

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ)  
RESPONSE TO PUBLIC COMMENTS ON THE UNIVERSAL PROPULSION  
DECLARATION OF ENVIRONMENTAL USE RESTRICTION**

In August 2019, Universal Propulsion Company, Inc. (UPCO) and PAF Central, LLC (PAF) submitted a request for an Engineering Control Declaration of Environmental Use Restriction (DEUR) to ADEQ for a portion of the Universal Propulsion Company (UPCO) site located at 25401 N. Central Avenue, Phoenix, Arizona 85085. A DEUR is a voluntary restriction on real property that limits the use of the property in order to reduce the potential for exposure to contaminants. With this DEUR, UPCO and PAF have agreed to voluntarily limit a portion of the property to non-residential use and to further maintain certain portions of the property to prevent exposure to the public. Furthermore, this DEUR establishes a financial assurance mechanism to ensure maintenance and restoration of the engineering controls should they fail to achieve performance expectations.

Arizona Revised Statutes (A.R.S.) § 49-104(A)(4) requires ADEQ provide information on request of any local, state or federal agencies and private persons and business enterprises on matters within the scope of the department.

On October 25, October 26, and November 2, 2019, ADEQ advertised a public notice in the *Arizona Republic* announcing the public comment period for the Engineering Control DEUR for the UPCO site. On November 25, November 26, November 27, and November 29, 2019, ADEQ advertised a public notice in the *Arizona Republic*, announcing a 30-day extension of the public comment period. The public comment period opened on October 26, 2019 and closed on December 26, 2019. ADEQ received seven comment letters during the public comment period.

ADEQ has responded to all such comments in this Response to Comments (RTC) Summary.

The following is a list of the public comments received, followed by ADEQ's response in **bold text**.

**COMMENT 1 [11/01/2019]:**

“... please consider this email to be my formal objection to your PUBLIC NOTICE – as I absolutely disagree with your ignorant understanding of the damage that Tally, UPCO, and Goodrich did to this 160 acre parcel. This land should never be converted to anything but what it currently is: empty, toxically contaminated desert.”

**RESPONSE: A DEUR is a restrictive covenant recorded by the owner of real property to voluntarily limit the use of a property where the owner has elected to leave contamination in place above residential soil remediation standards. A DEUR may also be used to prohibit specific activities on a property (e.g. installation of wells).**

**A DEUR is recorded with the deed of the property and remains in effect until the property owner demonstrates to ADEQ release of the DEUR is appropriate. Once in place, the property owner is responsible for ensuring the use restrictions prescribed by the DEUR and the annual (or more frequent) reporting requirements are met.**

**The purpose of a DEUR is to ensure future property owners are aware of contamination on a site and take appropriate actions to prevent or mitigate additional contamination. A DEUR documents**

**institutional and engineering controls, allows closure of a site with contamination above residential soil remediation levels, and ensures appropriate future use of a contaminated site.**

**Extensive investigation of the UPCO site indicates soil contamination is limited to the central portion of the site, corresponding with historic operational areas. Pursuant to A.R.S. § 49-152, a property who elects to leave contamination on the property that exceeds the applicable residential Arizona Soil Remediation Standards (SRLs) for the property, the owner shall record in each county where the property is located an institutional control that consists of a restrictive covenant that is labeled “declaration of environmental use restriction” pertaining to the area of the property necessary to protect the public health and the environment. Due to issues of feasibility, the property owner voluntarily left contamination in place above Arizona Soil Remediation Standards for residential SRLs. Therefore, the property owner is required to submit a DEUR and provide a financial assurance mechanism to ensure the engineering controls (i.e. caps) continue to eliminate infiltration of water into contaminated soils and reduce human exposure to contaminated soils located beneath the engineering controls.**

**The City of Phoenix annexed the UPCO property on November 14, 2001, and has the authority to approve or deny changes to zoning classifications. Prior to annexation, the property was zoned as RU-43 (residential, 1 residence per acre). Following annexation of the property, the zoning classification was updated to S-1 (ranch or farm residential, 1 residence per acre) in accordance with Section 105 of the City of Phoenix Zoning Ordinance. The S-1 zoning classification is the City of Phoenix equivalent to the Maricopa County’s RU-43. In 2005, the City of Phoenix City Council approved a request by UPCO to change the zoning classification to CP/GCP (non-residential, Commerce Park - General Commerce Park option). This zoning classification includes the development of a broad range of commercial installations such as, day care, offices, warehousing, light manufacturing, restaurants, dining, motels/hotels, etc. If the property owner does not develop the property for commercial use, the owner may still use the S-1 zoning option, and construct ranch homes with a density of not greater than one residence per acre.**

**In accordance with A.R.S. § 49-152(L), a DEUR does not authorize the use of a property that is otherwise prohibited by zoning ordinances, other ordinances or laws. Alternately, a DEUR may include land use restrictions or activity restrictions that would otherwise be permitted by zoning ordinances, other ordinances or laws. Issues regarding planning and zoning must be addressed by the local jurisdiction.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 2 [11/19/2019]:**

**“The referenced Public Notice has a direct relationship to the 25401 N. Central Avenue proposed application for rezoning and development project that has been submitted to the City of Phoenix. This application has been designated by the City of Phoenix as “Rezoning Case No. Z-37-19-2, Happy Valley Road & Central Avenue; PA-18-158; 1<sup>st</sup> Submittal: June 11, 2019.” This application is a request for rezoning of the property located at 25401 N. Central Avenue. The application proposes the rezoning of approximately 157 gross acres. This rezoning proposal calls for 274 homes on 78 acres of the 157 gross acres (equating to 3.5 single family residences/acre) which also includes a larger area of contaminated**

property along with commercial and open spaces located in north Phoenix at the northeast corner of Central Avenue and Happy Valley Road.

I have been a property owner since 1998 and my property line abuts the property boundary where this Public Notice is attempting to focus on and approve a new, high-density housing development on what was previously a toxic waste site. Please know that I strenuously object to any further progress or approval of these plans as identified in the Public Notice and the described development application.”

**RESPONSE: As stated in Comment 1, a DEUR cannot approve or deny changes to zoning classifications. A DEUR is a legal tool voluntarily implemented by a property owner to reduce exposure to contamination through property use restrictions, regardless of the zoning classification. Issues regarding planning and zoning must be addressed by the local jurisdiction.**

**The boundary of the DEUR includes approximately 57 acres in the central portion of the property. None of the private property along Yearling Road (to the north of the property) abuts the portion of the property in question.**

**No change has been made to the DEUR as a result of this comment.**

“This area was where toxic burns, explosions, and dumping activities occurred for almost forty years and the flagrant disregard for human health and safety has affected the health of our community members. Furthermore, we have grave concern this development will have further disastrous impact to the health and welfare of current and future residents. Should this terrible proposal be approved, the City, County, and State may be potentially subjecting an additional 274 single-family dwelling occupants to live within a few walking steps of a contaminated and uninhabitable area of land.

We, the community, are actively engaging ADEQ, ASLD, Health and Human Services, State Representatives, CDC, and City of Phoenix agencies to communicate our concerns. A few officials have expressed an understanding, yet activities are moving ahead without addressing our concerns. The more we have learned about illnesses among the existing community, the more concerns have about the development and subjecting new residents to this contaminated area. UPCO et al. polluted and spread toxic chemicals for over 3 decades and then bought the land for a fraction of market value, only to sell it for development. I assume this is likely because of the land’s toxic site designation, and to mitigate their responsibility to return the property to original (uncontaminated) state. That is, without a thorough and complete study of every aspect of the contaminated land, any future development has the potential to exacerbate the environmental and health issues we already face.

As member of a community group who are protesting the subject rezoning approval by the City of Phoenix, I am requesting a cease and desist on approving the Public Notice plans for the following reasons:

1. This remediation is to approve approximately only 79 acres as non-livable.”

**RESPONSE: Past soil sampling events identified a portion of the UPCO site on which concentrations of several contaminants of concern (COCs) exceeded Arizona Soil Remediation Standards (SRL). PAF included these areas within the Engineering Control DEUR; the specific areas are limited to non-residential use only. A DEUR is a voluntary use restriction and cannot**

**be used to compel a property owner to limit the use of a property on which soil concentrations do not exceed residential SRLs.**

**No change has been made to the DEUR as a result of this comment.**

2. “There are approximately 78 acres that have not been determined, as of this date, to be completely livable as purported by the proposed development agents from Kyle Moyer.”

**RESPONSE: The commenter submitted the comment but did not specify the source of nor identify a specific 78-acre parcel to which the comments reference.**

**ADEQ is developing a sampling plan to address residents’ concerns regarding contamination of soils within portions of the property not covered by this Engineering Control DEUR. Once complete, ADEQ will provide the sampling plan to interested parties for review.**

**No change has been made to the DEUR as a result of this comment.**

3. “We have been working with ADEQ to have the soil of this approximately 78 acres tested, via drilling of core samples at distinct and regular intervals throughout the area designated for new housing. It is our understanding a plan is being developed to have this soil testing for hazardous materials and heavy metals that may have tragically accumulated via unfettered dumping for at least 20 years, if not during the almost forty years that UPCO and others had full access to the entire 160-acre parcel.”

**RESPONSE: The comment submitted the comment but did not specify the source of nor identify a specific 78-acre parcel to which the comments reference.**

**ADEQ is developing a sampling plan to address residents’ concerns regarding contamination of soils within portions of the property not covered by this Engineering Control DEUR. Once complete, ADEQ will provide the sampling plan to interested parties for review.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 3 [11/19/2019]:**

“I stand by my concerns that the remediation plans for this site is limited to the 56 acres of fenced area and ignores the total property 157 acres plus surround properties, over 200 acres of watershed.

The responses below cites 2010 storm water studies and remediation designed based on the hydrology analysis of 56 acres. However, I feel this analysis is incomplete by ignoring the surrounding plans and drainage. Setting aside that UPCO et al. were found deficient of many, many safety and pollution violation by the EPA and ADEQ and that neither agency can be certain of what went on there from ’72-’93, this 56 acres cannot be considered separate from the other leased 100 acres and surrounding watershed.

ADEQ representatives are aware that plans for 274 homes adjacent and commercial on TOP of the 56 ac are being proposed.

The City of Phx has no flood control for this land and watershed must be kept on site. A developer is proposing consolidating 7 washes to 1 or 2 ending at the SW corner with retention basins abutting the capped sites. Which they plan to build on!!!

Ignoring these factors turns a blind eye to the potential undermining and adequacy of CAPPED toxic sites and health and safety of current and proposed residence. With proposed plans, a 100 yr storm would channel 23 Mill gallons of water to retention ponds adjacent to the toxic sites.

In my view the entire 157 acres should be subject to further development restriction to better isolate the remediation locations for the protection of the community.”

**RESPONSE: A DEUR is a restrictive covenant recorded by the owner of real property to voluntarily limit the use of a property. Past soil sampling events identified a portion of the UPCO site on which concentrations of several COCs exceeded residential SRLs; these areas are included in the Engineering Control DEUR. PAF voluntarily limited these areas to non-residential use only through the Engineering Control DEUR.**

**Those portions of the site not included in the Engineering Control DEUR do not contain any COCs above their respective residential SRLs. DEUR statutes do not authorize ADEQ to request the owner of real property limit the use of portions of the property on which soil concentrations do not exceed the residential SRLs.**

**In 2019, ADEQ approved the Engineering Control Plan (ECP) prepared by Arcadis on behalf of UPCO and PAF. The ECP provides guidelines for annual maintenance and inspection of the caps to ensure they continue to eliminate exposure to and migration of contaminants in soil. Furthermore, the ECP provides protocol for addressing intentional and unintentional breach of the caps.**

**In the event the caps fail, UPCO and PAF have submitted a financial assurance mechanism to ensure the maintenance and restoration of the caps.**

**The City of Phoenix annexed the entire property into the city limits on November 14, 2001 and is authorized to address flood control during the planning and zoning process. ADEQ recognizes that such property development may alter the rate or frequency of stormwater flow at the caps, and ADEQ will coordinate with the City of Phoenix to ensure cap integrity is maintained.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 4 [11/21/2019]:**

“I am writing in reference to: ADEQ Public Notice, Dated 26 October 2019; Subject: Notice of 30-Day Public Comment Period UPCO Voluntary Remediation Program.

This Public Notice is in regards to the 25401 N. Central Avenue proposes application for rezoning and development project that has been submitted to the City of Phoenix. This application has been designated by the City of Phoenix as “*Rezoning Case No. Z-37-19-2, Happy Valley Road & Central Avenue: PA-18-158; 1<sup>st</sup> Submittal: June 11, 2019.*” This application is a request for rezoning of the property located at 25401 N. Central Avenue of approximately 157 gross acres, calling for 274 homes on 78 acres of the 157 gross acres (equating to 3.5 single family residences/acre) which also includes a larger area of contaminated property along with commercial and open spaced located in north Phoenix at the northeast corner of Central Avenue and Happy Valley Road.

I have been a Union Hills property owner since 1995 and my property line abuts West Yearling Road, the property boundary of this high-density housing development on what was previously occupied by Universal Propulsion Company, Inc. (UPCO) where the company manufactured military aircraft ejection seats and survival systems until 2009.

As a member of the Union Hills neighborhood who experienced the outcome of UPCO's flagrant safety violations, I have had evacuate my family twice, have well testing and witness many disturbing window shaking explosions and plumes of gas. In addition, a child and I have endocrine related diseases including the thyroid and the pituitary gland. I find it irresponsible to build homes on this property with known problems. It's a liability for the city and the builder to put homes or place of employment on this land.

Therefore, I am petitioning the City of Phoenix to not approve *Rezoning Cases No. Z-37-19-2.*"

**RESPONSE: A DEUR is a restrictive covenant recorded by the owner of real property to voluntarily limit the use of a property.**

**Extensive investigation of the UPCO site indicates soil contamination is limited to the central portion of the site, corresponding with historic operational areas. Due to issues of feasibility, the property owner voluntarily left contamination in place above residential SRLs and installed engineering controls (i.e. caps). Therefore, the property owner is required to submit an Engineering Control DEUR and provide a financial assurance mechanism to ensure the caps continue to meet performance expectations.**

**As stated in Comments 1 and 2, a DEUR cannot be used to approve or deny changes to the City of Phoenix zoning classifications. A DEUR is a legal tool implemented by a property owner to reduce exposure to contamination through property use restrictions, regardless of the zoning classification. Issues regarding planning and zoning are best addressed by the local jurisdiction (i.e. the City of Phoenix).**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 5 [11/24/2019]:**

"I live adjacent to the property that this Public Notice references, 25401 N. Central and I am opposed to any human use of this portion at the UPCO site. According to the new owner and developer of this property, there are plans to use this area for commercial offices, businesses and stores where human workers could spend 8 to 20 hours a day on this property contaminated with heavy metals, perchlorate, and other hazardous compounds. How is that any different then residential occupancy?"

**RESPONSE: Remediated properties with COCs remaining at or below residential SRLs are not required to record a DEUR. An institutional control DEUR, limiting the property (or a portion of the property) to non-residential use, is required if COCs exceed the residential SRLs. The methodologies used to determine the residential SRLs consider ingestion via oral and inhalation as well as dermal exposure. ADEQ does not believe remaining soil contamination (in the portions of property not included in the Engineering Control DEUR) poses a threat to human health and the environment. The remaining soils pose no hazard to future development.**

**Remediated properties with COCs remaining at or above the non-residential SRLs or groundwater protection levels are required to implement engineering control mechanisms to mitigate exposure to and migration of contaminants in soil. In addition, the property owner shall record an Engineering Control DEUR, limiting the property to non-residential use. The methodologies used to determine the non-residential SRLs consider ingestion via oral and inhalation as well as dermal exposure.**

**As long as the caps remain undisturbed at the UPCO site, ADEQ does not believe remaining soil contamination poses a threat to human health and the environment. Future development at the site shall not adversely affect the caps.**

**No change has been made to the DEUR as a result of this comment.**

“And what will my air quality be like living next to this area with months of construction, the digging up and moving of all that contaminated soil around, all the resulting dust, and all the soil moving that will be done building infrastructure such as water and sewage lines and roads?”

**RESPONSE: Extensive environmental investigations at the UPCO site indicate COCs in soils outside of the Engineering Control DEUR boundary are below residential SRLs.**

**The Maricopa County Air Quality Department is authorized to monitor dust control and mitigation during development and construction of the project.**

**No change has been made to the DEUR as a result of this comment.**

“I am asking ADEQ to take another look and do some research on all the chemicals and contaminations that were used or dumped on this property before 1987 when ADEQ became involved.”

**RESPONSE: Soil investigations at the site were based on historic site activities and included sampling for heavy metals, perchlorate, and volatile organic compounds (VOCs). ADEQ is not aware of any other contaminants being disposed of on the property.**

**No change has been made to the DEUR as a result of this comment.**

“As you know, UPCO already severely contaminated ours and our neighbors’ only water source, our personal water wells, with perchlorate. We were never given any advice or direction on not letting or babies or children drink this contaminated water. UPCO has been contaminating this area for about 40 years!!!”

**RESPONSE: Sampling of private wells in residences north of the UPCO site indicates perchlorate levels well below the health-based guidance level established by the Arizona Department of Health Services for perchlorate in drinking water. Arcadis continues to offer sampling of private wells for residents adjacent to the site.**

**No change has been made to the DEUR as a result of this comment.**

“I am asking ADEQ to not fail to protect us citizens living next to or near this property.

Thank you for your attention to this matter.”

**RESPONSE: ADEQ is currently developing a sampling plan that will investigate soils on portions of the property designated as non-operational areas. Once complete, this sampling plan will be made available to all interested parties prior to implementation. ADEQ will use the data to determine if additional environmental actions are warranted at the site.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 6 [12/13/2019]:**

“Appreciate the extended comment period. I have continued to do research on toxic site remediation and development and have additional comments to add.

From Fundamentals of Hazardous Waste Site Remediation by Dr. Kathleen Sellers. First published in 1999, we learn...

- “Hydrodynamic dispersion causes dissolved contaminants to spread out in the aquifer” (pg39)
- “Contaminates in soil can leach to groundwater when rainwater infiltrates” (p61)
- “Predictive models of pumping rates assume equilibrium conditions” (p115)
- “Reinjection systems usually require a greater area than that encompassed by the extraction” (p120)
- “Capping is not appropriate for many sites. It is rarely used to contain small volumes of highly toxic or leachable waste” (p220)
- “Capping is not appropriate where long-term use of the land cannot be restricted...” (p221)

Dr. Lee, a leading expert in Perchlorate remediation, also emphasizes the importance of restriction of land use;

- “A key to long-term protection of public health and environmental quality associated with “remediated” sites will be the effectiveness and reliability of the implementation of the restrictions on land-use activities at the site that could lead to release of hazardous chemicals (Lee, G. F., & Jones-Lee, A., 2010, pg 6)”

**RESPONSE:** The decision to utilize engineered caps as part of the Engineering Control DEUR is based on the 2015 Corrective Measures Study (the Study) prepared by Arcadis on behalf of UPCO (previous property owner). The Study identified potential engineering control alternatives and recommended engineered HydroTurf™ caps. In 2018, ADEQ approved the Final Cap System Design Plans and the caps were installed that same year.

UPCO contracted Arcadis to install four caps within the engineering control area: in the Waterbore (1), C-Complex (1), and New Burn Areas (2). The caps consist of compacted clean fill overlain by a relatively impermeable geomembrane synthetic liner. The caps in the Waterbore and Co-Complex areas are two-feet thick and the caps in the New Burn Area are five-feet thick. As part of the cap design, concrete anchor trenches were installed on all sides of each cap. Anchor trenches typically measure two-feet deep and five-feet wide. On the east side of the Waterbore Area, the anchor trench extends four-feet deep and eight-feet wide across the upstream side of the ephemeral wash. Alternately, the downstream side of the ephemeral wash includes approximately 30-feet of protective rip rap.

The caps were installed to meet the following remedial objectives:

- Prevent direct exposure to soil containing COCs (i.e. dermal exposure)
- Prevent generation of airborne contaminants (dust inhalation)
- Mitigate or greatly reduce the potential for leaching of COCs from soil to groundwater
- Control against erosion and scour that could compromise cap protectiveness

In addition to the engineering controls, the property owner submitted an Engineering Control DEUR, restricting use of the site and prohibiting activities that may harm the caps. The engineering controls shall be inspected semi-annually during the first 5 years (April and October). The inspection frequency shall be re-evaluated after 5 years. The inspection and maintenance requirements for the caps are described in Section 4 of the ECP and include inspection methods and specific maintenance requirements.

Pursuant to A.R.S. § 49-152.01(B), the property owner submitted a form of financial assurance document based on the cost to maintain and restore the caps should they fail to meet performance expectations.

The groundwater treatment system (GTS) at the site is not included in the Engineering Control DEUR. The Hazardous Waste post-closure permit includes guidelines for operation and maintenance of the GTS.

**No change has been made to the DEUR as a result of this comment.**

“Further, I question the judgement to accept the Arcadis remediation plan. Its only citations are to themselves or suppliers. I am sure the FAA will no longer rely on Vendor (Boeing) certifications. An independent expert review of the remediation is clearly required.”

**RESPONSE: All reports and plans related to remedial actions at the UPCO site must be submitted to ADEQ for review and comment. As such, the Engineering Control Plan prepared by Arcadis, on behalf of UPCO, was reviewed and approved by ADEQ in 2018.**

**No change has been made to the DEUR as a result of this comment.**

“Whether the remediation plan is adequate or not, the experts, including Dr. Sellers who works for Arcadis, agree that LAND USE RESTRICTIONS are a key to site remediation.

Building on and around this site, which results in concentrated storm water, is unacceptable.”

**RESPONSE: This Engineering Control DEUR restricts the use of a portion of the UPCO property to non-residential use. Future development of this portion of the property for non-residential purposes is permitted; however, such development shall not adversely impact the caps.**

**No change has been made to the DEUR as a result of this comment.**

**RESPONSE TO COMMENTS FROM CITIZENS OF SONORAN PRESERVE FOOTHILLS  
[12/23/19]**

**COMMENT 1**

“The cancer contaminants currently under an existing Remediation Plan, Special Deed, and DEUR are absorbed through oral, dermal, and inhalation exposure. This shall serve as written public comment to the request by the PAF Central LLC to amend the Declaration of Environmental Use Restrictions for 25401 N. Central Avenue Phoenix, Arizona.”

**RESPONSE: In the non-residential zoned portion of the parcel, COCs at the surface are believed to be below residential SRLs. The methodologies used to determine the residential SRLs considered ingestion via oral and inhalation as well as dermal exposure. ADEQ does not believe any remaining soil contamination at the surface poses a threat to human health and the environment. In the residential parcel, COCs at the surface and at depth are also believed to be below the residential SRLs. The soils pose no hazard to future development in the residential-zoned portion of the parcel.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 2:**

“The PAF Central LLC is a Delaware based outside interest seeking to build both commercial and residential buildings to reap profit from the development of known contaminated land without concern for the health or safety of citizens, plants, and wildlife of the state of Arizona.”

**RESPONSE: Submittal and compliance with the DEUR requirements, applied for by PAF will ensure protection of human health and the environment at this parcel.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 3**

“The community affected within a one-mile radius includes approximately 2,400 people. 80% of our population is above 50 or below 18 years of age. This community is rural in nature with 1-2 homes to the acre and a dark sky commitment. Directly adjacent to the Sonoran Desert Preserve it provides ingress for many Arizona citizens, approximately 50 hikers and bicyclists daily during the week and up to 100 on any given weekend. Both private and professional photographers come to the end of Central Avenue daily for pictures of the wildlife, plant life, weddings, graduation and the rural desert of our city.”

**RESPONSE: In the non-residential zoned portion of the parcel, COCs at the surface are believed to be below residential SRLs. The methodologies used to determine the residential SRLs considered ingestion via oral and inhalation as well as dermal exposure. ADEQ does not believe any remaining soil contamination at the surface poses a threat to human health and the environment. The capped areas as well as the groundwater treatment plant (GWTP) will be fenced off from access by the general public. In the residential parcel, COCs at the surface and at depth are also believed to be below the residential SRLs. The soils pose no hazard to future development in the residential-zoned portion of the parcel. For all areas, exposures will be below scenarios and assumptions made in determining the residential SRLs.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 4**

“The City of Phoenix has not identified a timeline for municipal supplied water and sewer thereby forcing private well use for all household water. City of Phoenix drinking water wells servicing the greater Phoenix area are located directly south and downgradient from the contaminated land at 25401 N. Central Avenue. The groundwater flow and flow from the mountain preserve is generally Northeast to Southwest, however, complex local geology and uncontrolled site grading may allow migration in undetermined directions. Airborne soil exposure is as fluctuating as wind direction.”

**RESPONSE: UPCO has a hazardous waste corrective action permit (“the Permit”) from ADEQ which requires treatment of contaminated groundwater to the level specified by the Arizona Department of Health Services. UPCO’s groundwater treatment plant (GWTP) is operating and a network of groundwater wells have been installed to ensure that contamination is contained. The Institutional Control DEUR (recorded on 12/07/2018) that exists for the entire parcel, does not regulate the GWTP. Instead, it supports the Permit by prohibiting the construction of wells on the parcel without the permission of ADEQ. Such wells located close to the GWTP have the greatest potential of affecting the contaminant movement and contaminant capture. The Institutional Control DEUR can be viewed at [https://static.azdeq.gov/wpd/hazwaste/upco\\_inst\\_deur.pdf](https://static.azdeq.gov/wpd/hazwaste/upco_inst_deur.pdf).**

No change has been made to the DEUR as a result of this comment.

**COMMENT 5**

“The request for residential expansion zoning and disregard for existing DEUR and land remediation requirements should exclude any attempt to change protection already assured to the citizens and neighborhood.”

**RESPONSE:** ADEQ is not aware of any “disregard for existing DEUR and land remediation requirements” by the applicant. UPCO applied for a DEUR in 2018, regarding a prohibition on the construction of groundwater wells within the parcel. The DEUR under consideration concerns the non-residential parcel, and PAF submitted the DEUR application to ADEQ for its review and approval in accordance with State requirements.

No change has been made to the DEUR as a result of this comment.

**COMMENT 6**

“Our top concerns include: 1. The continued direct dust contact of citizens living, hiking the preserve, and biking on Central Avenue between Happy Valley and Sonoran Preserve. This dust is caused by the unmonitored work and lack of dust control of any kind being conducted at this 157 acre contaminated parcel, including installation of roads, electrical service poles, storage facilities and grading. This work is publicly documented in aerial photos of 2019.”

**RESPONSE:** Dust emissions generated from onsite operations are regulated by Maricopa County. In addition, see the response to comments 1 and 3.

No change has been made to the DEUR as a result of this comment.

**COMMENT 7**

“2. Degradation and destruction of native vegetation between May 19 and current is suspected to be caused by soil and earth disturbances and the contaminants released. This can be seen utilizing real life visit or aerial photos.”

**RESPONSE:** In the non-residential zoned portion of the parcel, contaminants of concern at the surface have been found to be below residential SRLs. The methodologies used to determine the residential SRLs considered ingestion via oral and inhalation as well as dermal exposure. ADEQ does not believe any remaining soil contamination at the surface poses a threat to human health and the environment. Below ground surface, the concentrations for perchlorate become elevated above the residential SRL, and these sections have been capped with a geo-synthetic liner to reduce infiltration to groundwater and to prevent human exposure. The capped areas as well as the groundwater treatment plant (GWTP) will be fenced off from access by the general public.

In order to complete the soil and groundwater remedies in accordance with the Permit (see response to Comment 4) it was necessary for UPCO to clear areas of brush and to relocate protected vegetation; however, the DEUR process does not address the location or maintenance of native vegetation.

No change has been made to the DEUR as a result of this comment.

**COMMENT 8**

“3. Contact contamination of cancer causing agents washing into Central Avenue from the soil disruption along the flood wash running through this site.”

**RESPONSE: Extensive environmental investigations at the UPCO site indicate COCs in soils outside of the capped areas are below residential SRLs. All releases of the COCs have been addressed. There is no evidence of COCs remaining in washes down-gradient of the site above the residential SRLs.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 9**

“4. Release of further cancer agents due to unrestricted work at 25401 N. Central causing immediate and future concern for the families specifically children and elderly, hikers, pets, bikers, and endangered species formerly protected on this parcel including Nichol's Turk's head cactus, Hedgehog Cactus, Roadrunners, ridge-nose rattlesnake, Narrow head garter snake, Willow flycatcher, and our mated owl family.”

**RESPONSE: See the response to Comments 1, 3, 6, and 8, above. The DEUR is not designed to protect endangered species and any protected vegetation.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 10**

“5. Continued disregard for use restrictions, proper monitoring, soil disturbances, contaminated ground water runoff and public health and safety of vehicle, foot, bike and home contamination. Repeat failures to secure parcel gates allowing children access to play unrestricted within the parcel.”

**RESPONSE: Site security and access controls are regulated by the Permit, not the DEUR. The Permit requires UPCO to conduct periodic inspections of the security fence. However, hazardous waste facility inspection reports completed by ADEQ have noted times when the existing security fence was breached, and UPCO completed the necessary repairs within the expected timeframes.**

**ADEQ expects UPCO to submit a Permit modification to upgrade the security fence for the facility. This may include installing a new fence around the capped structures and the GWTP, and removing the existing fence surrounding the parcel.**

**ADEQ is not aware of any recent instances of noncompliance that include a knowing or willful disregard for use restrictions, proper monitoring, soil disturbances, contaminated ground water runoff, and public health and safety of vehicle, foot, bike and home contamination, or any instances of children having unrestricted access to (the non-residential portion of) the site.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 11**

“Violations of the Remediation Plan and Special Deed Restrictions occurring since purchase by PAF Central:

A. No surface or subsurface water at, on or under shall be used for any purpose, or brought into contact with any person. Violations; Uncontrolled site access to public, ponding water and soil runoff Redirected natural wash to flood Happy Valley during heavy rain;”

**RESPONSE: Site security and access controls are regulated by the Permit, not the DEUR. See the response to Comment 10. Ponding water, soil runoff, or stormwater flows onsite are not regulated by the DEUR. Surface contamination at the residential and non-residential portions of the parcel have been addressed. See the response to Comment 1.**

**No change has been made to the DEUR as a result of this comment.**

#### **COMMENT 12**

“B. No use of solvents or breakdown products. Violations; Product use to backfill power poles and install storage buildings, work vehicle fluid leakage;”

**RESPONSE: The DEUR process does not regulate these issues.**

**No change has been made to the DEUR as a result of this comment.**

#### **COMMENT 13**

“C. No exacerbation of environmental conditions – Violations: No dust control methods during pole trenching, lot line, sign installation, or grading. Soil and ponding water causing visible plant and animal death;”

**RESPONSE: The DEUR process does not regulate these issues.**

**No change has been made to the DEUR as a result of this comment.**

#### **COMMENT 14**

“D. Required cap and hydroturf inspections after any surface water event of 1” or greater – Violations: Storm flooding occurring on 11/19/19 through 11/22/19.”

**RESPONSE: The Engineering Control Plan (ECP) required by the DEUR includes inspection and maintenance requirements for the cap, including after significant storm events. The caps were inspected by UPCO on November 22, 2019. They were found to be in satisfactory condition and no maintenance was required.**

**No change has been made to the DEUR as a result of this comment.**

#### **COMMENT 15**

“Declarant release still pending.”

**RESPONSE: This comment is not relevant to the DEUR that is under consideration.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 16**

“Written Approval for use of section of non-developed, citizen maintained Central Avenue north of Happy Valley as the right of way access for 25401 Central has not been requested or received.”

**RESPONSE: This comment is not relevant to the DEUR that is under consideration.**

**No change has been made to the DEUR as a result of this comment.**

**COMMENT 17**

“The transfer to a new LLC of PAF Central, LLC and direct violations and premeditated breaches of the special warranty deed, CCR's, land use restrictions, Remediation plan and DEUR occurring since the sale in December 2018 demand:

- Review by Superfund and Program Assessment branch;”

**RESPONSE: This comment is not relevant to the DEUR that is under consideration.**

**No change has been made to the DEUR as a result of this comment.**

- “Review by Arcadis for failures under existing remediation plan;”

**RESPONSE: Regarding the final soil remedy, the ECP required by the DEUR includes inspection and maintenance requirements for the caps, including after significant storm events. The caps were inspected by UPCO on November 22, 2019; they were found to be in satisfactory condition, and no maintenance was required.**

**The groundwater remedy is covered under the Permit, not the DEUR.**

**No change has been made to the DEUR as a result of this comment.**

- “Completion of health assessment by 3<sup>rd</sup> party to determine reason for sudden and mass death of trees and animals on this parcel over the last 11 months and immediate/future cancer risk to families, pets, hikers, and bikers inhaling uncontrolled dirt generated from this parcel;”

**RESPONSE: This comment is not relevant to the DEUR that is under consideration.**

**No change has been made to the DEUR as a result of this comment.**

- “Review by Governor Ducey and state historic preservation for mitigation of health risks, state preserve and ground water runoff contamination of City wells;”

**RESPONSE: See response to comments 1, 3, 4, 7, and 8. Surface contamination has been mitigated, so contamination in runoff will not contaminate City Wells.**

**No change has been made to the DEUR as a result of this comment.**

- “Review by 3<sup>rd</sup> party of hydro turf life failure caused by burrowing animals, water ponding, and debris build up and settlement;”

**RESPONSE:** The caps were designed by qualified engineers registered by the Arizona Board of Technical Registration. Design specifications were reviewed by qualified registered engineers at ADEQ. In addition, building permits were submitted to the City of Phoenix, and the City reviewed and approved the construction details.

The ECP required by the DEUR includes inspection and maintenance requirements for the caps. Inspection items for the caps will include burrowing, erosion, and any significant cracking. Repairs will be made approximately within thirty days of discovery.

**No change has been made to the DEUR as a result of this comment.**

- “Review by 3<sup>rd</sup> party of the penetration of arsenic backfill areas caused by redirection of natural water flow canals;”

**RESPONSE:** Areas where elevated arsenic contamination exists in soil have been capped. Caps are to be periodically inspected by UPCO, as well as after significant rain events. Repairs will be made within the time periods specified in the ECP.

**No change has been made to the DEUR as a result of this comment.**

- “Publish and distribution of the required cap inspection from recent storms 11/19/19 -11/22/19. It should be noted that the surface water flow assumption has changed due to unregulated grading at 25401 N. Central and clearly resulted in a 1" or greater pooling;”

**RESPONSE:** The caps were inspected on November 22, 2019 following the significant storm event described in the comment. The caps were found to be in satisfactory condition and no maintenance is required. The next inspections of the caps are scheduled for the first quarter of 2020, unless there is any 1-day rain event that equals or exceeds 1-inch of total rain. If such a rain event occurs, a visual surface inspection will be conducted of the run-on and run-off controls, and cap integrity will be conducted within seven calendar days.

**No change has been made to the DEUR as a result of this comment.**

- “Increase of Final Assurance Surety bond to include fund coverage for any loss of life or long term care for each person, animal, and plant affected and guarantee future performance under the existing requirements and special deed.”

**RESPONSE:** The purpose of the financial assurance (FA) for the DEUR is specified in State law, at Arizona Revised Statutes (A.R.S.) § 49-152.01. The purpose of the FA is to ensure the engineering controls are maintained and there are sufficient funds available to restore the engineering controls if they fail or if they fail to meet performance expectations. The amount of the FA must be sufficient to cover both of the following: i) the cost of maintenance of the engineering controls for a period of thirty (30) years or until the owner demonstrates that continued maintenance of the engineering controls is no longer necessary, whichever occurs first; and ii) the cost of restoring the engineering controls if they fail. The applicant has submitted sufficient FA to comply with this requirement.

**No change has been made to the DEUR as a result of this comment.**