

ADEQ CORRECTIVE ACTION UNIT'S NEW REPORTING FORMAT

March 2022



- ADEQ Team Introductions
- Discuss Voice of the Customer Feedback
- Discuss Site Characterization Report (SCR) changes
- Discuss Free Product (FP) changes
- Discuss Periodic Site Status Report (PSSR) changes
- Timeline for changes and general reminders
- Live Demos of the SCR, FP, and PSSR changes
- Questions
- Contact information

Corrective Action Unit (CAU)

- Pam Nicola - Value Stream Manager
- Lee-Anna Walker - CAU Unit Manager
- Jorge Espinosa - Senior Engineer
- Erin Abel - Project Manager/Risk Assessor
- Jessica McDonald - Project Manager/Project champion
- Cheryl Nazareth Graves - Project team Member/Risk Assessor
- Arti Jain - Senior Lean Coach

- **Voice of Customer Survey 1 (4/21 - 5/15/21):**
 - Titled: 'UST Vendors - Your Feedback Matters'
 - Explored cause of delays, hiring issues, issues with submittals to ADEQ, prioritization of deliverables
- **Voice of Customer Survey 2 (7/21 - 8/1/21):**
 - Titled: 'Seeking Feedback About Electronic Conceptual Site Models (eCSMs)
 - Survey explored benefits of eCSM, challenges of eCSM, efficiency of eCSM, problems with using and mailing an eCSM, issues with attachments to eCSMs.

- **Former report format issues encountered:**
 - Rework, clarification and correction which resulted in approval delays.
 - Size of eCSM only increases with time causing document crashing and difficulties with emailing the document.
 - Issues prompted ADEQ to evaluate the current state reporting tool and potential need for more simplistic reporting options in line with regulatory requirements.

- 1.) New reporting format no longer requires embedding of pdf format documents inside of an excel table
- 2.) Each SCR report has been split into two portions:
 - A **pdf section** (including narrative and figures)
 - A **live data section in excel** (now called the eTables)
- 3.) All reporting has been simplified to what is required by statute

■ PDF Section

- A number of sections of the SCR report that were formerly handled by the eCSM were moved into a fillable PDF form
- **These include:**
 - Release Information
 - Facility Information
 - Potential pathways for contamination migration discussion
 - Current or potential receptors discussion
 - Site history
 - Geological/hydrological information

– **PDF Moved Sections (Continued)**

- Summary of results investigation
- Reasoning for characterization
- Maps and Site Plans
- Well and Well Log Information
- Laboratory and Field Forms
- Additional pertinent information



PDF Fillable Form - Other Informational Report

ADEQ Arizona Department of Environmental Quality UST- LEAKING UST
1110 West Washington Street
Phoenix, Arizona 85007

OTHER INFORMATIONAL REPORT

Fill out the below form

Date submitted: _____

Release Information

LUST Number: _____

Facility Information

ADEQ Facility ID: 0-0 Facility Name: _____

Facility Street Address: _____

City: _____ Zip Code: _____ County: _____

1. Describe the current occupancy and use of the facility:

2. Describe the current occupancy and use of the properties immediately adjacent to the facility. *(attach additional pages as needed)*

- Reporting other than the SCR (for reimbursement or decisionmaking support) can also use the SCR reporting form, but must mark the report as an **Other Informational Report** on submittal
 - This saves reporting time when it comes to compiling information for the SCR report
- **Other Information Reports** do not need to fill the form out completely, but should include the following information:
 - A Site History/ Narrative
 - Estimated or known lithology and groundwater depth/flow direction/quality
 - Laboratory reports for all media analysis
 - Field Documents, including but not limited to: field notes, HASP, Daily Field Report Form, Boring Logs and Monitoring Well Construction Logs
 - Site Vicinity Map
 - Site Location Map
 - Site Plan Map
 - Additional maps, graphics, tables and remedial diagrams are optional or may be requested by ADEQ



UST- LEAKING UST
1110 West Washington Street
Phoenix, Arizona 85007

SITE CHARACTERIZATION REPORT

Fill out the below form and attach additional information as prompted.

Date submitted: _____

Release Information

LUST Number: _____

Facility Information

ADEQ Facility ID: 0-0 _____ Facility Name: _____

Facility Street Address: _____

City: _____ Zip Code: _____ County: _____

1. Describe the current occupancy and use of the facility:

2. Describe the current occupancy and use of the properties immediately adjacent to the facility. *(attach additional pages as needed)*

Arizona Administrative Code (A.A.C.) R18-12-262 LUST Site Investigation

A. Requirement to investigate. An owner or operator shall investigate a release at and from a LUST site to determine the full extent of the release of regulated substances and shall:

3. List physical, natural, and artificial features at or surrounding the LUST site that are current or potential pathways for contamination migration (include on Site Vicinity Map): *(attach additional pages as needed)*

4. Identify the current or potential receptors other than wells (Include on Site Vicinity Map):

Distance from facility (feet)	Direction from facility (example: S, NW)	Receptor Name (include map reference)	Receptor Type (example: school, residential)

Arizona Administrative Code (A.A.C.) R18-12-262 LUST Site Investigation

R18-12-262(A)(4) Obtain any additional data necessary to determine site-specific corrective action standards and to justify the selection of remedial alternatives to be used in responses to contaminated soil, surface water, and groundwater.

5. Provide information obtained that is necessary to determine site-specific corrective action standards. If not applicable, please explain:

6. Provide information obtained that is necessary to justify the selection of remedial alternatives to be used in responses to contaminated soil, surface water, and groundwater. If not applicable, please explain:

Attachments

Please attach to this submittal (using PDF or similar technology) the following:

- 1. A site vicinity map (a representation by means of signs and symbols on a planar surface, at an established scale, of the natural and artificial physical features, used in the exposure assessment, that occur within at least 500 feet of the facility boundaries, with the direction of orientation indicated.)
- 2. A site location map (a representation by means of signs and symbols on a planar surface, at an established scale, of the streets, wells, and general use of the land for properties within at least one-quarter mile of the facility boundaries, with the direction of orientation indicated.)
- 3. A site plan (a representation by means of signs and symbols on a planar surface, at an established scale, of the physical features (natural, artificial, or both) of the facility and surrounding area necessary to meet the requirements under which the site plan is prepared, with the direction of orientation indicated.)
- 4. Lithologic logs for each borehole advanced during each subsurface investigation conducted to determine the full extent of contamination
- 5. As-built construction diagram of each monitor and remedial well installed as part of each referenced investigation; lithologic logs may include well construction detail
- 6. ADWR map of all wells registered with the Arizona Department of Water Resources, and other wells located within one-quarter mile of the facility property boundary
- 7. Full level-appropriate laboratory reports that at a minimum include: associated quality assurance and quality control reports and chain-of-custody forms generated during each subsurface investigation conducted to determine the full extent of contamination
- 8. Any applicable field forms including field notes, purge forms, etc. (forms generated during each subsurface investigation conducted to determine the full extent of contamination, and/or O&M notes)
- 9. Any additional/overflow pages necessary in order to fully document information required by this form
- 10. Please attach, if groundwater is impacted:
 - a. Hydrographs
 - b. Plume maps
 - c. Groundwater contour maps

Please include with this submittal the following:

- 1. ADEQ data tables (data tabulation of soil and groundwater, all field screening and laboratory analytical results, and water level data acquired during each investigation conducted to determine the full extent of contamination)

Attachment A Site Maps

Contents:

- 1. Site Vicinity Map
- 2. Site Location Map
- 3. Site Plan

Attachment B Well and Well Log Information

Contents:

1. Lithologic Logs
2. As-built Well Diagrams
3. ADWR Map

Attachment D Additional Pages

Contents:

1.

2.

3.

4.

5.

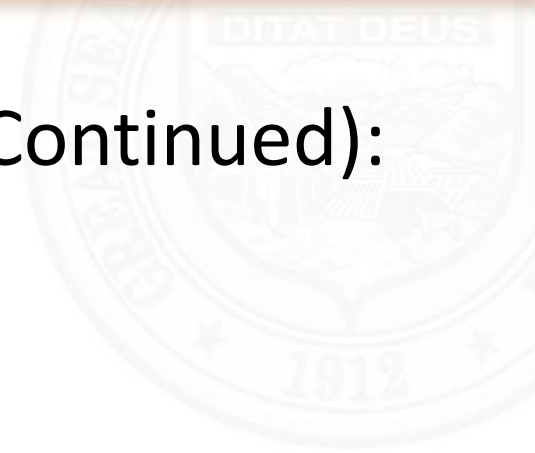
6.

7.

- Remaining items in the former eCSM have been moved to a new spreadsheet (now called eTables)

- Sections included in the eTables include:
 - Revision Summary
 - Soil VOC Table
 - Soil PAH Metals Table
 - Soil Vapor Survey Table
 - GW Elevations & Gradient
 - GW VOCs Table
 - GW PAHs & Metals
 - Site Well, Boring Construction
 - GW Parameter Table
 - Free Product Recovery Table

- Sections included in the eTables (Continued):
 - Excavation Detail Table
 - SVE Table
 - Detail SVE Table
 - AS Table
 - Detail AS Table
 - DPE-P&T Table
 - ISCO, AC, & Bio Injection
 - CSM
 - Well Summary Table



- Selected Changes to remaining tables include:
 - **Removed** embedded figure and information tabs
 - **Removed** formulas and graphs, presents data only
 - **Added** CSM tab
 - **Removed** site information tabs
 - **Modified** tabs to be more printer friendly
 - **Modified** SVE, DPE, and ISCO information tabs

- Soil (Green) & GW (Blue) Tabs
 - **Added** analytes to analytical tables
 - **Added** functionality to show only detections
 - **Added** CAS Nos, RCLs, GPLs, and EPA VISLs to analytical tables
 - **Modified** well information and WLS into new tabs
 - **Modified** conditional formatting
- Tables have been generally simplified for alignment with regulatory requirements

EXAMPLES (SCREENSHOTS) ON NEXT SLIDES

Selected Changes and Updates - eTables



OLD:

Revision Summary																														
Put an "X" below the name of the tab that has been updated																														
Date of revision	Site History	General Site Info	Site Specific Info	Well Summary	Risk-Severity	Field Docs	Additional Info	Soil VOC	Soil PAH Metals	Soil Vapor Survey	GW Elev and VOC	GW Elev and PAH	GW Parameter	GW Trends Table	Excavation Detail	Free Product Recovery	SVE Table	Detail SVE	AS Table	Detail AS	DPE-P&T Table	ISCO, AC, Bio Injection	Site Location Map	Site Vicinity Map	Site Plan	Cross-sections	GW Contour Map	Plume Map	Remedial Sys. Asbuil	Boring & Well Logs

NEW:

Revision Summary																			
Put an "X" below the name of the tab that has been updated																			
Date of revision (must match pertinent PDF report)	Name of Matching Report	Soil VOC	Soil PAH Metals	Soil Vapor Survey	GW Elev and Gradient	GW VOCs Table	GW PAHs & Metals	Site Well, Boring Construction	GW Parameter Table	Free Product Recovery	Excavation Detail	SVE Table	Detail SVE	AS Table	Detail AS	DPE-P&T Table	ISCO, AC, Bio Injection	CSM	Well Summary Table

OLD:

Add 5 Rows										Delete Blank Rows							
Notes: If a result is less than the detection limit, input "e" followed by the detection limit. If the compound does not have a laboratory detection or laboratory limit (example: some labs may not have a detection/reporting limit for certain TICs), then input "ND". If a compound is not analyzed, input "NA".																	
Phase	Sample ID	Confirmation sample?	If a confirmation sample, what was the original soil sample ID for comparison?	Sample Date	Sample Depth (ft bgs)	USCS Classification	PID Reading (ppm)	Benzene	1,2-Dichloroethane	n-Butylbenzene	sec-Butyl ben	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Tier 1 Standard (mg/kg)								0.65	0.58	240	220	220					
Minimum GPL (mg/kg)								0.7	NC	NC	NC	NC					

NEW:

Show Detected Analytes										Show All Analytes				
Notes: If a result is less than the detection limit, input "e" followed by the detection limit. If the compound does not have a laboratory detection or laboratory limit (example: some labs may not have a detection/reporting limit for certain TICs), then input "ND". If a compound is not analyzed, input "NA".														
If a confirmation sample, what was the original soil sample ID for comparison?	Confirmation sample?	Sample ID	Sample Date	Sample Depth (ft bgs)	USCS Classification	PID Reading (ppm)	Acetone	Acrobin	Acrylonitrile	Benzene	Bromobenzene	Bromochloromethane	Bromoforn	
CAS Numbers							67-64-1	07-02-807-13	71-43-2	08-86-95-27-475-25-2				
ADEQ Release Confirmation Levels (RCLs) (mg/kg)							NE	NE	NE	0.25	NE	NE	NE	
Tier 1 Residential Standard (mg/kg)							14000	0.1	2.1	0.65	28	8.3	690	
Minimum GPL (mg/kg)							NE	NE	NE	0.71	NE	NE	NE	

OLD:

Add 5 Rows										Sort by Well ID then Sample Date					Groundwater Elevations and VOI							
Notes: If a result is less than the detection limit, input "e" followed by the detection limit. If the compound does not have a laboratory detection or laboratory limit (example: some labs may not have a detection/reporting limit for certain TICs), then input "ND". If a compound is not analyzed, input "NA".																						
Phase	If remediation system is continuously operating, how much time was allowed for equilibration (days or N/A)	Well ID	ADWR Number	Latitude (formatted as +/- DDDMMSS.SSSS)	Longitude (formatted as +/- DDDMMSS.SSSS)	ADEQ Well Number (if known)	Well Status (if not sampled)	Well Diameter (inches)	TOC (ft amsl)	TOS (ft bgs)	BOS (ft bgs)	Sample Type	Sample Depth	Sample Date	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Product Type	Water Table Elevation, Corrected for Product Thickness (ft amsl)	GW Above TOS	GW Column Above BOS (ft)	µg/L
																				Tier 1 Standard (µg/L)	5	

NEW:

Groundwater Elevations								
Notes: Insert well elevation and screen information in the table to the right. Be sure the name of the well matches exactly as presented in the table.								
Well ID	Gauging Date	Depth to Water (ft. TOC-N)	Depth to Product (ft. TOC-N)	Product Thickness (ft)	Product Type	Water Table Elevation, Corrected for Product Thickness (ft amsl)	GW Above TOS	GW Column Above BOS (ft)

Well Construction Table											
ADWR Number	Well ID	Date Surveyed	Latitude (formatted as +/- DDDMMSS.SSSS)	Longitude (formatted as +/- DDDMMSS.SSSS)	Measuring Point Elevation (feet amsl)	Well Status (if not sampled)	Well Diameter (inches)	Top Of Screen (ft bgs)	Bottom Of Screen (ft bgs)	Well Depth (ft bgs)	Boring Depth (ft bgs)

- **Added** verbiage to the Free Product Disposal Section
 - “Has produced water been stored/disposed of in accordance with applicable environmental and safety regulations?”
- **Modified** checkboxes
- **Modified** verbiage in first two removal method table listings:
 - Manual removal changed to Passive removal
 - Automatic removal changed to Active removal

Changes and Updates - Free Product Reporting

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM**

Free Product Report

DATE FORM COMPLETED: _____ (mm/dd/yy) **ADEQ use only**
DATE RECEIVED: _____

Site classification form attached? yes / no
Required attachments submitted? yes / no

FACILITY ID: 0-00 _____ **LUST NUMBER:** _____

FREE PRODUCT DISCOVERY DATE: _____ (mm/dd/yy)

FREE PRODUCT INFORMATION:
Type: gasoline diesel used oil jet fuel other:
Quantity: _____ gallons (estimate)
Maximum Thickness: _____ in./ft. _____ well _____ date measured (mm/dd/yy)

FREE PRODUCT EXTENT: (attach map showing extent, see below for site plan requirements)
 extent defined: yes / no extent limited to on-site?: yes / no

FREE PRODUCT REMOVAL: (check all that apply)

••	REMOVAL METHOD	DATE INITIATED (mm/dd/yy)	DATE COMPLETED (mm/dd/yy)
<input type="checkbox"/>	Manual removal (e.g. bailing, absorbers)		
<input type="checkbox"/>	Automatic removal (e.g. skimmer pumps)		
<input type="checkbox"/>	Pump & Treat		
<input type="checkbox"/>	Vapor extraction		
<input type="checkbox"/>	Dual Phase		

FREE PRODUCT DISPOSAL:
Has recovered free product been stored in a manner that prevents fire and safety hazards? yes / no
Has derived waste (soil, groundwater or surface water) been properly stored and disposed? yes / no / NA
Method/location of disposal: _____
Has recovered free product been disposed of in a proper manner? yes / no
Method/location of disposal: _____

PERMITS:
Have the appropriate permits for free product removal, storage and disposal been obtained? yes / no

ATTACHMENTS: (check if attached)
 Permits associated with free product removal, storage and disposal
 Site plan which includes:
- property boundaries - adjacent property land use - surface water - extent of free product
- wells and receptors - release point(s) and ID number - sample locations

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM**

Free Product Report

DATE FORM COMPLETED: _____ (mm/dd/yy) **ADEQ use only**
DATE RECEIVED: _____

Site classification form attached? yes no
Required attachments submitted? yes no

FACILITY ID: 0-00 _____ **LUST NUMBER:** _____

FREE PRODUCT DISCOVERY DATE: _____ (mm/dd/yy)

FREE PRODUCT INFORMATION:
Type: gasoline diesel used oil jet fuel other:
Quantity: _____ gallons (estimate)
Maximum Thickness: _____ in./ft. _____ well _____ date measured (mm/dd/yy)

FREE PRODUCT EXTENT: (attach map showing extent, see below for site plan requirements)
 extent defined: yes / no extent limited to on-site?: yes / no

FREE PRODUCT REMOVAL: (check all that apply)

	REMOVAL METHOD	DATE INITIATED (mm/dd/yy)	DATE COMPLETED (mm/dd/yy)
<input type="checkbox"/>	Passive removal (e.g. bailing, absorbers)		
<input type="checkbox"/>	Active removal (e.g. skimmer pumps)		
<input type="checkbox"/>	Pump & Treat		
<input type="checkbox"/>	Vapor extraction		
<input type="checkbox"/>	Dual Phase		

FREE PRODUCT DISPOSAL:
Has recovered free product been stored in a manner that prevents fire and safety hazards? yes no
Has derived waste (soil, groundwater or surface water) been properly stored and disposed? yes no NA
Method/location of disposal: _____
Has recovered free product been disposed of in a proper manner? yes no
Method/location of disposal: _____
Has produced water been stored/discharged of in accordance with applicable environmental and safety regulations? yes no

PERMITS:
Have the appropriate permits for free product removal, storage and disposal been obtained? yes no

ATTACHMENTS: (check if attached)
 Permits associated with free product removal, storage and disposal
 Site plan which includes:
- property boundaries - adjacent property land use - surface water - extent of free product
- wells and receptors - release point(s) and ID number - sample locations

- **Added** bullet #4 verbiage
 - “Provide the results of monitoring and laboratory analysis of collected samples for each contaminated medium received since the last report was submitted to the Department. Please also include a short narrative summarizing this information, and the purpose/rationale of this investigation. Please also provide a summary of any findings of this investigation.”
- **Modified** checkboxes
- **Removed** “Please note that the above information is required once every 12 months from the date the ADEQ approves the site characterization report for the subject release unless otherwise stated within an ADEQ approved corrective action plan.”

Changes and Updates - Periodic Site Status Report



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

Periodic Site Status Report

DATE FORM COMPLETED: _____ (mm/dd/yy) ADEQ use only
Date Received: _____

Site classification form attached? yes / no
Required attachments submitted? yes / no / NA

FACILITY ID: 0-00 LUST NUMBER: _____ OTHER LUST(S) AT FACILITY: _____

1. Has the ADEQ approved the site characterization report for the subject release?
If you checked "yes" include date of ADEQ approval and proceed to #2 below.
If you checked "no" stop here, corrective action status information is not required at this time. DATE: YES • NO ••
2. Has a corrective action plan (CAP) been requested?
If you checked "no" proceed to #3 below.
If you checked "yes" are you proceeding with remedial corrective actions prior to CAP approval?
If you are proceeding, include date ADEQ was notified in accordance with A.A.C. R18-12-263.02(E) YES • NO ••
DATE: _____

3. Type(s) of remedial corrective action technology currently being performed. For each system in use, enter the date the system became operational.

Soil	Date	Groundwater	Date
Over-excavation		Natural attenuation (monitored)	
Vapor extraction		Air sparging	
Thermal desorption		Extract and treat	
Bioremediation		Free product recovery	
Land farming (on site)		Bioremediation	
Other (describe below)		Other (describe below)	

If "Other" please describe (include dates the systems became operational - attach additional pages as necessary):

4. For each of the remedial corrective action technologies checked in #3 above, attach any monitoring and laboratory results collected since submittal of the last status report form.
5. For the remedial corrective action technologies checked in #3 above, attach a site plan showing their locations and any monitoring and sample collection locations, if not previously submitted.
6. Check the time frame that most accurately estimates when the response activities, including remediation and verification monitoring, will demonstrate that the concentration of each chemical of concern is projected to be at or below the applicable corrective action standard.
•• 0 - 2 years •• 2 - 5 years •• 5 - 10 years •• greater than 10 years

7. Attach the *LUST Site Classification Form* as required and described under R18-12-261.01.

Please note that the above information is required **once every 12 months** from the date the ADEQ approves the site characterization report for the subject release **unless** otherwise stated within an ADEQ approved corrective action plan. If you have any questions regarding this form, contact the UST Help Desk at (602) 771-4303, or toll free within Arizona at 800-234-5677 extension 4303.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

Periodic Site Status Report

DATE FORM COMPLETED: _____ (mm/dd/yy) ADEQ use only
Date Received: _____

Site classification form attached? yes no
Required attachments submitted? yes no NA

FACILITY ID: 0-00 LUST NUMBER: _____ OTHER LUST(S) AT FACILITY: _____

1. Has the ADEQ approved the site characterization report for the subject release?
If you checked "yes" include date of ADEQ approval and proceed to #2 below.
If you checked "no" stop here, corrective action status information is not required at this time. DATE: YES NO
2. Has a corrective action plan (CAP) been requested?
If you checked "no" proceed to #3 below.
If you checked "yes" are you proceeding with remedial corrective actions prior to CAP approval?
If you are proceeding, include date ADEQ was notified in accordance with A.A.C. R18-12-263.02(E) YES NO
DATE: _____

3. Type(s) of remedial corrective action technology currently being performed. For each system in use, enter the date the system became operational.

Soil	Date	Groundwater	Date
Over-excavation		Natural attenuation (monitored)	
Vapor extraction		Air sparging	
Thermal desorption		Extract and treat	
Bioremediation		Free product recovery	
Land farming (on site)		Bioremediation	
Other (describe below)		Other (describe below)	

If "Other" please describe (include dates the systems became operational - attach additional pages as necessary):

4. Provide the results of monitoring and laboratory analysis of collected samples for each contaminated medium received since the last report was submitted to the Department. Please also include a short narrative summarizing this information, and the purpose/rationale of this investigation. Please also provide a summary of any findings of this investigation.

5. For each of the remedial corrective action technologies checked in #3 above, attach any monitoring and laboratory results collected since submittal of the last status report form.
6. For the remedial corrective action technologies checked in #3 above, attach a site plan showing their locations and any monitoring and sample collection locations, if not previously submitted.
7. Check the time frame that most accurately estimates when the response activities, including remediation and verification monitoring, will demonstrate that the concentration of each chemical of concern is projected to be at or below the applicable corrective action standard.
 If 0 - 2 years, estimated year complete: _____ 2 - 5 years 5 - 10 years greater than 10 years

8. Attach the *LUST Site Classification Form* as required and described under R18-12-261.01.

If you have any questions regarding this form, contact the UST Help Desk at (602) 771-4303, or toll free within Arizona at 800-234-5677 extension 4303.

- We expect **March 16, 2022** to be the official start date for using this new reporting format.
 - However, the eCSM format is still acceptable until **June 30, 2022**, after which only the new reporting format will be accepted.
 - Reports can still be submitted either through e-mail to your PM or through Sharefile.
- As a reminder:
 - Reports need to be approved **BEFORE** the Preapproval Reimbursement Requests (RR) can be submitted. Please do not submit RR until this time.
 - Do not submit the Site Characterization Report unless the full extent and distribution of all contaminants of concern within each media resulting from a UST release has been characterized and can be documented within the referenced deliverable.
 - Please select the “**Other Informational Report and eTables**” as report selection if characterization has not been achieved.

- The Tanks Requests for Proposals is out on the street. Please go to app.az.gov and look for BPM004175.
 - Questions go to Trish Lorenzen at lorenzen.trish@azdeq.gov

And now for the Live Demo:

- Site Characterization Report
- Free Product Report
- Periodic Site Status Report



ADEQ is available for any questions you may have regarding the new reporting format during kick off meetings or if you need additional assistance!

This presentation will be on our website.

Contact Us:

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