



# VOLUNTARY REMEDIATION PROGRAM



**Orientation Package**  
(Rev. 2014-04-15)

## **Disclaimer**

This document was developed to provide the regulated community, volunteers, and consultants with guidance in complying with the Voluntary Remediation Program (VRP) as provided for in Arizona statutes and rules, and is to be utilized to aid in determinations regarding adequacy of site investigation and remediation activities. It creates no substantive or procedural rights in any person. The mention of trade names, commercial products, or private entities does not constitute an endorsement.

Nothing in this document supersedes any state or federal regulation. Complete conformity with the information in this document does not guarantee acceptance of all results by ADEQ, nor does it establish that all remedial actions undertaken are reasonable and necessary. Site-specific variances from the details of this document may be warranted, and will require use of professional judgment. This guidance document is a basic application for generalities encountered at VRP sites, and does not constitute an account for all site-specific conditions.

## List of Common Acronyms and Abbreviations

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADWR	Arizona Department of Water Resources
A.R.S.	Arizona Revised Statutes
ASRAC	Arizona Superfund Response Action Contract
ASTM	American Society for Testing and Materials
AWQS	Aquifer Water Quality Standards
AZPDES	Arizona Pollution Discharge Elimination System
bgs	below ground surface
CFR	Code of Federal Regulations
CI	Community Involvement
CIC	Community Involvement Coordinator
CIP	Community Involvement Plan
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DEUR	Declaration of Environmental Use Restriction
DQO	Data Quality Objectives
DU	Decision Unit
ECs	Engineering Controls
ECP	Engineering Control Plan
EPA	Environmental Protection Agency
ERA	Early Response Action
FS	Feasibility Study
FSP	Field Sampling Plan
FY	Fiscal Year
GPL	Groundwater Protection Level
GPS	Global Positioning System
gpm	gallons per minute
HASP	Health and Safety Plan
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
IC	Institutional Control
IRA	Interim Remedial Action
IRIS	Integrated Risk Information System
ISM	Incremental Sampling Methodology
LCS/LCSD	Laboratory Control Spike/ Laboratory Control Spike Duplicate

LOC	Letter of Completion
MCL	Maximum Contaminant Level
mg/Kg	milligrams per kilogram
mg/L	milligram per liter
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter of air
MNA	Monitored Natural Attenuation
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MW	Monitor Well
NFA	No Further Action
O & M	Operation and Maintenance
PA/PI	Preliminary Assessment/Preliminary Investigation
P.E.	Professional Engineer
POC	Point of Contact
ppb	parts per billion
ppm	parts per million
PRAP	Proposed Remedial Action Plan
PRP	Potentially Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
R.G.	Registered Geologist
RI	Remedial Investigation
RO	Remedial Objective
ROD	Record of Decision
RP	Responsible Party
SAP	Sampling and Analysis Plan
SCR	Site Characterization Report
SRL	Soil Remediation Level
SVE	Soil Vapor Extraction
SWQS	Surface Water Quality Standards
USCS	United Soil Classification System
UST	Underground Storage Tank
VEMUR	Voluntary Environmental Mitigation Use Restriction
VRP	Voluntary Remediation Program
WPD	Waste Programs Division
WQARF	Water Quality Assurance Revolving Fund

**For additional acronyms, refer to:** <http://www.azdeq.gov/function/help/acro.html>

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Attachment B: Abbreviated Quality Assurance Project Plan (QAPP)  
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Deliverable (EDD) format

## **VOLUNTARY REMEDIATION PROGRAM**

The Voluntary Remediation Program (VRP) allows interested parties to work cooperatively with Arizona Department of Environmental Quality (ADEQ) to remediate contaminated sites. The main goals of the VRP are:

- To allow interested parties to conduct remediation of properties and return them to productive use.
- To work cooperatively with interested parties to achieve their remediation goals in a cost effective manner.
- To allow interested parties to proactively reduce risk to public health and the environment.
- To inform the community of the activities being performed at the site.
- To facilitate identification of remediation goals as background, pre-determined or site-specific (risk assessment) standards.
- To facilitate the selection of regulatory tools such as engineering and institutional controls through Declaration of Environmental Use Restriction (DEURs).

VRP regulations and processes can be found under Arizona Revised Statutes (A.R.S.) § 49-171 through § 49-188. VRP accounting processes and Fee Rule can be found under Arizona Administrative Code (A.A.C.) Title 18, Chapter 7, Article 5.

### **ELIGIBILITY**

Most sites are eligible for the VRP. A site is not eligible if it is located within a Water Quality Assurance Revolving Fund (WQARF) Registry site boundary and the applicant has proposed to address the same contaminants of concern being addressed under WQARF. Additionally, any site where remedial action is required pursuant to a written agreement (i.e. judicial judgment, decree, or administrative order) between the applicant and the Director is not eligible. Resource Conservation Recovery Act (RCRA) permitted/interim status facilities and Federal sites are not eligible.

VRP works cooperatively with other ADEQ programs if they recommend a site enter VRP to see that applicable program standards are applied. VRP performs the oversight management for Brownfield Grant Sites if it is determined a site requires remediation.

## PROCESS

In general, once a site has been accepted into the VRP, a work plan is submitted for review and approval. Once approved, the applicant can proceed with investigation and/or remediation according to the approved work plan.

If required, work plan modifications should be submitted to the VRP. Interested parties can submit pertinent documents for review after remedial activities are completed; however, the VRP strongly recommends working cooperatively with the VRP from the inception of any project. Once the remedial goals have been met, and the community involvement requirements completed, the applicant may submit a request for a No Further Action (NFA) determination. The department reviews and, if appropriate, grants an NFA for the site or portion of the site.

## ACCOUNT INFORMATION

Application Fee: See A.R.S. § 49-179(A) and A.A.C. R18-7-502 for complete details.

- A non-refundable application fee of \$2,000, which accompanies the application, is used by the program to perform research and inquiries within ADEQ to determine eligibility of the site to enter the program. If the site is accepted, any amount of the \$2,000 remaining is applied to the site account and used by the program to cover document review costs before any other deposits are used.

Account Deposit & Summary: See A.R.S. § 49-179(C), A.A.C. R18-7-503, and A.A.C. R18-7-504 for details.

- Upon acceptance into the program, an initial deposit request in the amount of \$4,000 will be issued and must be paid prior to any review of work being performed by program personnel.
- If at any time during the duration of work on the site, the site account balance falls below \$1,000, ADEQ will issue another \$4,000 deposit request, due and payable within 30 days from the issuance of the request.
- The VRP deposit requests are issued in \$4,000 increments; however, the Volunteer has the option to submit payments in excess of \$4,000 at any time to maintain a positive account balance or in anticipation of a large volume of activity.

Hourly Reimbursement: See A.A.C. R18-7-504, and A.A.C. R18-7-505 for complete details.

- Time spent on the project by program personnel is billed at \$110 per hour.
- Personnel bill in 1/10<sup>th</sup> hour increments (every 6 minutes).

Accounting: See A.A.C. R18-7-506 for complete details.

- Account Summaries are issued quarterly.
- As a courtesy to our Volunteers, requests for site account reconciliation can be made to the project manager at any time.

Account Reconciliation: See A.A.C. R18-7-507 for complete details.

- Upon successful completion of work at the site, or if the site either withdraws or is terminated, a final Account Summary will be prepared and issued. This will determine if there is a refund due to the Volunteer.
- If the site costs incurred by VRP exceed the \$2,000 non-refundable application fee and there are funds remaining in the site account at the time of closure, those funds will be refunded to the applicant.
- If the site costs incurred by VRP do not exceed the \$2,000 non-refundable application fee, but the \$4,000 initial deposit was paid, then only the \$4,000 initial deposit will be refunded.

## WITHDRAWAL / TERMINATION / REFERRAL

See A.R.S. § 49-178 for complete details.

- A Volunteer may withdraw from the program at any time.
- VRP may terminate a volunteer for failure to do the following:
  - Submit a work plan or report in a reasonable time period.
  - Comply with work plan/work plan modification requirements.
  - Substantially comply with approved schedule for completion.
  - Reimburse VRP for its costs.
  - Or submitting false or misrepresenting information.
- VRP may refer a site to the appropriate regulatory program upon withdrawal, termination, and/or failure to include a known environmental issue into the scope of work.

## NOTIFICATIONS

The VRP encourages the following:

- Notify VRP a minimum of one (1) week prior to the beginning of field work.
- Notify VRP as soon as practical of any necessary modification to the approved work plan and/or unforeseen occurrences on the site.
- Notify VRP if the site has a pending real estate action that may be impacted by report or site reviews.
- Notify VRP in writing of any changes to information including:
  - Volunteer contact information.
  - Mailing address.
  - Billing address.
  - Consultant and/or authorized agent information.

## GENERAL INFORMATION

- VRP information can be found at: <http://www.azdeq.gov/environ/waste/cleanup/vol.html>.
- A list of reference and/or guidance documents, templates, and checklists is provided in Attachment A. The templates and checklists can be provided by VRP upon request.
- The Soil Remediation Standards, found in A.A.C. R18-7-201 through 210, adopted on May 5, 2007, contain the accepted residential Soil Remediation Levels (SRLs) and non-residential SRLs for contaminants regulated by ADEQ.
- Groundwater is regulated under the Aquifer Water Quality Standards (AWQSSs) found in A.A.C. R18-11-406.
- Surface Water is regulated under the Surface Water Quality Standards (SWQSSs) found in A.A.C. R18-11-101, *et. seq.*
- The Water Quality Assurance Revolving Fund (WQARF) Remedy Selection rules apply if groundwater is impacted off-site.
- In most cases, a Human Health Risk Assessment (HHRA) will be reviewed by an outside contractor. Associated costs will be billed to the VRP site account and are the responsibility of the Volunteer.
- NFAs may be granted for a site or portion of a site.
- A Conditional NFA may be awarded with a Declaration of Environmental Use Restriction (DEUR) for contaminant soil levels that are above residential SRLs.
- In a dispute concerning an issue of geologic, hydrologic, chemical, biological, or other scientific interpretation, dispute resolution may be requested by the Volunteer. Refer to A.R.S. § 49-185(B) and (C).

- Any dispute regarding a billing shall be raised in writing within thirty days after a bill is received. Refer to A.R.S. § 49-185(D).

## WORK PLAN CONTENT GUIDANCE

See A.R.S. § 49-175 for complete details.

VRP recommends submitting a comprehensive work plan by following the “Required” and “Suggested” items described below as well as following and completing the “VRP Work Plan Checklist”. By doing so, the number of modifications requested by VRP will be reduced. Refer to Attachment A for reference/guidance documents, templates, and checklists for assistance in developing a work plan.

Required:

Pursuant to A.R.S. § 49-175, work plans submitted to VRP shall include the following:

- Summary of existing site characterization and assessment information; information regarding any remediation previously conducted; and copies of referenced reports not previously submitted.
- If the site has not been characterized, a plan to conduct site characterization and a schedule for completion.
- If site characterization is completed, a description of how the remediation will comply with A.R.S. § 49-175(B) ("Work Plans") and how the completion of remediation will be verified. A schedule for completion must be included.
- If site characterization is completed, the work plan may provide for the remediation to be conducted in phases or tasks. A schedule for completion must be included.
- Schedule for submission of progress reports.
- A proposal for community involvement as prescribed by A.R.S. § 49-176 ("Community Involvement Requirements").
- If known, a list of institutional or engineering controls necessary during remediation and after completion of the proposed remediation to control exposure to contaminants.
- A proposal for monitoring during remediation and after the remediation if necessary to verify whether the approved remediation levels or controls have been attained and will be maintained.
- A list of any permits or legal requirements known to apply to the work or already performed by the applicant.

- If requested by the department, information regarding the financial capability of the applicant to conduct the work identified in the application, if applicable.
- Remediation levels or controls for remediation conducted pursuant to this article shall be established in accordance with rules adopted pursuant to A.R.S. § 49-282.06 (“Remedial Action Criteria, Rules”) unless one or more of the following applies:
  - The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of contaminated soil comply with A.R.S. § 49-152 (“Soil Remediation Standards; Restrictions on Property Use”) and the rules adopted.
  - The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of landfills or other facilities that contain materials that are not subject to A.R.S. § 49-152 (i.e.: asbestos) do not exceed a cumulative excess lifetime cancer risk between  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ , and a hazard index of no greater than 1.
  - The applicant demonstrates that on achieving remediation levels or controls for a source or potential source of contamination to a navigable water, the source of contamination will not cause or contribute to an exceedance of SWQSSs, or if a permit is required pursuant to 33 United States Code § 1342 (“National Pollutant Discharge Elimination System”) for any discharge from the source, that any discharges from the source will comply with the permit.
  - The applicant demonstrates that, on achieving remediation levels or controls for a source of contamination to an aquifer, the source will not cause or contribute to an exceedance of AWQSSs beyond the boundary of the facility where the source is located.
- VRP may waive any work plan requirement that it determines to be unnecessary to make any of the determinations required under A.R.S. § 49-177 (“Work Plan Review and Approval”).
  - If any waivers are requested in the work plan or have been previously requested and approved by the VRP, cite them in the work plan, including a citation of the statute for which the waiver applies.

### Suggested:

In general, VRP recommends that work plans submitted to VRP also include the following:

- An explanation of the project objectives as they relate to the characterization and/or remediation to be performed.
- Additional site information such as:
  - Physical description of the site location.
  - Site map to scale.
  - Physical description of impacted or potentially impacted site characteristics including any or all of the following: soil, geology, groundwater, surface water, air impacts, biology, climate, cultural/natural resources, or zoned usage.
  - A scaled figure of proposed sampling/monitoring well/remedial system locations.
  - A description of the characterization and/or remediation to be performed.
- A Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) or a Sampling and Analysis Plan (SAP) [these documents can be appendices to the work plan].
- A plan for data management and reporting procedures including electronic submittal of groundwater quality data. Refer to: [http://www.azdeq.gov/environ/waste/sp/s/download/guidance\\_v3.4.pdf](http://www.azdeq.gov/environ/waste/sp/s/download/guidance_v3.4.pdf)
- An estimated schedule for project completion, including:
  - Timelines for various aspects of the project.
  - Timelines for submission of applicable reports, such as:
    - SAP or a QAPP and FSP, if not included with the work plan.
    - Health and Safety Plan (HASP).
    - Stormwater Pollution Prevention Plan (SWPPP), if applicable.
    - Progress reports.
    - Monitoring reports.
    - Characterization reports.
    - Risk assessment work plan and subsequent reports,
    - Institutional and/or engineering control operation and maintenance reports.
    - Project completion report.
    - NFA determination request.
- A references section that includes any documents referred to in the work plan such as:

- Historical documents.
- Reference and/or guidance documents.
- Technical papers.
- Other.

## **VRP WORK PLAN CHECKLIST**

The VRP Work Plan Checklist (Checklist) has been developed to assist Volunteers in producing accurate and administratively complete work plans, thereby reducing the need for comments from the VRP.

This Checklist assists the Volunteers by providing guidance on work plan preparation as stipulated in A.R.S. §49-175. The Checklist is provided to the Volunteer and/or their Authorized Agent separately, in electronic format, so it can be completed using Adobe Acrobat.

The VRP strongly encourages the Volunteer and/or their Authorized Agent to submit a completed VRP Work Plan Checklist with all work plan submittals.

If you have not received the electronic Checklist with your orientation package, please contact your VRP project manager directly or the VRP Unit Manager at 602-771-4866.

## **SAMPLING AND ANALYSIS PLAN**

A SAP combines, in a short form, the basic elements of a QAPP and a FSP. The SAP can be submitted as a separate document or as an appendix to the work plan. Refer to Attachment A for reference/guidance documents, templates, and checklists for assistance in developing a SAP. The SAP may include, but is not limited to, the following:

- The data quality objectives (DQOs) and data quality indicators for the project.
- The purpose for the sampling, specifically for certain contaminants of concern (COCs).
- A description of the media to be sampled (soil, groundwater, soil vapor, surface water, etc).
- Sample location(s) clarified/shown on maps or figures.
- Sample frequency (e.g. how many rounds or phases of sampling are planned).
- Field sampling and analytical methods.

- Examples: discrete, grab, composite, grid, incremental sampling methodology (ISM), etc.
- Decontamination procedures.
- Analytical method(s) to be utilized by the laboratory.
- Handling of investigative derived waste (IDW).
- Sample containers, preservation, storage, and holding times.
- Sample documentation and shipment.
  - Chain of Custody, sample identifications, field notes, photograph(s).
  - Sample transport and delivery methods to fixed lab or mobile on-site lab.
- A plan for Quality Assurance/Quality Control (QA/QC).

## QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) measures may be presented in a SAP, the work plan, or a QAPP. Refer to Attachment A for reference/guidance documents, templates, and checklists for assistance in developing a QAPP.

A plan for QA/QC should adhere to the following:

- The laboratory to be used must be an Arizona Department of Health Services (ADHS) certified laboratory.
- The laboratory must report using the Arizona Data Qualifiers. Refer to: <http://www.azdhs.gov/lab/documents/license/resources/resources/data-qualifiers-rev4.pdf>
- At a minimum, the laboratory must provide a Level II data package.

Details regarding a project's QA/QC should include, but are not limited to:

- An outline of DQOs and data quality indicators.
- A plan for field quality control which could include items such as:
  - Chain of Custody procedures.
  - Duplicate samples collected at a rate of one for every 20 samples or one duplicate per day per sample type,
  - Equipment blanks collected at a rate of one per media/equipment type or a minimum of one per day.
  - Trip blanks (typically one per cooler. Only necessary for volatile organic water samples).
  - Equipment testing, inspection, and maintenance.
  - Instrument calibration.

- A plan for data review to include, but not limited to:
  - Data verification and validation.
  - Data usability assessment.
  - Review of field quality and laboratory quality controls

Your laboratory's QA/QC program should include limits and procedures for the following:

- Holding times.
- Trip blanks.
- Method blanks.
- Matrix spike/matrix spike duplicates (MS/MSD).
- Laboratory control spike /laboratory control spike duplicates (LCS/LCSD).
- Reporting limits (these should be below the applicable regulatory standards. Having a sample diluted by the laboratory can impact this greatly).

### ABBREVIATED QUALITY ASSURANCE PROJECT PLAN TEMPLATE

An Abbreviated QAPP template has been provided to assist Volunteers in developing a QA/QC program appropriate for their project.

The Abbreviated QAPP may be used at sites with limited, short-term sampling. Sites where sampling includes more than one media type and/or has on-going monitoring should have a comprehensive QAPP prepared.

The Abbreviated QAPP is provided to the Volunteer and/or their Authorized Agent separately, in electronic format, so it can be completed using MS Office.

If you have not received the electronic template with your orientation package, please contact your VRP project manager directly or the VRP Unit Manager at 602-771-4866.

### COMMUNITY INVOLVEMENT

See A.R.S. § 49-176 for complete details.

- Work plans are subject to a public comment period.
- Volunteer must provide public notice and information regarding site investigation and/or remediation:
  - Visible on-site sign (suggested minimum).

- Direct mailing (factsheets, newsletters and news articles), door hangings, or other distribution sufficient to reach those who may be impacted.
- Public meeting.
- Establish a repository and provide general notice if remediation will be greater than 180 days.
- Volunteer should provide the public general notice of an NFA request in a newspaper of general circulation:
  - The public comment period is generally 30 days.
  - Sites executing a DEUR require a 45 day comment period.
- Community involvement requirements are site-specific. Additional activities appropriate to schedule and scope of work may be required after consideration of the following factors:
  - Actual or potential impact to water supply.
  - Extent and toxicity of contamination.
  - Duration of the work.
  - Level of public interest.
  - Noise, light, odor, dust, and other adverse impacts.
  - Likelihood of contaminant exposure to human or ecological receptors.

## NO FURTHER ACTION (NFA)

See A.R.S. § 49-181 for complete details.

- An NFA report in the form of a summary/letter report shall include:
  - Description of specific contaminants to be included in NFA.
  - Description of actions taken to achieve remediation levels.
  - Description of soil, water, and/or soil and water treatment system(s) used as part of the remediation.
  - If institutional or engineering controls are placed on the site:
    - Demonstration that engineering controls have been constructed, is functioning, and will be maintained.
    - Description of proposed land use and demonstration that the use will not compromise integrity of engineering controls and will be in accordance with any institutional controls.
  - Description of post-remediation monitoring (if proposed).
  - Description of community involvement activities undertaken (during characterization/remediation and closure).
  - List of permits obtained for remedial action or held by volunteer pertaining to the site.
- As part of the NFA report, include a:

- Draft NFA public notice for review and approval.
- Scaled map of the NFA area along with a .KMZ [Keyhole Markup language Zipped] file (see Attachment B).
- At the end of the NFA public comment period, submit:
  - Affidavit of publication.
  - Certification forms (supplied by VRP).
    - Certification for No Further Action Determination - Soil.
    - Certification for No Further Action Determination - Groundwater.
    - Certification for No Further Action Determination with DEUR.
  - Public comment notification letter.
- Denial or rescission of an NFA determination is an appealable agency action [refer to A.R.S. § 49-185(A)].

## **DECLARATION OF ENVIRONMENTAL USE RESTRICTION**

See A.R.S. §§ 49-151 through 49-159 for complete details. A complete list of applicable Statutes and Rule are provided on page 15.

A Declaration of Environmental Use Restriction (DEUR) is a restrictive covenant designed to document the use of institutional and/or engineering control(s) to allow closure of a site with contamination above a residential remediation level and ensures the appropriate future use of the subject site. The DEUR ensures that current and future property owners are aware of contamination on a site and take the appropriate actions to prevent unacceptable exposure to the remaining contamination. All land use restrictions, provisions and engineering controls defined in the DEUR must be approved by ADEQ. Upon ADEQ's approval the property owner records the DEUR with the appropriate county recorder's office. The DEUR remains in effect and is monitored by ADEQ until the property owner demonstrates that releasing the DEUR is appropriate. Property owners seeking an NFA from ADEQ should be aware that a Conditional NFA determination will be issued if a DEUR is to be placed on the site or portion of a site.

Once recorded, the DEUR is attached to the land and allows ADEQ to take actions necessary to ensure that the institutional and/or engineering controls are adequately maintained throughout the life of the DEUR. Once a DEUR is in place, the current property owner is responsible for maintaining the terms of the DEUR. ADEQ may visit the property and conduct inspections to ensure compliance with the terms of the DEUR.

The program providing the oversight of the remediation process will determine if the site conditions meet the requirements of a DEUR. The program will provide the property owner with the DEUR application which will need to be completed and submitted to ADEQ. ADEQ will develop a site-specific DEUR based on the conditions of the site and information contained in the application. In addition to the application, ADEQ will require the following:

- A certified copy of the deed.
- Vicinity map illustrating the property's general location.
- A legal description of the restricted area(s) as determined from a survey conducted by an Arizona licensed surveyor.

- A map of the restricted area(s) created from the dimensions and bearings obtained from the survey.
- A contaminant information page citing the contaminant(s) of concern and their respective concentration(s).
- If the DEUR utilized an engineering control, an engineering control plan and a proposed form of financial assurance document are required.

## MODIFICATION OR RELEASE

The DEUR is perpetual unless formally released by ADEQ. ADEQ will determine that a release of the DEUR is appropriate if the area of the property subject to the DEUR has been remediated to meet the requirement of A.R.S. §§ 49-152(D) and 49-158(L). In addition, pursuant to A.A.C. R18-7-605 and 606, property owners must pay a fee to cover ADEQ's administrative costs for processing the DEUR release or modification.

## REPORTING REQUIREMENTS

Property owners that elect to utilize an institutional control (land use restriction) are required by statute to submit a written status report to ADEQ once each calendar year. ADEQ has established September 1 as the annual reporting deadline. ADEQ will provide a site-specific annual report form to responsible property owners' of record prior to the reporting deadline. Property owners will be required to report the status of the institutional control and return the completed form to ADEQ by September 1. ADEQ will review all annual reports for completeness and will periodically conduct site visits to ensure that the institutional control and DEUR provisions are being adequately maintained.

Property owners that elect to utilize engineering controls shall maintain the controls in accordance with the respective Engineering Control Plan (ECP). Pursuant to statute, all engineering controls shall be inspected at least once each calendar year and an inspection report shall be submitted to ADEQ within 30 days following the inspection. In addition, property owners are required to maintain an amount of financial assurance as calculated in the ECP, which covers the costs of maintaining the controls and implementing a contingency plan in the event the controls fail.

## FEES

Property owners electing to use an institutional or engineering control to satisfy the requirements of A.R.S. §§ 49-152 or 49-158, must pay a fee to

ADEQ established by rule. The fee shall be calculated pursuant to A.A.C. R18-7-601 through 606. All fees are non-refundable and are due at the time the DEUR is submitted to ADEQ for review and approval. A DEUR Fee Calculation Spreadsheet can be found at: <http://www.azdeq.gov/environ/waste/cleanup/deur.html>

## STATUTES

A.R.S. § 49-151 through 49-159.

- A.R.S. § 49-151 Definitions.
- A.R.S. § 49-152 Soil Remediation Standards and Restrictions on Property Use.
- A.R.S. § 49-152.01 Engineering Controls and Financial Assurance.
- A.R.S. § 49-152.02 Enforcement of Engineering Controls and Civil Penalty.
- A.R.S. § 49-158 Restrictions on Property Use.
- A.R.S. § 49-158 Enforcement of Engineering and Institutional Controls.
- A.R.S. § 49-159 Institutional and Engineering Control Fund and Purpose.

## FEE RULE

A.A.C. R18-7-601 through 606.

- A.A.C. R18-7-601 Definitions.
- A.A.C. R18-7-602 Applicability.
- A.A.C. R18-7-603 Fee.
- A.A.C. R18-7-604 Fee Calculation.
- A.A.C. R18-7-605 Postponement of the Release Portion of the DEUR Fee.
- A.A.C. R18-7-606 DEUR Modification Fee.

## **Reference/Guidance Documents:**

### **ADEQ:**

*A Screening Method to Determine Soil Concentrations Protective of Groundwater.* ADEQ. September 1996.  
[http://www.azdeq.gov/environ/waste/sps/download/gpl\\_guidance.pdf](http://www.azdeq.gov/environ/waste/sps/download/gpl_guidance.pdf)

*Groundwater Data Submittal Guidance Document* (version 3.4). ADEQ. October 2010.  
[http://www.azdeq.gov/environ/waste/sps/download/guidance\\_v3.4.pdf](http://www.azdeq.gov/environ/waste/sps/download/guidance_v3.4.pdf)

*Groundwater Data Submittal Look Up Tables* (version 3.4). ADEQ. October 2013.  
<http://www.azdeq.gov/function/forms/appswaste.html#superfund>

Groundwater Protection Leaching Model Instructions (November 2008) and Spreadsheet (January 2013):  
<http://www.azdeq.gov/function/forms/appswaste.html #superfund>

*Substantive Policy Statement Directory.* ADEQ. March 2014.

[http://www.azdeq.gov/function/laws/download/sub\\_policy\\_directory.pdf](http://www.azdeq.gov/function/laws/download/sub_policy_directory.pdf)

**The following documents are for reference purposes and have been provided to assist Volunteers with developing applicable documents. VRP does not expect, nor require, that these be used.**

### **SAPs:**

*Sampling and Analysis Plan Guidance and Template Version 2,* Private Analytical Services Used. USEPA. R9QA/002.1. April 2000.  
[http://www.epa.gov/region9/qa/pdfs/sap\\_ot6\\_pvt\\_v2.pdf](http://www.epa.gov/region9/qa/pdfs/sap_ot6_pvt_v2.pdf)

### **QA/QC and QAPPs:**

*Brownfields Grant Recipients' Road Map to Understanding Quality Assurance Project Plans.* USEPA. OSWER. EPA 542-R-12-005. November 2012.  
[http://www.brownfieldstsc.org/pdfs/BrownfieldsQAPPRoadMap\\_Nov2012.pdf](http://www.brownfieldstsc.org/pdfs/BrownfieldsQAPPRoadMap_Nov2012.pdf)

*Data Quality Assessment: A Reviewer's Guide.* USEPA. EPA QA/G-9R. EOA/240/B-06/002. February 2006.  
<http://www.epa.gov/quality/qs-docs/g9r-final.pdf>

*Data Quality Objectives Process for Hazardous Waste Site Investigations.* EPA QA/G-4HWFinal, EPA 600-R-00-007, January 2000.  
<http://www.epa.gov/quality/qs-docs/g4hw-final.pdf>

*EPA Region 9 Guidance for Quality Assurance Project Plans.* USEPA. R9QA/03.2. March 2012.  
[http://www.epa.gov/region9/qa/pdfs/mngmt-plan\\_guidance\\_2012.pdf](http://www.epa.gov/region9/qa/pdfs/mngmt-plan_guidance_2012.pdf)

*EPA Requirements for Quality Assurance Project Plans.* USEPA. EPA QA/R-5, EPA/240/B-01/003. March 2001  
<http://www.epa.gov/quality/qs-docs/r5-final.pdf>

*Guidance for Quality Assurance Project Plans.* USEPA. EPA QA/G-5. EPA/240/R-02/009. December 2002.  
<http://www.epa.gov/quality/qs-docs/g5-final.pdf>

*Guidance on Systematic Planning Using the Data Quality Objectives Process.* USEPA. EPA QA/G-4, EPA/240/B-06/001. February 2006.  
<http://www.epa.gov/quality/qs-docs/g4-final.pdf>

Other:

*RCRA Facility Investigation (RFI) Guidance, Interim Final,* USEPA, OSWER Directive 9502.00-6D, EPA 530/SW-89-031, May 1989. <http://www.epa.gov/osw/hazard/correctiveaction/resources/guidance/sitechar/> [four volumes]

**Attachment A: Work Plan Checklist**

**Attachment B: Abbreviated Quality Assurance Project Plan (QAPP) Template**

**Attachment C: Instructions for Creating Geographic Information System (GIS) Boundaries**

**Attachment D: Groundwater Database (GWDB) – Electronic Data Deliverable (EDD) format**

## **ATTACHMENT A**

### **Work Plan Checklist**

The VRP Work Plan Checklist has been developed to assist Volunteers in producing accurate and administratively complete Work Plans, thereby reducing the need for comments from the VRP.

The Checklist assists the Volunteers by providing guidance on work plan preparation as stipulated in A.R.S. §49-175. The Checklist is provided to the Volunteer and/or their Authorized Agent separately, in electronic format, so it can be completed using Adobe Acrobat.

The VRP strongly encourages the Volunteer and/or their Authorized Agent to submit a completed VRP Work Plan Checklist with all work plan submittals.

Following is a sample representative of the electronic Checklist you will receive. If you have not received the electronic Checklist with your orientation package, please contact your project manager or Julie Hoskin at 602-771-4866.

**Voluntary Remediation Program Work Plan Checklist**

Complete Shaded Areas and Submit with Work Plan

Site Name:	VRP Site Code:		
Volunteer/Applicant Name:			
Volunteer/Applicant Email Address and Phone:			
Authorized Agent (AA)/Consulting Company:			
AA/Consultant Email Address and Phone:			
Reference	Summary of Statutory Requirement  (please review all statutes in their entirety to ensure compliance)	Page(s) Where Addressed in Work Plan  (write N/A if not applicable)	VRP Use Only
<a href="#"><u>\$49-175A.1</u></a>	Summary of existing site characterization and assessment information; information regarding any remediation previously conducted; copies of referenced reports not previously submitted;		<input type="checkbox"/>
<a href="#"><u>\$49-175A.2</u></a>	If the site has not been characterized, a plan to conduct site characterization and a schedule for completion.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.3.a</u></a>	If site characterization is completed, a description of how the remediation will comply with <a href="#"><u>\$49-175B</u></a> ("Work Plans") and how the completion of remediation will be verified. A schedule for completion must be included.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.3.b</u></a>	If site characterization is completed, the work plan may provide for the remediation to be conducted in phases or tasks. A schedule for completion must be included.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.4</u></a>	Schedule for submission of progress reports.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.5</u></a>	A proposal for community involvement as prescribed by <a href="#"><u>\$49-176</u></a> ("Community Involvement Requirements")		<input type="checkbox"/>
<a href="#"><u>\$49-175A.6</u></a>	If known, a list of institutional or engineering controls necessary during remediation and after completion of the proposed remediation to control exposure to contaminants.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.7</u></a>	A proposal for monitoring during remediation and after the remediation if necessary to verify whether the approved remediation levels or controls have been attained and will be maintained.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.8</u></a>	A list of any permits or legal requirements known to apply to the work or already performed by the applicant.		<input type="checkbox"/>
<a href="#"><u>\$49-175A.9</u></a>	If requested by the department, information regarding the financial capability of the applicant to conduct the work identified in the application. (IF APPLICABLE)		<input type="checkbox"/>

**Voluntary Remediation Program Work Plan Checklist**

Complete Shaded Areas and Submit with Work Plan

Site Name:	VRP Site Code:	Page(s) Where Addressed in Work Plan	VRP Use Only
Reference	Summary of Statutory Requirement  (please review all statutes in their entirety to ensure compliance)	(write N/A if not applicable)	
<u><a href="#">§49-175B</a></u>	Remediation levels or controls for remediation conducted pursuant to this article shall be established in accordance with rules adopted pursuant to <a href="#">§49-282.06</a> unless one or more of the following applies: see §49-175B.1 through §49-175B.4, below.		<input type="checkbox"/>
<u><a href="#">§49-175B.1</a></u>	The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of contaminated soil comply with <a href="#">§49-152</a> and the rules adopted.		<input type="checkbox"/>
<u><a href="#">§49-175B.2</a></u>	The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of landfills or other facilities that contain materials that are not subject to <a href="#">§49-152</a> (i.e.: asbestos) do not exceed a cumulative excess lifetime cancer risk between $1 \times 10^{-4}$ to $1 \times 10^{-6}$ , and a hazard index of no greater than 1.		<input type="checkbox"/>
<u><a href="#">§49-175B.3</a></u>	The applicant demonstrates that on achieving remediation levels or controls for a source or potential source of contamination to a navigable water, the source of contamination will not cause or contribute to an exceedance of surface water quality standards, or if a permit is required pursuant to <a href="#">33 United States Code §1342</a> for any discharge from the source, that any discharges from the source will comply with the permit.		<input type="checkbox"/>
<u><a href="#">§49-175B.4</a></u>	The applicant demonstrates that, on achieving remediation levels or controls for a source of contamination to an aquifer, the source will not cause or contribute to an exceedance of aquifer water quality standards (AWQS) beyond the boundary of the facility where the source is located.		<input type="checkbox"/>
<u><a href="#">§49-175C</a></u>	The VRP may waive any work plan requirement under this section that it determines to be unnecessary to make any of the determinations required under <a href="#">§49-177</a> . If any waivers are requested in the Work Plan or have been previously requested and approved by the VRP, cite them in the Work Plan, including a citation of the statute for which the waiver applies.		<input type="checkbox"/>



## Voluntary Remediation Program Work Plan Checklist

Complete Shaded Areas and Submit with Work Plan

Site Name:	VRP Site Code:		
<p><b>To support the prerequisites established by A.R.S. §49-177 and §49-180, the VRP expects certain documentation to accompany a Work Plan. The following provides a list of attachments/exhibits which are recommended for submittal with a Work Plan to provide the information required by the statutes.</b></p>			
Work Plan Information	Title of Figure/Table/Attachment/Exhibit Where Requested Information is Cited <small>(write N/A if not applicable)</small>	Figure/Table/Attachment or Report Page Number <small>(write N/A if not applicable)</small>	
Site Location Map <i>(topographic or aerial)</i>			<input type="checkbox"/>
Site Map <i>(to scale)</i>			<input type="checkbox"/>
Historical Sampling Data Table			<input type="checkbox"/>
Historical Sample Location Map <i>(to scale)</i>			<input type="checkbox"/>
Proposed Sample Location Map <i>(to scale)</i>			<input type="checkbox"/>
Sampling and Analysis Plan <i>(Includes Field Sampling Plan &amp; Quality Assurance Plan)</i>			<input type="checkbox"/>
Proposed Remediation System Location Map			<input type="checkbox"/>
Proposed Remediation System Layout <i>(Design Drawings)</i>			<input type="checkbox"/>
Schedule for Implementation of Project Activities* <i>(Gantt Style Chart)</i>			<input type="checkbox"/>
<p>*Project Activities are defined in A.R.S. §§49-175A.2 through 49-175A.4, and 49-178A.2 (Community Involvement).</p>			
Proposed Language for Public Notification of Remediation <i>(i.e.: example signage)</i>			<input type="checkbox"/>
Plan for Investigative Derived Waste (IDW)			<input type="checkbox"/>
Evaluation of Remedial Alternatives <i>(i.e.: for Feasibility Study Work Plan)</i>			<input type="checkbox"/>
<b>DOES THE WORK PLAN PROPOSE IMPLEMENTING SITE-SPECIFIC REMEDIATION LEVELS?</b>			
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>DOES THE WORK PLAN PROPOSE EVALUATION OF BACKGROUND LEVELS?</b>			
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<p>NOTE: When reports are submitted which document any type of sampling activity, the submittal of Electronic Data per ADEQ's <a href="#">Groundwater Data Submittal Guidance (V3.4)</a> is strongly recommended.</p>			

## **ATTACHMENT B**

### **Abbreviated QAPP Template**

The Abbreviated Quality Assurance Project Plan (QAPP) has been formulated to assist Volunteers in developing a QA/QC program appropriate for their project.

The Abbreviated QAPP may be used at sites with limited, short-term sampling. Sites where sampling includes more than one media type and/or has on-going monitoring should have a comprehensive QAPP prepared.

The Abbreviated QAPP is provided to Volunteers separately, in electronic format, so it can be completed using MSOffice.

Following is a sample representative of the electronic Abbreviated QAPP you will receive. If you have not received the electronic Abbreviated QAPP, please contact your project manager or Julie Hoskin at 602-771-4866.

## **Abbreviated Quality Assurance Project Plan**

*In completing the form, individual sections may be expanded, or limited, as circumstances warrant.*

- 1. Title and Approvals:** *Provide a name for the project. Insert name, and organization for each of the approvers. Have each sign on the signature line.*

Project Name:

Approvals:

Project Manager(s):

Sampling Team Leader(s):

Quality Assurance Coordinator(s):

- 2. Distribution List:** *List the names of the individuals who will receive a copy of the approved QAPP.*

Project Manager:

Sampling Team Leader:

Quality Assurance Coordinator:

Sampling Team Members:

Laboratory:

- 3. Project Description / Background:** *Briefly describe the specific sampling job which is to be addressed/investigated by this particular environmental monitoring project. What human health or environmental issues are involved? Indicate, as best you can, the decisions to be made with the data. Make reference to the action levels, benchmarks, or standards which will be used to make assessments.*

- 4. Project Technical Design:** *Essentially this section is intended to show what data will be collected in order to answer the question(s) described in the previous section.*

**Site(s) to be sampled:** *Identify site(s) to be sampled, and the reason(s) for their selection.*

**Sampling Points:** *State the number of sampling points. If sampling points will be identified in the field, describe how they will be selected.*

**Sample Type(s):** *Indicate whether samples will be grabs or composites. If composites, indicate the compositing method. Indicate whether samples will be surface or subsurface (if applicable) and why.*

**Parameters to be measured:** *Indicate the analytical parameters for the samples. Include parameters to be measured in the field (i.e. pH, temperature, etc.).*

**Quality Control (QC) Activities:** *Indicate what QC activities will occur. This would include field blanks, replicates, and QC samples, among others.*

**Locational Information / Documentation:** *Provide a map or document in writing the proposed locations of sampling points.*

**Special Sample Requirements:** *Describe any special requirements for the collection of samples, beyond those documented in SOPs cited in this QAPP. For example, indicate whether collection of samples is dependent on heat, wind direction, time of day, or any other event.*

**5. Project Organization and Task Responsibilities:**

Project Manager is responsible for comprehensive oversight and final decision making for the Project.

Quality Assurance (QA) Coordinator will facilitate with proper planning documents and is available to review and approve plans. Questions regarding validity and usability of data will be directed to the QA Coordinator.

Sampling Team Leader is responsible for:

- Assembling sampling team and briefing members on requirements of the project
- Supervising preparation of equipment
- Overall collection of samples, record keeping, and delivery to laboratory
- Safety of field personnel
- Overall coordination and documentation of field activities related to the project

*List all other individuals and responsibilities not covered above.*

**6. Special Training Requirements:** *If field team members are required to have any special training in addition to the standard field training given to all field personnel, describe it here. Otherwise, write "NONE."*

**7. Project Schedule:** *Indicate briefly the schedule for the project. Note when samples are anticipated to be shipped or delivered to the laboratory.*

**8. Field Sampling Table:** *Fill out the Table below. If there is insufficient space, a table with the same headings may be attached to the back of this form.*

Matrix	Analyte	# Samples	Sample Volume <sup>1</sup>	Container	Preservation	Holding Time

<sup>1</sup>For volume, give QA sample volume followed by a slash and the regular sample volume (i.e. 500ml/100ml)

**9. Field Sampling Requirements:** *Briefly describe how sampling points will be selected, how samples will be collected, and the major equipment to be used in sample collection. Indicate how cross contamination of samples will be avoided. Cite SOPs for the details of sample collection, equipment cleaning, etc. If other procedures (not covered by SOPs) will be used, describe them below:*

Procedures detailed in the appropriate Quality Assurance Program Plan or equivalent will be utilized.

The following SOPs will be adhered to: *List SOPs.*

**10. Sample Handling and Custody Requirements:** *In addition to the language recommended below, indicate where samples will be delivered for analysis. Make comments on chains-of-custody, sample handling, and note any other special requirements. List any SOPs that will be utilized.*

**11. Analytical Method Requirements:** *Analytical methods should be referenced and verified as ADHS approved and certified by the laboratories.*

Analyte	Matrix	Analytical Method	Laboratory Name	Reporting Limit	Units of Reporting Limit

**12. Other Data Quality Indicators:**

**Representativeness:** *Indicate how well the environmental measurements you plan to collect actually represent the true state of the environmental feature you are measuring. Note features of the sampling design intended to enhance representativeness, such as time or spatial composites, sampling depth, selection of sampling points, etc.*

**Comparability:** *Indicate the degree to which data obtained in this study can be compared directly to data from other studies and your benchmarks. If analyses will be performed using standard approved methods, then data should be directly comparable to standards and benchmarks. A statement to that effect is sufficient.*

**Completeness:** *Indicate completeness goal percentage and how it will be calculated.*

**13. Peer Review:** *Is peer review needed for the project? Who will provide the review, and at what level of review?*

**14. Instrument, Equipment, and Supplies Testing and Maintenance Requirements:**

Instruments will be calibrated and maintained in accordance with manufacturer instructions and the procedures outlined in appropriate Standard Operating Procedures (SOPs). Sample containers will be new certified pre-cleaned containers.

Laboratory equipment will be tested, calibrated, and maintained in accordance with SOPs approved by each respective laboratory.

*Add other requirements not covered by the above statement.*

**15. Assessments / Oversight:**

Formal field audits by QA personnel are not anticipated for this project. Identification of problems related to technical performance will be the responsibility of the technical staff working on this project. The Sampling Team Leader will assess any problems that arise in the field, and make modifications to technical procedures, if needed and will communicate with the Project Manager and any technical staff. Any changes in technical procedures will be documented in field notes, and highlighted in reports related to this project.

Laboratory personnel will perform self audits and institute corrective actions in accordance with their respective written procedures.

#### **16. Data Review, Validation, and Usability:**

Data from other laboratories will be initially validated by the laboratory performing the analysis. The data will be reviewed and verified by \_\_\_\_\_ . Third party validation *is/is not* required for this project.

Any questions regarding the verification and usability of the data will be discussed with your VRP Project Manager and decisions made appropriately.

#### **17. Documentation and Records:**

Field notes and measurements will be recorded in a field notebook, which will be maintained by the Sampling Team Leader. Original copies of Chain of Custody, raw data, and analytical results will be maintained by the respective laboratories performing the analyses.

At the end of each day, the Sampling Team Leader will prepare a summary of the sampling activities for the day. The summary will be in writing, but may be submitted either as a hard copy or electronically.

The summary should include the following:

- Name of Sampling Team Leader and Team Members
- Number of samples collected by matrix
- Locations samples
- On-site measurements made and results obtained at each location (including times)
- Disposition of all samples (where they were delivered for analysis)
- Air bill numbers for all shipped samples
- Photocopies of Chain of Custody
- Noteworthy observations at each sampling location

#### **18. Data Management**

List electronic copies and formats needed reports and data

Identify appropriate databases for input and/or uploading

- Such as electronic submittal of groundwater quality data (refer to [http://www.azdeq.gov/environ/waste/sps/download/guidance\\_v3.4.pdf](http://www.azdeq.gov/environ/waste/sps/download/guidance_v3.4.pdf)).

List parties to receive electronic data and/or reports and how the reports will be delivered, archived, and maintained for future access and use.



## **ATTACHMENT C**

### **Instructions for Creating Geographic Information System (GIS) Boundaries**

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**Date:** January 31, 2014  
**From:** Lowell Carty, Waste Programs Division  
**Re:** Instructions for Creating Geographic Information System (GIS) Boundaries

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The Arizona Department of Environmental Quality (ADEQ) Waste Programs Division (WPD) has developed the following instructions for preparing and submitting an electronic file of Geographic Information System (GIS) boundaries for No Further Action (NFA) properties and for properties implementing a Declaration of Environmental Use Restriction (DEUR). The instructions are provided for preparation in both Google Earth and/or ArcGIS Explorer. If you have any questions, please contact Lowell Carty at [Carty.Lowell@azdeq.gov](mailto:Carty.Lowell@azdeq.gov) or (602) 771-4413.

**PREPARATION UTILIZING GOOGLE EARTH:**

1. Launch Google Earth program.
2. Enter your site information in the search box (i.e.: physical address and zip code).
3. Using the navigation tools, zoom to the site.
4. Once the site is centered on screen, select "View" from the command ribbon at the top of the screen. Scroll down the "View" menu and select "Reset", then "Tilt and Reset Compass".
5. Select the "Add Polygon" icon.
6. Using the polygon points, draw the outline of the NFA or DEUR boundary on the screen, leaving the polygon text box open.
7. Once the polygon is drawn, name the polygon (using the full site address) in the pop-up text box. Under the "Description" tab enter the ADEQ site code. Do not close text box yet.
8. Select the tab labeled "~~Style~~ Color". Set the opacity of the "area" of polygon at 50% and set the Filled+Outline color as red. Click "OK" to close the pop-up window.
9. The named polygon now appears under the contents header "Places" on the left of screen.
10. Right-click on the named polygon in "My Places" and select "Add" then "Folder" to create a folder to store this polygon and any others you may create (name the folder appropriately for what you will be storing in it). Click and drag the polygon into your new folder.
11. Right click the polygon on the map and select "Save Place As". Save the polygon you have created as a KMZ file and use the following nomenclature for naming the file: [ADEQ Six Digit Site Code]-[Name of Boundary].KMZ (the name of boundary used should reflect the specific area of a site for which an NFA or DEUR is sought. Check with your ADEQ project manager for more information). You will need to determine where on your drive you want to save the file. ADEQ recommends creating a folder so additional polygons can be saved to it and kept in the same place on your drive.
12. E-mail your KMZ file(s) to your project manager at ADEQ along with your NFA request and/or DEUR submittal.

## **PREPARATION UTILIZING ARCGIS EXPLORER:**

1. Launch ArcGIS Explorer program.
2. On the top toolbar, select "Basemap" and nine options will appear. Select the option "Imagery with Labels".
3. Use "Find" feature (binoculars icon) and enter the city and state or site address with zip code. If you search by address, multiple options/variations on the address may appear, double click the correct one.
4. Select the "2D/3D" button on far right of Home Tab and select "3D" from drop-down list. Wait for the screen settings to change. Wait for the view settings to change. Once 3D settings have taken effect, you may need to zoom back in to the site again.
5. Zoom to the site using either the mouse wheel or the navigation tool located in lower left corner of map.
6. Use "Area" selection above Create Tab to draw the outline of the NFA or DEUR boundary. Single click to open the tool. Double click to close/complete the area.
7. After you have double clicked to close the area a "note" feature will pop up. Name the note (using the full site address). Enter the ADEQ site code.. Click "ok" to close the note feature. The boundary is now listed under the "Contents" header on the left.
8. Add a folder by clicking on the "folder" icon to create a folder to store the area/site and any others you may create (name the folder appropriately for what you will be storing in it). Click and drag the polygon into your new folder. Additional boundaries (i.e.: multiple NFAs ) can be added to this folder for ease of storage and submittal to ADEQ.
9. Move cursor over the shaded area, right click on the area and select "Share". Three options will appear (Map Content, Layer Package, and KML). Select "KML". Select "File". This allows you to save a KMZ file. Use the following nomenclature for naming the file: **[ADEQ Six Digit Site Code]-[Name of Boundary].KMZ** (the name of boundary used should reflect the specific area of a site for which an NFA or DEUR is sought. Check with your ADEQ project manager for more information.) You will need to determine where on your drive you want to save the file. ADEQ recommends creating a folder so additional polygons can be saved to it and kept in the same place on your drive.
10. E-mail your KMZ file(s) to your project manager at ADEQ along with your NFA request and/or DEUR submittal.

## **ATTACHMENT D**

### **Electronic Data Deliverable (EDD) Format**

#### A. Well Inventory Submittal

Format: ASCII fixed-width or Excel file. (All fields are left justified in ASCII fixed-width file.)

Do not export header row with data for the ASCII fixed-width file. A header row may be provided with Excel files.

Submittal may be upper or lower case or combination. ADEQ program will automatically convert all text to caps.

**Note: In the case of multi-port wells, please list each sampling port as a separate record entry.**

Field Name	Field Length	Position	Look-Up Table Name	Look-Up Table No.	Requirements/Comments
ADEQ Well Number	6	01-06			Unique identifier of the well in the database. Field should be left blank in well inventory submittal unless this is an update to an existing well record.
Well Name	25	07-31			Facility or common name of well.
ADWR Number	9	32-40			55-xxxxxx ADWR registration number for the well.
Longitude	12	41-52			ddmmss.ssss Longitude of well using NAD 27 or NAD83 datum. NAD83 is preferred.
Latitude	11	53-63			ddmmss.ssss Latitude of well using NAD 27 or NAD83 datum. NAD83 is preferred.
Latitude/Longitude Method	1	64	Latitude/Longitude Measuring Methods	WQR218	Method used to determine lat/long location of well.
Top of Screened Interval	7	65-71			In feet below measuring point elevation.
Bottom of Screened Interval	7	72-78			In feet below measuring point elevation.
Drill Depth	7	79-85			Total drilled depth of the borehole, in feet below ground surface. This may or may not be the same as the total depth of the well.
Measuring Point Elevation	7	86-92			Measurement point elevation of the well (datum NAVD29 or NAVD88), in feet above mean sea level. NAVD88 is preferred.
Measuring Point Elevation Method	1	93	Elevation Measuring Methods	WQR202	Method used to determine the measurement point elevation of the well.

Here is an excerpt from the Groundwater Data Submittal Guidance Document (Version 3.4). You may find the complete document at <http://www.azdeq.gov/function/forms/appswate.html#superfund>. If you should have any questions or need assistance you may contact Lowell Cartt at LMC@AZDEQ.gov and by phone at 602 771 4413.