drainage.

UNDERGROUND STORAGE AND RECOVERY PROJECT - means a facility designed and constructed to store water underground and recover that water pursuant to a permit issued by the Arizona Department of Water Resources.

UNDERGROUND STORAGE TANK - means a tank or combination of tanks and underground pipes connected to tanks 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 non commercial 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 sections 1671 through 1686.
 - (ii) the hazardous liquid pipeline safety act of 1979 (49 United States Code section 2001).
- (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).*

VADOSE ZONE - means the zone between the ground surface and any aquifer.

WASTES - means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substance which may pollute or tend to pollute any water of the State. The term "wastes" does not include agricultural irrigation and drainage waters for which water quality standards shall have been established pursuant to Arizona Administrative Code (A.A.C.) R18-11-101 through 304.

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

APPLICATION
— APP —

AQUIFER PROTECTION PERMIT APPLICATION

(see guidance document for details)

*Original
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A. FACILITY DATA

1. NAME OF FACILITY (List previous names, if any)

2. a) DATE FACILITY BEGAN (or is expected to begin) OPERATIONS

b) EXPECTED LIFE OF THE FACILITY

3. MAILING ADDRESS OF FACILITY

4. FACILITY ADDRESS

5. COUNTY _____

6. FACILITY LOCATION

a) Township	Range	Section(s)	Quarters
_____	_____	_____	___ 1/4, ___ 1/4, ___ 1/4
_____	_____	_____	___ 1/4, ___ 1/4, ___ 1/4

b) Latitude _____

Longitude _____

7. FACILITY CONTACT PERSON _____

8. TELEPHONE NUMBER _____

9. NATURE OF BUSINESS (FACILITY)

B. APPLICANT INFORMATION

1. NAME OF APPLICANT

2. APPLICANT MAILING ADDRESS

CONSULTANT MAILING ADDRESS (OPTIONAL)

3. TELEPHONE NUMBER OF APPLICANT

C. OWNER INFORMATION

1. NAME OF OWNER

2. OWNER MAILING ADDRESS

3. TELEPHONE NUMBER OF OWNER

4. LAND OWNER

5. LAND OWNER ADDRESS

D. OPERATOR INFORMATION

1. OPERATOR NAME

2. OPERATOR ADDRESS

3. OPERATOR TELEPHONE NUMBER

E. EXISTING ENVIRONMENTAL PERMITS

1. NPDES PERMITS & NUMBERS

2. REUSE PERMITS & NUMBERS

3. RCRA PERMITS & NUMBERS

4. AIR QUALITY PERMITS & NUMBERS

5. SOLID WASTE PERMITS & NUMBERS

G. REQUIRED ATTACHMENTS

Please indicate in the spaces provided that the appropriate attachments or information have been included.

1. LOCATION MAP

_____ Have you attached 2 copies of the appropriate map?

Is all the following information indicated on the map?

_____ The facility site boundary?

_____ An area of at least 3 miles around the boundary?

_____ Location of all wells within 1/2 mile of the boundary?

_____ Land ownership or use of properties adjacent to the site?

_____ Have you included well construction details and well uses?

2. SITE PLAN - TWO COPIES

_____ Have you included the site plan?

Is all the following indicated on the plan?

_____ Property lines?

_____ Buildings and structures?

_____ Locations of water wells, borings or sampling points?

_____ Locations of discharge sites?

_____ Topography?

_____ Proposed Point of Compliance?

3. FACILITY DESIGN PLANS - TWO COPIES: PROPOSED AND/OR "AS BUILT"

_____ Have you included the design drawings?

6. DEMONSTRATION OF COMPLIANCE WITH STANDARDS.

_____ Have you indicated a proposed Point of Compliance on the appropriate site plan or map?

Is the proposed Point of Compliance for:

_____ Hazardous substances?

_____ Non-hazardous substances?

Provide justification for selecting the proposed Point of Compliance.

7. DEMONSTRATION OF TECHNICAL CAPABILITY

a. Who is responsible for the design of the facility?

Provide the basis for the party's capability:

b. Who is responsible for the construction of the facility or its components?

Provide the basis for the party's capability:

c. Who is responsible for the operation of the facility?

Provide the basis for the party's capability:

8. DEMONSTRATION OF FINANCIAL CAPABILITY

Please indicate in the spaces provided that the appropriate attachments or information have been included. Please submit financial information in a form that will easily allow ADEQ to keep such information confidential.

- a) Have you included estimates for the total costs of each of the following aspects of the facility?

___ Construction;
___ Operation;
___ Closure;
___ Post-closure care;

- b) ___ Have you attached the required statement from the applicant's chief financial officer that the applicant is financially capable of meeting the costs estimated in sub-section a) above?

- c) If the applicant is not a governmental entity, have you included one of the following?

___ The most recent 10K form of the applicant;
___ A report containing all of the following:
___ Applicant's organizational structure
___ Description of applicant's business
___ Applicant's net worth, describing major assets and liabilities
___ Description of judgments exceeding \$100,000.00 against applicant during five years prior to making this application
___ Description of bankruptcy or insolvency proceedings by applicant during five years prior to making this application.
___ Names & dates of birth of executive officers (If applicant is a corporation);
___ Evidence of a bond, insurance, or trust fund.

9. ENFORCEMENT ACTIONS

Provide a brief description of any action for the enforcement of any 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 prior to making this application.

10. ZONING

— Indicate that you have included evidence that the facility complies with applicable municipal or county zoning ordinances and regulations.

H. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE

SIGNATURE

DATE SIGNED

We recommend that two copies of the application be submitted to expedite review within Plan Review & Permits Section .

-Orig-
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Make copy

Arizona Department of Environmental Quality

AQUIFER PROTECTION PERMIT APPLICATION

=====

PART II - DISCRETIONARY INFORMATION

A. Specific portions of the following information is required upon request of the Department. Please see the application guidance document, or establish what is needed during the pre-application meeting. Requirements vary depending on facility design and specific site characteristics of the location.

1. HYDROLOGIC STUDY

Have you included:

- a. A description of the surface and subsurface geology;
- b. The location of any perennial or ephemeral surface water bodies;
- c. The characteristics of the Aquifer and Geologic Units with limited permeability, including depth, hydraulic conductivity and transmissivity.
- d. The rates, volumes and directions of surface water and ground water flow, including hydrographs, if available and Equi-potential maps.
- e. The location of the 100-year flood plain and an assessment of the 100-year flood surface flow and potential impacts on the facility;
- f. A documentation of the existing quality of the water in the aquifers underlying the site, including, where available, the method of analysis and quality assurance and quality control procedures associated with the documentation;
- g. A documentation of the extent and degree of any known soil contamination in the vicinity of the facility;
- h. An assessment of the potential of the discharge to cause the leaching of pollutants from surface soils or vadose materials;
- i. Any anticipated changes in the water quality expected as a result of the discharge;

- _____ j. A description of any expected changes in the elevation and flow directions of the groundwater that may be caused by the facility;
- _____ k. Map of the facility's discharge impact area;
- _____ l. The criteria and methodologies used to determine the discharge impact area.

2. PROPOSALS FOR VARIOUS PERMIT CONDITIONS

If requested, have you included detailed proposals for the items indicating how the applicant proposes to satisfy the requirements of A.R.S. 49, Chapter 2, Article 3, and A.C.C. R18-9-101 thru 130.

_____ a. Alert Levels

Alert levels may be based upon site-specific conditions described by the applicant or may be based upon a pollutant which indicates the potential appearance of another pollutant or may be prescribed to be measured at the point of release, the point of compliance or any intervening point;

_____ b. Discharge Limitations

Discharge limitations should be based upon the considerations described in ARS 49-243 A, B, C, D;

_____ c. Monitoring Plan

- 1) The type and method(s) of monitoring to be conducted;
- 2) The frequency of monitoring;
- 3) The analytical techniques or methods used to perform the sampling or analysis;
- 4) Any requirements for the installation, use or maintenance of monitoring equipments, and reporting intervals and monitoring records as prescribed by the department.

_____ d. Contingency plans for alert level exceedances;

_____ e. Contingency plans for discharge limit exceedances;

- _____ f. Contingency plans for Aquifer Water Quality Standard violations;
- _____ g. Compliance Schedule;
- _____ h. Temporary cessation plans;
- _____ i. Closure and Post-Closure plans.

BADCT
GUIDANCE D6C -
MINING INDUSTRY

BADCT GUIDANCE DOCUMENT

**FOR THE
MINING CATEGORY**

**DRAFT
FOR DISCUSSION
PURPOSE ONLY**

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I. INTRODUCTION

A. Objective of BADCT Guidance Document

The purpose of this document is to guide selection of the Best Available Demonstrated Control Technology (BADCT) for mining facilities. For purposes of this document, mining facilities include mining, mineral processing, mineral extraction and associated disposal activities. This document will address the base metal, uranium, and precious metal segments of the mining industry. The Environmental Quality Act (A.R.S. 49-243 B.1.) requires that all permitted facilities utilize BADCT:

"...the facility will be designed, constructed and operated as to ensure the greatest degree of discharge reduction achievable through application of best available demonstrated control technology, processes, operating methods or other alternatives, including, where practicable, a technology permitting no discharge of pollutants...However, a discharge reduction to an aquifer achievable solely by means of site specific characteristics does not, in itself, constitute compliance with..." BADCT.

In other words, rather than using some minimum required control technology, mining operators should be using state-of-the-art design elements to limit discharge to aquifers. BADCT determination involves evaluating the "optimal" technologies as a first design. Site characteristics may be substituted for designed control technologies to arrive at a final design (BADCT for that facility and site). Two key concepts reflected in this document are that BADCT is site specific and that BADCT is determined through negotiation between the applicant and the Department of Environmental Quality (DEQ).

This document outlines the best demonstrated control technologies available for mining facilities and describes the stepwise process that a permit applicant should follow to select BADCT for a specific site. The BADCT Guidance Document is intended for use in conjunction with the Aquifer Protection Permit Guidance Document (currently under development). Meeting BADCT requirements is only one aspect of the Aquifer Protection Permit. The Department will use both Guidance Documents to evaluate permit applications. In the event that an inconsistency exists between this document and applicable rules and/or statutes, provisions of the latter will prevail. Statutory (state law) references are prefaced by A.R.S. (Arizona Revised Statutes) while regulation references are denoted by AAC (Arizona Administrative Code).

B. Facilities Requiring BADCT

Mining, processing, refining, and smelting facilities are considered to be discharging facilities (A.R.S. 49-241 B.) when they have any of the following: surface impoundments, solid waste disposal, injection wells, tailings piles and ponds, leaching operations, wastewater treatment facilities, addition of pollutants to underground caves or mines, or point source discharges to navigable waters. They are required to obtain an Aquifer Protection Permit with BADCT incorporated into their designs.