

This Substantive Policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona Administrative Procedure Act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties, you may petition the agency under Arizona Revised Statutes section 41-1033 for a review of the statement.

Investigation Derived-Wastes (IDW) Policy	Document No.	4013.001
	Revision No.	1.0
	Effective Date	

1.0 Purpose

- 1.1 The purpose of this policy establishes guidance for managing Investigation-Derived Wastes (IDW) and describes various types and classifications of IDW. Management and disposal options will depend on whether the materials derived from investigative activities are solid waste, hazardous waste, or another type of waste, and the final disposition of IDW, whether on-site or off-site.

2.0 Revision History

Date	Rev. No.	Change	Ref. Section
8/9/2005	1.0	Policy Revision, New Format	0100.000

3.0 Persons Affected

- 3.1 This guidance shall apply to all ADEQ programs and personnel generating IDW.
- 3.2 In addition, it shall apply to all ADEQ contractors or subcontractors generating IDW as part of an ADEQ investigation.
- 3.3 This guidance should also prove useful to other entities generating IDW, both in the public and private sectors.

4.0 Policy.

The policy of ADEQ is to ensure that:

- 4.1 All ADEQ programs that generate IDW shall characterize, handle and dispose of IDW in accordance with the procedures in this policy and all applicable rules and laws.
- 4.2 Contamination problems at a site are not worsened because of the handling and disposal of IDW; and

- 4.3 Consistent procedures are provided for IDW handling and disposal based on compliance with environmental regulations and application of sound technical principles. This policy is consistent with the Soil Remediation Standards Rule.

5.0 Definitions

- 5.1 Investigation Derived-Wastes (IDW) consist of wastes generated during environmental site investigations and sampling activities including soil cuttings and other soil wastes; fluids from well drilling, aquifer testing, well purging, sampling, and decontamination; and disposable sampling and personal protection equipment.
- 5.2 Solid Waste is waste soil, wastewater and refuse.
- 5.3 Special waste is solid waste that requires special handling and management. Auto shredder fluff and petroleum contaminated soils (PCS) are classified as special waste.
- 5.4 Hazardous Waste means waste soil and wastewater will be classified as hazardous waste if the IDW exhibit the characteristic of ignitability, reactivity, corrosivity or toxicity.
- 5.5 Toxic Waste is classified as IDW containing polychlorinated Biphenyls (PCBs) and is regulated under the Toxic Substances Control Act (TSCA).
- 5.4 Petroleum Contaminated Soils (PCS) is defined as excavated soil containing benzene, toluene, ethylbenzene, total xylenes (BTEX) or polycyclic aromatic hydrocarbons (PAHs) above the residential predetermined soil remediation standards.

6.0 Responsibilities

- 6.1 All managers shall be responsible for insuring that their respective programs follow the guidance contained in this policy.

7.0 Procedures

- 7.1 A plan should be developed for IDW management prior to any sampling or other investigative activity that will generate IDW. The IDW management plan should be incorporated as an integral part of the field sampling plan.

7.1.1 IDW Management Plan Development:

- 7.1.1.1 Make a preliminary waste determination for each type and classification of IDW. Estimate the anticipated quantity and concentration of contaminants based on available data from previous investigations and/or historical site records. If information is limited and it is not possible to predict the classification of IDW, the IDW should be assumed to be hazardous waste. Once the waste determination is complete, the management plan can be modified if necessary.

- 7.1.1.2 Evaluate IDW management options based upon:

7.1.1.2.1 IDW type and classification;

7.1.1.2.2 Regulatory requirements;

7.1.1.2.3 Potential environmental impact; and

7.1.1.2.4 Community concerns.

7.1.1.3 Determine IDW management options. Select the most cost effective from those identified.

7.1.1.4 Integrate the selected IDW management option(s) into site-specific IDW management plan which includes the following:

7.1.1.4.1 An estimate of the number and type of samples needed for waste characterization.

7.1.1.4.2 Arrangements for IDW storage containers, if necessary.

7.1.1.4.3 Arrangements for temporary on-site IDW storage, if feasible.

7.1.1.4.4 Arrangements for off-site IDW transportation, storage and disposal, if necessary.

7.1.1.4.5 Obtain an EPA ID number and manifests for hazardous waste IDW disposal, if necessary.

7.1.2 Explanation of Steps for Plan Development

7.1.2.1 Preliminary Waste Determination - Various types of IDW may be generated during an investigation. The most common types are:

7.1.2.1.1 Wastewater, which includes groundwater, surface water, non-aqueous phase liquids, drilling muds, and decontamination fluids. Wastewater may be generated while:

7.1.2.1.1.1 Drilling wells and exploratory boreholes

7.1.2.1.1.2 Purging well casings prior to collecting a groundwater sample

7.1.2.1.1.3 Developing a newly installed monitor well

7.1.2.1.1.4 Pumping a well to perform an aquifer test

7.1.2.1.1.5 Decontaminating sampling equipment

7.1.2.1.1.6 Collecting virus and parasite samples from reclaimed wastewater

7.1.2.1.1.6 Collecting water quality samples

7.1.2.1.2 Waste Soil, which may be generated while:

7.1.2.1.2.1 Collecting soil samples from boreholes (drill cuttings)

7.1.2.1.2.2 Collecting soil samples from excavation pits (excavated soil)

7.1.2.1.2.3 Collecting composite surface samples (leftover excavated soil)

7.1.2.1.2.4 Searching for subsurface disposal units using exploratory borings or excavations

7.1.2.1.2.5 Collecting stream sediments

7.1.2.1.2.6 Constructing spill control berms during emergency actions

7.1.2.1.3 Refuse, which may be generated while:

7.1.2.1.3.1 Collecting hazardous substance samples (discarded personal protective equipment and disposable sampling tools)

7.1.2.1.3.2 Collecting samples of any environmental media (broken sample bottles, sample bottle labels, spent filters, empty beverage bottles and food wrappers)

7.1.2.1.3.3 Positioning spill control devices during emergency response actions (sorbants)

7.1.3 IDW generated during an investigation may be classified into one or more of the following categories:

7.1.3.1 Solid Waste will be regulated as solid waste if the IDW are removed from the site and do not exhibit a hazardous waste characteristic of ignitability, reactivity, corrosivity or toxicity.

7.1.3.2 Special waste is solid waste that requires special handling and management. Auto shredder fluff and petroleum contaminated soils (PCS) are classified as special waste. Methods for the collection and analysis of samples for characterization of auto shredder fluff are specified in R18- 8-307.

7.1.3.3 Hazardous Waste - Waste soil and wastewater will be classified as hazardous waste if the IDW exhibit the characteristic of ignitability, reactivity, corrosivity or toxicity. Generally, waste soil may exhibit toxicity if the total soil concentration is at least 20 times greater than the Toxicity Characteristic Leaching Procedure (TCLP) concentration for that regulated constituent. Waste soil containing regulated constituents that will be removed from the site will require TCLP testing to determine the appropriate disposal option. Generally, wastewater containing a VOC concentration exceeding 500 ug/l will exhibit the hazardous waste characteristic of toxicity and will be classified as a hazardous waste.

7.1.3.4 Toxic Waste - IDW containing polychlorinated Biphenyls (PCBs) are regulated under the Toxic Substances Control Act (TSCA). For addition information, see the EPA's PCB Guidance Manual. Upon receipt of sufficient information to make a waste determination, IDW must be immediately classified to insure that management is in compliance with applicable federal and state laws and rules. Written documentation regarding the waste classification and selected management options should be placed into the project or facility file.

7.2 Short-Term IDW Management options

7.2.1 While completing a waste determination, short-term management of IDW will be required. Management includes placing the IDW into a closed container, storing the container in a secure location, and labeling the container with information needed for future handling purposes. Non-hazardous soil may be stockpiled on liners on the ground if protected from run-on and run-off. All waste soil may be stored in roll-off containers or in drums. Fluids may be stored in drums or tanks to be drained or disposed later. If soil or fluids will be stored for any length of time (i.e. overnight, etc.), the appropriate program should be contacted to determine if other restrictions apply. Non-hazardous personal, protection equipment, disposable sampling equipment, and other refuse generated during field work should be properly containerized and transported to a landfill or commercial solid waste receptacle.

7.3 Selection of IDW Management Options

7.3.1 Arrangements should be made for the least costly, legal IDW disposal alternative. In some cases, IDW may be disposed at the site where generation occurred. Often, on-site disposal may be the preferred option. However, selection of IDW management options should be sensitive to community concerns. Residents living near an investigation site may have concerns about certain disposal methods or storage of IDW at the site. For example, a community may consider direct discharge of investigation derived groundwater onto the ground an unreasonable health risk. Therefore, a permitted discharge of the groundwater to publicly owned treatment works (POTW) may be necessary. In some instances, it may appropriate to include IDW management decisions in public fact sheets or community relations plans. For selection of hazardous

waste IDW management options, consultation with the Hazardous Waste Compliance Unit is advised.

7.3.1.1 On-site solid waste IDW management options include:

7.3.1.1.1 Disposal of drill cuttings into the borehole or test pit from which the cuttings were withdrawn, provided that:

7.3.1.1.1.1 The cuttings were not removed from the site before disposal;

7.3.1.1.1.2 Contaminated cuttings are not returned to previously uncontaminated parts of the borehole or test pit; and

7.3.1.1.1.3 The landowner has given permission.

7.3.1.1.2 Disposal of wastewater on the surface of the ground at the site, provided that:

7.3.1.1.2.1 The wastewater is known to be non-hazardous and the discharge on soil will not cause an increase or spread of existing contamination,

7.3.1.1.2.2 No environmental nuisance is created, and

7.3.1.1.2.3 The landowner has given permission. Evaporation of liquids on site in a lined container or impoundment provided there is no potential to violate air permit requirements or cause an environmental nuisance.

7.3.1.2 Off-site solid waste IDW management options include:

7.3.1.2.1 Disposal of wastewater to a POTW under written authorization (permit) from the municipality having jurisdiction.

7.3.1.2.2 Treatment or disposal of solid or liquid IDW at an ADEQ approved solid waste facility.

7.3.1.2.3 Personal protection equipment, disposable sampling equipment, and other refuse generated during field work should be properly disposed. This includes containerization and transportation of the waste to a landfill or commercial solid waste receptacle if it is non-hazardous.

7.3.1.3 Special waste IDW management options:

7.3.1.3.1 Best management practices (BMPs) developed for the treatment, storage and disposal of special wastes should be

followed for this classification of IDW. Analysis may classify auto shredder fluff as hazardous waste, and generated IDW must then be handled according to section B. For fluff that is nonhazardous, solid waste IDW management options can be used with the exception that facilities receiving fluff must be ADEQ approved special waste facilities. PCS must be handled as special waste and treated, stored, or disposed at an ADEQ approved PCS facility.

7.3.1.4 Hazardous waste IDW management options:

- 7.3.1.4.1 If IDW are expected to be hazardous, it is recommended that the Hazardous Waste Compliance Unit be contacted for assistance to insure compliance with these regulations.
- 7.3.1.4.2 It is acceptable to store potentially hazardous IDW at the site where generated until disposal arrangements have been made, provided that the storage site is in compliance with hazardous waste storage requirements.
- 7.3.1.4.3 To reduce unnecessary costs, an attempt should be made to minimize the amount of hazardous waste generated. Costs may be minimized by segregating non-hazardous materials from those that are suspected to be hazardous. Another common waste minimization practice is decontamination of personal protection equipment and disposable sampling equipment. The decontamination rinseate should be tested to determine if it is hazardous waste. If hazardous, the rinseate can be managed with other hazardous waste fluids from the investigation.

7.3.1.5 On-site hazardous waste IDW management options include:

- 7.3.1.5.1 Disposal of wastewater on the surface of the ground at the site, provided that, in the professional judgment of the site hydrologist or project manager, no adverse consequences with respect to the existing extent or severity of contamination in soils, surface water, or groundwater are anticipated. The following factors should be considered:
 - 7.3.1.5.1.1 The wastewater discharge will not cause an increase or spread of existing contamination; and
 - 7.3.1.5.1.2 The landowner has given permission.
- 7.3.1.5.2 Return of waste soil to boreholes and test pits from which the cuttings were withdrawn, provided that:

7.3.1.5.2.1 The cuttings were not removed from the site before disposal at the site;

7.3.1.5.2.2 Contaminated cuttings are not returned to previously uncontaminated parts of the borehole or testpit; and

7.3.1.5.2.3 The *landowner* has given *permission*.

7.3.1.5.3 Treatment of wastewater using granular activated carbon filtration or other effective methods, provided that:

7.3.1.5.3.1 The treatment is done at the site where the wastewater was generated or at a hazardous waste TSDF;

7.3.1.5.3.2 The treatment is done in accordance with 40 CFR § 262.34 and §268.7; and

7.3.1.5.3.3 The spent filter media are managed as hazardous waste, if necessary.

7.3.1.5.4 Storage of hazardous IDW at the site where it was generated until treatment arrangements can be made. For instance, if soil at a site contains wastes that are expected to be treated on-site, then it may be both cost effective and reasonable to store the IDW at the site until the treatment takes place rather than shipping the IDW off-site. However, the storage period is limited depending on the quantity of IDW. Again, it is critical to insure that the IDW is stored in compliance with hazardous waste requirements.

7.3.1.6 Off-site hazardous waste IDW management options include:

7.3.1.6.1 Disposal of wastewater to a POTW under written authorization (permit) from the municipality having jurisdiction.

7.3.1.6.2 Disposal of solid and liquid IDW at a RCRA Subtitle C hazardous waste TSDF through the use of a hazardous waste transporter and TSDF. Depending on the contaminants present and the *concentrations*, soil *classified as* hazardous waste and removed from a site may require an evaluation of the toxicity characteristic (TCLP).

7.4 Management of TSCA-regulated IDW

7.4.1 TSCA requirements include proper disposal methods (usually incineration) and storage time limitations (less than one year).

8.0 Additional Documentation

- 8.1 Arizona Administrative Code, Title, 18, Chapter 8, Article 2, (2004), Hazardous Wastes.
- 8.2 Arizona Administrative Code, Title 18, Chapter 13, Article 13, (2004), Special Wastes.
- 8.3 Arizona Administrative Code, Title 18, Chapter 13, Article 16 (2004), Best Management Practices for Petroleum Contaminated Soil.
- 8.4 Arizona Administrative Code, Title 18, Chapter 9, Article 3, Parts A-D(2004), Aquifer Protection Permits, General Permits.
- 8.5 Arizona Department of Environmental Quality, (1990), Guidelines for the Registration of a Temporary Facility for the Treatment of Excavated Petroleum Contaminated Soils, Office of Waste Programs, Solid Waste Unit.
- 8.6 Arizona Revised Statutes, (2004), Title 49, Chapter 1, Article 4, Sections 151 and 152, Remediation Standards.
- 8.7 Arizona Revised Statutes, (2004), Title 49, Chapter 4, Article 1, General Provisions (Solid Waste).
- 8.8 Arizona Revised Statutes, (2004), Title 49, Chapter 4, Article 9, Management of Special Waste.
- 8.9 Arizona Revised Statutes, (2004), Title 49, Chapter 5, Article 2, Hazardous Waste Management.
- 8.10 The Resource Conservation and Recovery Act, (RCRA), (2004) 42 U.S.C. §6901-6992.
- 8.11 Toxic Substances Control Act (TSCA), (2004), 15 U.S.C. S. §§2601-2671.
- 8.12 U.S. Environmental Protection Agency, (July 1989), Determining When Land Disposal Restrictions are Applicable to CERCLA Response Actions, Superfund Publication: 9347.3-05FS.
- 8.13 U.S. Environmental Protection Agency, (March 1991), Guide to Discharging CERCLA Aqueous Wastes to Publicly Owned Treatment Works (POTWs), OERR Publication 9330.2-13FS.
- 8.14 U.S. Environmental Protection Agency, (April 1992), Guide to Management of Investigation-Derived Wastes, OSWEI Publication 9345.3- 03FS.
<http://www.epa.gov/superfund/resources/remedy/pdf/93-45303fs-s.pdf>. November 19, 2004.
- 8.15 U.S. Environmental Protection Agency, (May 1991), Management of Investigation - Derived Wastes During Site Inspections, OERR Directive 9345.3-02.
<http://www.epa.gov/cgi-bin/claritgw?op-Display&document=clserv:OSWER:1434;&rank=4&template=epa>. November 19, 2004.

- 8.16 U.S. Environmental Protection Agency, (August 1990), PCB Guidance Manual, EPA/540/G-90/007.
- 8.17 40 CFR §§260-270, Sub-Chapter 1, Solid Wastes
- 8.18 FR Vol. 55, No. 46, p 8760, (March 8, 1990), National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

109331 ^{PRC} _{gwb}

ADEQ STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE	DATE
1	Don Richey, Remediation Section Manager	Review	<i>[Signature]</i>	5/20/05
2	Shannon M. Davis, Waste Programs Division Director	Approval	<i>[Signature]</i>	6-24-05
3	Ed Ranger, Administrative Counsel - Chair, PRC	Approval	<i>[Signature]</i>	7/7/2005
4	<i>Paul Rasmussen</i>		<i>[Signature]</i>	7/22/05
5	<i>Pat Cunningham</i>	JUL 22 2005	<i>[Signature]</i>	8/3/05
6	<i>Steve Owens</i>		<i>[Signature]</i>	8/9/05
7	<i>Judy Fought</i>		<i>[Signature]</i>	

ACTION OFFICER Peggy J. Guichard-Watters <i>[Signature]</i>	TITLE WPD Rules Manager	PHONE 1-4117	TRANSMITTAL DATE 4/12/05
---	-----------------------------------	------------------------	------------------------------------

SUBJECT Reformatted Policy for Posting Policy #0100.000 – Investigation-Derived Wastes (IDW) Policy	EFFECTIVE DATE
--	-----------------------

SUMMARY

The Investigation-Derived Wastes (IDW) Policy was originally issued on May 9, 1997. A review of the policy by current program staff indicated that the content of the policy was still valid and that there was a need for such a policy to continue. The policy has been reformatted, using the new policy system adopted by the agency. During the process of reformatting the policy, program staff was provided the opportunity to review the verbiage to ensure that the policy translated well into the new format.

As per the agency process established, a Policy Initiation Form has been prepared so that this revised policy can be cleared by the Policy Review Committee for posting on the intranet policy manual site.

Note: BAC
A new policy number will be assigned by the BAC, consistent w/ the core business process chapter and original policy approval date.

RECOMMENDATION Review and approve for posting and agency use
--

ATTACHMENTS Policy Control Form for Policy #0100.000; proposed revision 1 Policy #0100.000; proposed revision 1 – Investigation-Derived Wastes (IDW) Policy
--