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SUPERIOR COURT OF ARIZONA

MARICOPA COUNTY

THE TOWN OF FLORENCE, a political subdivision of the State of Arizona; SWVP-GTIS MR, LLC, a Delaware limited liability company; and PULTE HOME COMPANY, LLC, a Michigan limited liability company, Appellants, vs. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY, et al., Appellees.	Case No.: LC2017-000466-001 DT **APPELLANT'S REPLY BRIEF** **Oral Argument Requested** (Assigned to the Hon. Patricia Starr)

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The remaining central question in this matter is whether ADEQ can be allowed to approve locations of Points of Compliance wells (POC wells) for Florence Copper's (FCI) permit that are unchanged from POC wells ruled arbitrary, unreasonable and unlawful by the Water Quality Appeals Board (Board) in 2014. No party sought review of the 2014 Decision.[1] The 2014 Decision became final, binding and states the law of the case. Yet, FCI and ADEQ ignore the 2014 Decision and left the POC wells so far away they cannot possibly trigger a non-compliance finding for over 10 years after pollutants are released.

Figure 1, below, illustrates the facts: the POC well locations now approved after ADEQ's cursory review are the same POC well locations found arbitrary, unreasonable and unlawful in the previous thorough appeal decided in 2014.[1] The POC well locations were and still are arbitrary, unreasonable and unlawful. Just as was found in 2014, the POC wells are located so far away that even a massive release of pollutants will not be detected by the POC wells for over 10 years – which is far longer than the lifespan of the Pilot Test Facility (PTF). Any operator of a facility such as this that pumps pollutants into the ground desires to avoid findings of non-compliance. Here, FCI seeks to avoid any POC wells registering a non-compliant result by placing the POC wells as far away as possible. This is not what the statutory requirements allow, or what the 2014 Decision requires.

[1] **Record-2**, 2014 Decision at 141, paragraph 61 (RA001923)

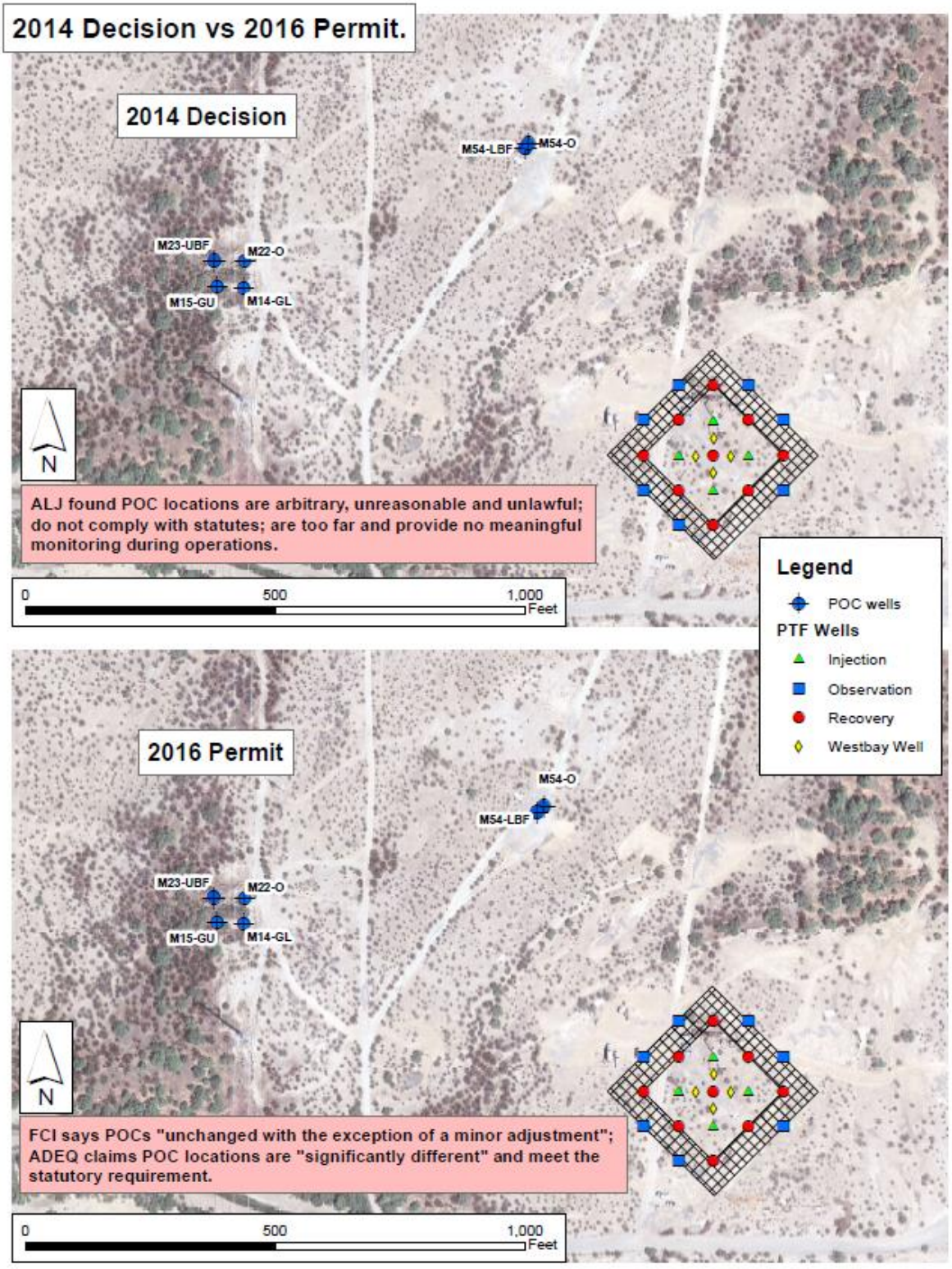
2014 Decision vs 2016 Permit.
2014 Decision
M54-LBF
M54-O
M23-UBF
M22-O
M15-GU
M14-GL
N
ALJ found POC locations are arbitrary, unreasonable and unlawful; do not comply with statutes; are too far and provide no meaningful monitoring during operations.
0
500
1,000
Feet
Legend
POC wells
PTF Wells
Injection
Observation
Recovery
Westbay Well
2016 Permit
M54-O
M54-LBF
M23-UBF
M22-O
M15-GU
M14-GL
N
FCI says POCs "unchanged with the exception of a minor adjustment"; ADEQ claims POC locations are "significantly different" and meet the statutory requirement.
0
500
1,000
Feet

Figure 1[2]

A related issue is whether the Pollution Management Area (PMA) should be established where pollution management is statutorily required to be placed, or instead can the PMA be located based on the same arbitrary and technically irrelevant basis found arbitrary, unreasonable and unlawful in 2014? The Court must also consider the permitted electrical conductivity alert level that is not triggered even by a massive release of pollutants. Such high alert levels may avoid any alerts, but do not satisfy the purpose, intent or language of the statutory requirements.

In the 2014 appeal, the Board held that the POC well locations were too far away and therefore unlawful because they did "not allow any meaningful monitoring of pollutants."[3] But three years later, the same POC well locations as before were somehow found to be lawful, even though they still do not allow for detection of pollutants at a meaningful location with respect to the lifespan of the PTF, do not comply with Arizona law, and do not protect the Town of Florence's drinking water supply. Without any change in circumstances, law, procedure, science or facts, the Board arbitrarily reversed its earlier final and binding determination.

This is not a minor technical matter relevant only to a small test facility of limited duration. The pilot project at issue here is a prologue to a massive commercial mine in the heart of the Town of Florence. The information collected from PTF operations will

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[2] This figure consolidates and summarizes information contained in **Record-2** (RA000082, RA004715, RA5383), **Record-21** (RA005814, RA006197-006205, RA006257), **Record-39** (RA006776), and **Record-40** (RA006818, RA006826), among others."

[3] **Record**-2, 2014 Decision at 136-141, COL 50-61 (RA001918).

drive ADEQ's decision regarding a permit for that commercial mine.[4] And make no mistake, this PTF permit will be cited as precedent for that commercial permit when the time comes. It is imperative to the Town's future and the health and safety of the Town's residents that ADEQ strictly follow its statutory mandate with the focus on protecting the Town's drinking water supply. ADEQ's failure to do so requires that the Board's decision affirming the permit be vacated and remanded.

1. ADEQ Is Bound by Arizona's Unambiguous APP Statutes.

The Court reviews *de novo* whether ADEQ has ignored the unambiguous requirements of Arizona law.[5] The key issues in this appeal, the POC and PMA locations, require the Court to interpret A.R.S. § 49-244 in light of ADEQ's mandate to protect groundwater resources and decide if ADEQ has properly applied the letter and intent of that statute to the facts presented.[6] As presented in Appellants' Opening Brief and in the

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[4] See FCI Response Brief, at 10-11 (describing purposes of the PTF).

[5] A.R.S. § 12-910(E); *Arizona Water Co. v. Arizona Dept. of Water Res*., 208 Ariz. 147, 151, 91 P.3d 990, 994 (2004) (an agency may not disregard clear statutory directives or legislative intent); Chevron, U.S.A., Inc. v. Natural Res. Defense Council, Inc., 467 U.S. 837, 842-43 (1984) (if legislative intent has been "unambiguously expressed," the Court need not even consider the agency's interpretation of a statute); *Joyner v. N.C. Dep't of Health and Human Servs*., 715 S.E.2d 498, 502 (N.C. Ct. App. 2011); *Cochise Cnty. v. Ariz. Health Care Cost Containment Sys*., 170 Ariz. 443, 445, 825 P.2d 968, 970 (App. 1991) (The reviewing court must reject an agency's statutory construction that is inconsistent with statutory mandates or would frustrate the intent of the legislature); *FEC v. Democratic Senatorial Campaign Comm*., 454 U.S. 27, 32 (1981); *Arizona Dep't of Revenue v. Great W. Publ'g., Inc*., 197 Ariz. 72, 74, ¶ 7, 3 P.3d 992, 994 (Ct. App. 1999) ("we defer and give great weight to an agency's interpretation of a statute it is charged with implementing or enforcing unless we conclude that the legislature intended a different interpretation.") (emphasis added).

[6] Both ADEQ and FCI discuss the impact of recent changes to A.R.S. § 12-910(E) on this Court's review, attempting to justify the Court's deference to ADEQ's own interpretations of law. Regardless of those changes, "judicial deference to an agency's interpretation of a statute only sets the framework for judicial analysis; it does not

discussion below, a reasonable interpretation and application of this statute and the APP program leads to only one conclusion—the PMA and POCs remain unlawful and unjustified.[7]

The Court can easily find for Appellants based solely on the unambiguous requirements of Arizona law. The Court also can and should hold ADEQ to the Board's 2014 decision. That decision, which remanded the original permit back to ADEQ, is the basis for the revised permit at issue here. It is difficult to see how the 2014 decision is moot or irrelevant when the whole purpose of the 2016 Significant Amendment was to correct the technical and legal errors found by the Board in 2014[8] and ADEQ has willfully avoided making such corrections regarding the POCs and PMA.[9]

Indeed, none of the relevant facts regarding the legality of FCI's POC wells have changed one bit since 2014:

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displace it." *Securities Indus. Ass'n v. Bd. of Governors*, 468 U.S. 137, 142-43 (1984) (internal quotations omitted). The amount of deference owed an agency varies with the circumstances of the case, depending on the degree of the agency's care and thoroughness in consideration of the issues; the agency's consistency, formality and relative expertise; the validity of the agency's reasoning; and the persuasiveness of the agency's position. *United States v. Mead Corp.*, 533 U.S. 218, 228 (2001); *Skidmore v. Swift Co.*, 323 U.S. 134, 140 (1944). "The presumption of agency expertise may be rebutted if its decisions, even though based on scientific expertise, are not reasoned." *Brower v. Daley*, 93 F. Supp. 2d 1071, 1082-83 (N.D. Cal. 2000). No argument can be made to justify blatantly illegal permit conditions.

[7] ADEQ attempts to mischaracterize Appellants' arguments as mere factual or procedural disputes. ADEQ Response Brief, at 10-11. The Court should reject the State's argument for what it is—an attempt to avoid *de novo* inquiry into ADEQ's actions.

[8] As ADEQ admits, it instructed FCI to submit an application addressing the issues remanded by the Board in 2014. ADEQ Response Brief, at 5. In this situation, Respondents' argument that this is an entirely new and different permit does not pass muster.

[9] See Figure 1.

- Arizona law regarding the location of POC wells has not changed.
- The configuration and operation of the PTF well field is exactly the same as before. Injection and recovery pumping is exactly the same, with exactly the same impacts to groundwater flow in the PTF well field and downgradient.
- FCI still maintains that it can and will, through hydraulic control, contain mining contaminants within the PTF well field and that in a worst case scenario, any escapes will remain within a short distance of the Observation Well ring.
- The PTF wells will still operate for just 14 months.
- If FCI operates in accordance with its permit, there is no authorized operational scenario under which contaminants escape the PTF. Contaminant escapes would occur only if project operations fail.
- There are no POC wells within 14-months travel time of the PTF well field. The POC wells in the original permit have not been moved. It will still take contaminated groundwater ten years or more to flow from the PTF well field to those POC wells.

Although Respondents cite numerous "substantial" changes to the permit since 2014, none of those changes have anything to do with the POC well locations.[10] They do, however, demonstrate the importance and value of Appellants' initial appeal, which has led to the improvements to project monitoring. While the permit upgrades are welcome, and required under the 2014 Decision, they do not moot the requirement of

[10] Except for one Alert Level requirement, Appellants have not challenged the additional monitoring that FCI goes into great length describing. We have argued all along for that monitoring, and those changes are commendable. Of course, although Respondents seek credit for the monitoring requirements now, touting this as the one of the most extensive *monitoring* packages in ADEQ history, few if any of the additional monitoring requirements would not have been added had Appellants not been fighting for them for the last eight years. What is still missing are POC wells at a location that is less than 10-years away. Under Arizona law, *compliance* wells have special, statutory meaning, while *monitoring* wells do not. Pollution detected at a *compliance* well has statutory ramifications. If FCI had designated its *monitoring* wells as *compliance* wells, FCI's POC wells could be in compliance with the final 2014 Decision.

the 2014 Decision that the PMA and POCs conform to Arizona law. Similarly, arguments about other federal permits or 20-year old state permits for another long-defunct operation are irrelevant to whether the POC wells determined in 2014 to be illegal have now suddenly become legal under Arizona law.

The law of the case doctrine is applicable where the *essential facts or issues* have not changed and there has been no *substantial change of evidence.*[11] The factual record with regard to the PMA and POCs is the same as it was in 2014, except that Respondents have attempted to justify another illegal and unreasonable PMA line based on the same reasoning that failed in 2014. As to POC wells, their location was squarely at issue in 2014 and the Board held in a final, unappealed decision that the POC well locations were unlawful. The same locations are just as unlawful today.

Respondents want to read the Board's 2014 decision as if it required only that the PMA and POC locations be justified in FCI's permit application by a cone of depression discussion missing from FCI's 2012 application but presented and thoroughly discussed at the 2014 hearing. That is not what the decision said. Regardless of the scope of any cone of depression created by FCI's pumping, the Board held that Arizona law requires POC wells to provide "meaningful monitoring of pollutants."[12] And even if the Board's 2014 decision is not binding (and Appellants believe it is), it was based upon a thorough and reasoned interpretation of the law and application of that law to the facts regarding

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[11] *Dancing Sunshines Lounge v. Industrial Commission of Arizona*, 149 Ariz. 480, 483, 720 P.2d 81, 84 (1986); *Leo Eisenberg & Co., Inc. v. Payson*, 162 Ariz, 529, 533-34, 785 P.2d 49, 53-54 (1989).

[12] **Record-2**, 2014 Decision at 136-141, COL 50-61 (RA001918).

the PMA and these POC well locations. In 2014, the Board properly held that these POC well locations did not provide meaningful monitoring. Nothing has changed since that time that suddenly makes monitoring at these locations meaningful when it wasn't meaningful four years ago.

2. ADEQ and the Board Have Already Defined the A.R.S. § 49-244 "Barrier" in the Requirement to Maintain Hydraulic Control so that Contaminants Remain *Inside the PTF Well Block*.

Respondents' attempted justifications for the PMA ignore one essential reality. FCI's project must control pollutants so that they remain *within the PTF well field*.

Since the permit was first issued in 2012, the hydraulic control requirements in the permit have always focused on keeping contaminants inside the PTF well field.[13] The permit requires FCI's pollutants to be contained by means of hydraulic control that "shall be maintained at all times *within the pilot test facility well block*, by pumping recovery wells at a rate greater than the injection rate in order to maintain a cone of depression."[14] Hydraulic control also must be demonstrated by maintaining a differential between the water levels in the observation wells and recovery wells to demonstrate an inward

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[13] Indeed, the Board previously held that "FCI's UIC permit application envisioned a worst-case scenario involving loss of hydraulic control for 48 hours due to inoperable recovery wells, resulting in injected fluids not being recovered in any amount. Under the worst-case scenario, injected fluids were not expected to migrate more than 67 feet horizontally from the injection wells.") (emphasis added). **Record-2**, 2014 ALJ Decision, at 84, FOF 295 (RA001866).

[14] **Record-1**, Temporary APP, § 2.2.1.1, at 3 (RA000003); see also id., § 2.7.4.4, at 27 (FCI must provide reports demonstrating "whether the hydraulic control was maintained at the PTF") (RA000027) (emphasis added); id., § 2.3.1, "In-Situ Area Injection and Recovery Well Block" (Hydraulic control over the injected solutions shall be maintained during the operating life of the facility. In-situ solutions shall be injected and contained within the oxide unit.); Table 4.1-1 re "In-Situ Area Injection and Recovery Well Block" ("Hydraulic control shall be maintained at all times, within the PTF well block . . .").

gradient flow, a condition which, if fully achieved, renders irrelevant the prospect of contaminant escape.[15] And the cleanup and closure provisions of the permit target the PTF well field, not the surrounding areas encompassed by the revised PMA.[16]

Thus, the permit clearly dictates where the PMA should be located according to the two elements required by A.R.S. § 49-244: (1) the horizontal area permitted to be polluted under the permit, i.e., the PTF well field, within which the pollutant (the injected acid solution) must be contained by hydraulic control; and (2) the horizontal space occupied by the barrier designed to contain the pollutants, i.e., the band between the recovery wells and the observation wells, between which there must be maintained a differential in water levels to demonstrate maintenance of an inward gradient of flow. This band represents the virtual and functional barrier—the underground berm or dike—around the PTF well block, and as required it is purposely and properly designed so that the pollutants injected into the PTF well block do not leave it.[17]

Without changing the locations of the injection wells or Point of Compliance wells, Respondent's argument is that the barrier, berm or dike allowed by A.R.S. § 49-244 is *six times larger than the* area where contaminants will be placed.[18] This same cone

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[15] **Record-1**, Temporary APP, § 2.2.4, at 4 (RA000004); see also id., § 2.2.4, at 5 (Observation Wells can be converted to Recovery Wells to maintain hydraulic control within the PTF well field) (RA000005).

[16] **Record-1**, Temporary APP, § 2.9.1, at 30-31 (requiring contingency mine block rinsing and sampling); 2.9.2, at 30-31 (describing a mine block rinsing program); id. (requiring groundwater sampling in the mine block); id. (requiring post-closure sampling in the mine block) (RA000030-31).

[17] See Figure 1, supra.

[18] FCI's 500-foot radius contains approximately four times the area of the PTF well field. The PTF well filed is only about 5 acres.

of depression argument was determined in the 2014 Decision not comply with applicable law:

> Appellants established that the existing POC wells are too far from "the limit projected in the horizontal plane of the area on which [lixiviant] will be placed," or PMA, to comply with A.R.S. § 49-244(2)(b)(iii).
>
> * * *
>
> For all of the foregoing reasons, Appellants established that under A.R.S. § 49-203, 49-243 and 49-244, the PMA and the location of the POC wells described in the application and permitted by the Temporary APP were arbitrary, unreasonable, and unlawful.[19]

Respondents' PMA makes no sense logically, legally, or technically, given FCI's assurances that pollutants will never get past the Observation Wells inside the PTF well field. And their argument distorts the unambiguous language of Section 49-244 beyond any reasonable interpretation. Because the Temporary APP requires that FCI maintain hydraulic control to keep contaminants within the PTF well block, then the well block itself—not FCI's arbitrary 500-foot line—should define the PMA.[20]

The PMA is unlawful, despite all the arguments presented by Respondents.[21] FCI has repeatedly insisted its pollutants will never escape the immediate area of the PTF

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[19] 2014 Decision at 140-141, COL 61 (RA00001923).

[20] Despite all of the justifications presented by Respondents for the 500-foot radius as a PMA, it truly was selected arbitrarily by FCI's experts, as they testified to before the Board. *See* Appellants' Opening Brief at 33 ("One of FCI's experts testified at the Board hearing that, although the cone of depression from the pilot test well field 'will go out so many thousands of feet,' FCI had to locate the PMA somewhere inside FCI's property boundary, so 'we had to then say, All right. Well, we've got to pick a distance.'").

[21] Among other things, Respondents criticize Appellants' hydrogeological expert as lacking experience with Arizona's APP program. The difficulty with that argument is that Dr. Wilson was Appellants' key witness in the 2014 appeal, and his testimony was directly responsible for remand of the original permit back to ADEQ. The ALJ found Dr. Wilson to be "competent and well-qualified" in agreeing with him instead of

well field. Yet Respondents want to justify their unlawful POC locations by defining the "area on which pollutants are or will be placed" A.R.S. § 49-244(1), to include an area hundreds of feet from, and many years of groundwater travel beyond, that area. The proposed POC wells cannot meaningfully monitor the immediate area of the PTF well field when they are located hundreds of feet away from the place where sulfuric acid will be injected into the groundwater, such that contamination could not be detected for years.

3. The Permit's PMA Illegally Allows Pollutants into the LBFU.

FCI is required to maintain its acid solutions within the Oxide Unit.[22] By drawing its PMA so large, FCI's PMA extends well beyond the Oxide Unit into the drinking water aquifer located in the Lower Basin Fill Unit (LBFU). If the arbitrary portion of the cone of depression selected by FCI is the "barrier" that satisfies A.R.S. § 49-244, then the barrier is hundreds of feet past the point where FCI is legally allowed to inject pollutants, as the barrier extends into and will allow pollutants into the LBFU where the drinking water aquifer exists.[23]

Respondents' experts on numerous key issues. **Record-2**, 2014 ALJ Decision, at 4, n.6 (RA001786).

[22] **Record-1**, Temporary APP, § 2.2.4, at 4 ("The injection of the solutions shall be limited to the Oxide ore body only.") (RA000004).

[23] ADEQ's characterizes Appellants' position as "extreme" and claims it is unsubstantiated by the record. ADEQ Response, at 16. As illustrated by Figures 4 and 7 of Appellants' Opening Brief, which reflect numerous submittals by FCI, the PMA extends into the LBFU directly downgradient of FCI's acid injection wells. For its part, FCI does not contradict this issue at all in its response.

The unique geology in the immediate area of the PTF well field involves a steep drop off of the Oxide Unit just a few hundred feet west of the PTF well field. The drop to the north is even steeper, and begins within the PTF. Because regional groundwater flows are to the northwest and west, groundwater flowing through the Oxide Unit would enter the LBFU within or very near the PTF well field at this steep interface with the Oxide Unit. The PMA approved by ADEQ, then, allows "pollutants" to be "managed" in an area that includes the LBFU, even though numerous other terms of the permit prohibit *any* contaminants in the LBFU.

FCI argues that the prohibitions on polluting the LBFU are best Available Demonstrated Control Technology (BADCT) requirements that POC wells are not intended to monitor. This is nothing more than an attempt to unreasonably limit the POC requirement under Arizona law and substitute other, discretionary monitoring for the monitoring enforcement points required by the APP statutes. POC wells are intended to monitor for violations of Arizona Water Quality Standards, allow for enforcement of those standards, and protect drinking water supplies. They work hand-in-glove with the BADCT requirements, but BADCT monitoring cannot substitute for statutorily-required POC wells.[24]

The POC wells are Located so Far From the PTF Well Field that They Will Never Detect Pollutant Escapes During the Life of the PTF.

[24] See, e.g., A.R.S. § 49-243(B)(1), requiring BADCT "to ensure the greatest degree of discharge reduction achievable" and § 243(B)(2), which requires that "pollutants discharged will in no event cause or contribute to a violation of aquifer water quality standards at the applicable point of compliance for the facility."

It is undisputed that the POC wells will not detect releases from the PTF well field for years after PTF operations cease. Common sense dictates that they are improperly placed, regardless of the untenable legal and technical justifications offered by Respondents. To argue otherwise is to ignore the overarching purpose of the entire APP program—protection of the aquifer, which is the sole source of supply for Florence. In terms of protecting drinking water supplies, the POC wells might as well be in Flagstaff. This explains why FCI elected not to argue with or appeal from the Administrative Law Judge's finding that the POC wells are "too far from "the limit projected in the horizontal plane of the area on which [lixiviant] will be placed," or PMA, to comply with A.R.S. § 49-244(2)(b)(iii)." [25]

Federal law contains requirements for groundwater monitoring that are nearly identical to those in the APP program, and the federal courts' interpretation of those requirements illustrates the unreasonableness of ADEQ's approach to POC locations in this permit.[26] The language of A.R.S. § 49-244 was copied nearly verbatim from the

[25] **Record-2**, 2014 ALJ Decision, at 140, COL 59 (RA001922).

[26] *State v. Green*, 200 Ariz. 496, 498, 29 P.3d 271, 273 (2001) ("interpreting an evidentiary rule that predominantly echoes its federal counterpart, we often look to the latter for guidance"); City of Phoenix v. ADEQ, 205 Ariz. 576, 581-82, 74 P.3d 250, 255-56 (App. 2003) (comparing state and federal permit procedures under RCRA); Najar v. State, 198 Ariz. 345, 347, 9 P.3d 1084, 1086 (App. 2000) (looking to federal law to help interpret Arizona Civil Rights Act); Canady v. Prescott Canyon Estates Homeowners Ass'n, 204 Ariz. 91, 93, 60 P.3d 231, 233 (App. 2002) ("Because the provisions of Arizona's Fair Housing Act involved in this appeal are virtually identical to those provisions of the federal Act, federal case authority is persuasive in interpreting Arizona's statute.").

federal regulations governing hazardous and solid waste facilities.[27] The federal regulation governing POCs for solid waste facilities refers to a "waste management area" instead of a PMA, but otherwise it is nearly identical to the language of A.R.S. § 49-244.[28]

In *United States v. Envtl. Waste Control, Inc.*,[29] a landfill operator attempted to defend its four monitoring well locations, which ranged from 60 to 285 feet away from the waste management area (WMA)—Arizona's PMA. The operator argued that the WMA should not be premised on where waste already had been placed at the landfill, but on the total area in which waste would be managed over the life of the landfill—a much larger area.[30] The court easily rejected the operator's position. It cited EPA guidance that logically recommended the WMA be evaluated "against the policy of designing monitoring programs so as to give an early warning of the release of contaminants" and discouraging a WMA "whose limit is geographically remote from the active waste management handling zone."[31] The court found that the proposed WMA would result in inadequate monitoring and a meaningless POC system:

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[27] Compare A.R.S. § 49-244 to 40 C.F.R. § 265.91 (groundwater monitoring for interim-status landfills) and 40 C.F.R. § 264.95 (points of compliance for permitted landfills). The federal regulations were promulgated several years before the APP statutes.

[28] 40 C.F.R. 264.95.

[29] 710 F. Supp. 1172, 1213 (N.D. Ind. 1989). The landfill operator was subject to the interim standards in 40 C.F.R. Part 265, which define the "waste management area" slightly differently than the language in Part 264 quoted above. Both the court and EPA agreed that a monitoring well network designed to meet Part 265 standards would be substantially the same as one designed under Part 264. Id. at 1219.

[30] Id. at 1218.

[31] Id. at 1219 (emphasis added). The subject regulation, 40 C.F.R. § 265.91, requires downgradient monitoring wells to be placed so that they "immediately detect" hazardous

> If a facility the size of the Four County Landfill began its waste deposits in its most remote upgradient portion, the downgradient monitoring wells located at what the facility announced to be the limit of the waste management area could be 1,500 feet from the deposited waste. If the groundwater beneath the facility travelled at a rate of one to two feet per year . . . hazardous waste constituents migrating from the original waste deposits would not reach the monitoring wells for several centuries. Such a delay in detection would not be harmonious with the regulatory requirement and intent that the wells be placed "at the edge of the waste management area to provide early detection."[32]

This is exactly the position taken by Appellants under substantially similar conditions presented by this permit. FCI proposed, and ADEQ tacitly adopted without scrutiny, a PMA that includes large swaths of land outside of the PTF well field where no contaminants will be placed. As a result, its POC wells are hundreds of feet—and many years of groundwater travel time—away from the PTF wells. Nothing about FCI's proposal allows for early detection of contaminants, a key benchmark under *Envtl. Waste Control* and clearly a major goal of the APP statutes.[33]

Respondents assert that the POC well locations are a minor detail because other monitoring in the permit will detect excursions. Arizona law does not say POC locations

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waste migration. Although the APP statute does not include this requirement, the clear intent of the APP statute is to ensure early detection.

[32] *See* also In the Matter of Landfill, Inc., 3 E.A.D. 461, 468-69 (Nov. 30, 1990) (where groundwater would take "at least 100 years to reach the nearest downgradient groundwater monitoring well" from a landfill, the monitoring wells did not comply with requirement that wells be placed "at the limit of the waste management area" to "immediately" detect migration of hazardous waste).

[33] **Record-2**, ALJ Decision, COL ¶ 57, at 139-140 ("Construing the word "circumscribing" in A.R.S. § 49-244(1) to expand the size of the PMA to nearly 100 times the size of "[t]he area on which pollutants are or will be placed" defeats A.R.S. § 49-243(B)(1)'s requirement that FCI ensure "the greatest discharge reduction achievable" in operating the PTF.") (RA001921-1922).

become irrelevant if there is other monitoring required by the permit.[34] Rather, Arizona law sets out a process for locating the POC wells that provides enforceable compliance locations to ensure protection of groundwater resources, a process that ADEQ has not followed.[35] Nowhere in their response is there any discussion that provides any explanation or justification as to why illegal POCs are now acceptable, much less that the 2014 issues have been fully addressed.

As previously discussed, the permit is clear that FCI must control its contaminants within the PTF well block and cannot allow contaminants into the Town's drinking water supply—the LBFU. An escape that travels a few hundred feet beyond the well block will flow into the LBFU. Logically, therefore, one would want to monitor for escapes just outside the PTF well field where contaminants would be detected while the PTF well field is operating and corrections can be made. No protection of groundwater is provided by compliance provisions that are 10 years or more of groundwater travel time away from a well field that will be closed within 2 years.

4. The Existing POC Wells Cannot be Justified by Cost Savings.

Attempts to justify the four existing POC wells are really arguments for favoring corporate profits over drinking water. These arguments were rejected in 2014 and

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[34] ADEQ Response Brief, at 18.

[35] A.A.C. § R18-9-A213 ("The Director may . . . suspend or revoke an individual permit . . . [if] a permitted activity is causing or will cause a violation of an Aquifer Water Quality standard at a point of compliance. . .") (emphasis added). Even ADEQ's own regulations recognize that POC wells serve an important and separate purpose from the other monitoring locations upon which ADEQ relies. A change in a POC location is one of nine permit amendments that require public notice and hearing; no public comment or hearing is required for any other changes. A.A.C. §§ R18-9-A211(B) and (E).

Respondents have added nothing new. Respondents rely on the alternative POC location allowed under A.R.S. § 49-244 if costs are "substantially" less and the locations are still protective of groundwater. FCI's 23-line cost analysis indicates that drilling four new POC wells would cost approximately $377,667.[36] That savings is hardly "substantial" in light of the facts that it represents less than one-half of one percent of the PTF's $75 million construction and operation cost,[37] and a minute fraction of the purported $2 billion that the State purportedly will receive from FCI's commercial project.[38]

Moreover, as more fully discussed below, FCI is incurring the cost of installing monitoring wells within a couple well-spacings of the injection wells. If FCI redesignates the monitoring wells as Point of Compliance wells, FCI would avoid additional cost – but of course would be subject to a determination of non-compliance if the Point of Compliance wells provided evidence of contamination.

The issue is not just whether use of existing wells is less costly than constructing new wells. That will always be the case, so interpreting the exception as applying whenever there were additional costs associated with a monitoring site would render the statutory requirement meaningless. Rather, the inquiry must be whether it will be "substantially" more costly so as to outweigh any benefit to the environment and public from drilling new wells. The statute, read in its entirety as part of the overall APP program, requires ADEQ to balance a permittee's purported cost savings against the

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[36] **Record-87**, Board Hearing Exhibit 6, Attachment B, FCI Application, at 3-5 (RA007717).

[37] **Record-2**, April 14, 121:7-8 (Johnson testimony)(RA003492).

[38] **Record-2**, ALJ Decision, FOF 48, at 12 (RA001794).

relative benefit or detriment to aquifer protection and the permittee's ability to "ensure the greatest degree of discharge reduction achievable."[39] If that were not the case, the statute would have read, "permittees can use existing wells to satisfy this statute."

ADEQ misses the mark because its position is that using existing wells will always be cheaper. But the issue of the relative expense of the wells only comes into play if the different locations provide monitoring that is functionally equivalent and adequate to protect the groundwater. The wells have to be *significantly* cheaper *and* be in locations where monitoring will protect groundwater resources. Neither condition is met here.[40] The legislature did not give ADEQ discretion to require impractical, gold-plated compliance systems if the cost outweighed the relative benefits. But at the same time, ADEQ's default position should not be that use of existing wells is always allowed because it is always cheaper than drilling new wells regardless of whether those existing wells provide adequate monitoring. ADEQ has an affirmative obligation to conduct the cost-benefit analysis in terms of groundwater protection. Under its reading of the statute, ADEQ is abdicating its obligations to the public and the environment because these POC wells provide no meaningful monitoring for contaminant escapes during the life of the PTF well field.

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[39] A.R.S. § 49-243(B)(1).

[40] **Record-2**, ALJ Decision, COL 59, at 140 ("The substantially less costly POC wells cannot define the PMA under A.R.S. § 49-244(1) and cannot be used as POC wells for the PTF unless they meet the requirements of A.R.S. § 49-244(2)(b). Appellants established that the existing POC wells are too far from "the limit projected in the horizontal plane of the area on which [lixiviant] will be placed," or PMA, to comply with A.R.S. § 49- 244(2)(b)(iii).") (RA001922).

EPA has required FCI to drill a ring of monitoring wells just outside of the PTF well field under FCI's federal permit, which are the "Supplemental Monitoring Wells" in the APP permit.[41] As Appellants have argued for years, those wells represent ideal POC locations because they better meet the spirit and intent of the statutory PMA and POC requirements.[42] If these wells were used for POC wells, there would be no additional cost to FCI. In fact, use of these wells eliminates any need to demonstrate that alternative POC well locations are justified because these locations are consistent with a legal and reasonable PMA, in compliance with the statute. FCI's use of the four existing POC wells, however, does not comply with Arizona law regardless of any cost savings.[43] And FCI's unwillingness to agree to use the mandated federal monitoring wells as POC wells is telling in itself–FCI lacks confidence in its ability to maintain hydraulic control.

5. The Fluid Electrical Conductivity Alert Level is Unreasonable.

Although the Board reviewed the electrical conductivity issue, the Board's cursory questioning did not adequately develop the facts. There was no cross-examination of Respondents' hearing testimony. And the Board apparently ignored written and oral testimony from Appellants' expert that it is impossible for the alert level in question to be exceeded.[44] The Board may have accepted Respondents' arguments

[41] *See* **Record-1**, Table 4.1-6B (RA000042).

[42] *See*, e.g., **Record-2**, SWVP Comments on the Draft Permit, at 16-17 (RA000088-89).

[43] **Record-2**, 2014 Decision, COL 59, at 140 (RA001922).

[44] **Record-82**, Wilson Affidavit, ¶27, at 7-8 (RA007540-41); **Record-83**, Wilson Affidavit, ¶15, at 6 (RA007572).

supporting this Alert Level, but that does not mean the Board conducted an adequate review or that its decision was correct.

Appellants and their expert understand how electrical conductivity works. What they don't understand is Respondents' reasoning regarding this Alert Level, or their misrepresentation of Appellants' position.[45] Before mining and under background groundwater conditions, the Observation Wells will contain water whose electrical conductivity reflects natural groundwater conditions. That level will fluctuate somewhat with variations in groundwater flow and particles in that groundwater. If FCI's hydraulic control process works, contaminants should never reach the Observation Wells. Therefore, if conductivity in the Observation Wells rises significantly above background levels, it is an indicator that hydraulic control has failed. That indicator will become evident at conductivity levels somewhere between background levels and levels in FCI's injection wells. There is no need to wait to take action until conductivity levels exceed those in the injection wells, as the permit now requires (and assuming that is even possible).[46]

Appellants' approach to this Alert Level is the same that ADEQ has taken with respect to Alert Levels for individual contaminants. FCI has to provide an average

[45] Appellants do not argue that exceeding the electrical conductivity limit should result in a permit violation, as FCI asserts. An exceedance would be treated like any other alert level exceedance.

[46] Appellants also understand the difference between a geochemical model and a groundwater flow model. Those differences do not change the fact that FCI's predicted contaminant levels for the "PLS" pumped from Recovery Wells would not generate conductivity levels exceeding those in the Injection Wells. And FCI has not explained how, if that is the case, that conductivity levels in the outer Observation Wells would somehow exceed levels in the Injection Wells.

background concentration for a contaminant using monitoring data and statistical analysis, and the Alert Level is set at a technically defensible level above background that allows for natural fluctuation and insignificant contaminant increases but is still protective of drinking water supplies.[47] The Alert Level for conductivity in this permit, however, creates an Alert Level that can never be exceeded. More critically, it is not triggered even if the contamination reaches 99.9% of full strength, rendering it meaningless and useless in the protection of groundwater resources.

FCI misrepresents Appellants' position before the Board, arguing that we previously asserted that "any" exceedance of electrical conductivity should be treated as a permit violation. This is simply not the case and Appellants are not introducing a new legal argument. Appellants have always argued that the permit Alert Level is unreasonable because it can never be exceeded and have argued for an alert level based upon a technically defensible, statistically-significant increase in conductivity.[48]

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[47] *See*, e.g., **Record-1**, Significant Amendment, § 2.5.3.2, at 7-8 (RA000007-8).

[48] *See* **Record-2**, SWVP Comments on the Draft Permit, at 28-29 (RA000099-100) (referencing "any" increase above background levels, i.e. statistically determined average background groundwater levels, as is commonly done in every permit for every alert level); Record-82, Wilson Affidavit, ¶27, at 8 ("The correct provision would be an alert level triggered when electrical conductivity values at the observation wells exceed an established background conductivity value.") (emphasis added) (RA007541); Record-83, Wilson Affidavit, ¶ 15, at 6 ("ADEQ should correct the language to require setting of an appropriate alert level to be used in the event of a significant acid escape.") (RA007572).

6. Appellants Were Given No Chance to Address Procedural Notice to the Board.

As explained in more detail in their Opening Brief, the Board denied Appellants any opportunity to present evidence on their procedural notice claims.[49] Yet the Board somehow found that Appellants did not establish their case on these claims.[50]

ADEQ criticizes Appellants for only providing "an outline" of our argument on this issue in our *Initial Brief re Issues on Appeal* to the Board.[51] This document was intended to help focus the scope of the substantive issues before the Board. The Board limited the scope of the brief to four categories of substantive issues, thereby excluding any discussion of Appellants' procedural arguments on the merits.[52] Appellants were never thereafter allowed to present evidence on these issues. So although Appellants properly raised these issues in their notice of appeal, the Board allowed Appellants no opportunity to present the issues yet still somehow found that ADEQ met its procedural obligations.

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[49] Appellants' Opening Brief, at 49-50.

[50] **Record-69**, 2017 Board Order at 12, §E (May 17, 2017) (RA007473).

[51] **Record-20**.

[52] **Record-18**, Water Quality Appeals Board Meeting Minutes, at 3 (Oct. 13, 2016) (RA005763) ("They can discuss the 13 issues in 4 categories and need to specify how the significant amendment impacted. Number one how it met the remand of the Board and number two, if in doing so those revisions impacted any other portions of the permit that were not under remand."). ADEQ itself described that brief as "identifying the issues each party believed were remanded by the Board's previous order." **Record-22**, Arizona Department of Environmental Quality's Memorandum of Issues Appealed, at 2 (June 11, 2016) (RA006267) (emphasis added). FCI did not mention the procedural issues in its corresponding brief to the Board, focusing solely on technical, substantive issues. **Record-21**, FCI Brief Outlining the Changes that the Arizona Department of Environmental Quality Made in the Significant Amendment (Nov. 14, 2016).

7. ADEQ's Attempt to Justify its Litigation Hold Demand Ignores the Context in Which the Demand was Issued.

ADEQ's attempt to justify its litigation hold letter as "common practice" ignores the unique context of this appeal. Appellants are interested parties who have participated in the public review of this permit. To the extent Appellants have relevant information on the contested permit, they are required to provide the information during the public comment period, otherwise the information can be disregarded. In this context, ADEQ's litigation hold letters were nonsensical and unnecessary. And if the letters are "common practice," then ADEQ has failed to explain why it did not send one to FCI. ADEQ's summary of the purpose of litigation hold letters does not address the real issue—that the issuance of the litigation hold letters only makes sense if ADEQ saw Appellants as adversaries *before public comments had even been submitted* because ADEQ knew at that early stage that it was going to issue the permit regardless of Appellants' concerns.

8. Conclusion

Nothing in this permit has changed from 2014 with regard to key terms that are crucial to permit enforcement and protection of the Town's drinking water supply. The PMA is still illegal because it is based on an arbitrary "portion" of a cone of depression having no relationship to the area on which pollutants will be placed. The POC wells are unchanged from those proven to be illegal and are located too far away to provide timely compliance monitoring of FCI's contaminants for violations of Arizona groundwater standards. Appellants ask that the Court vacate and remand the Board's decision regarding the PMA and POC locations, with direction that FCI submit a new significant amendment application:

- proposing a PMA that complies with Arizona law, is based upon the area on which pollutants will be placed, and is protective of groundwater supplies;
- proposing POC locations capable of providing monitoring for contaminant escapes during the 14 months of injection and recovery operations at the PTF well field; and
- proposing a technically defensible alert level for electrical conductivity that is based upon background conditions and does not require contaminant levels at monitoring wells to illogically approach or exceed contaminant levels in injection wells before triggering an alert level.

The Court also should remand with direction that ADEQ follow proper procedures with regard to the public notice and comment process. Finally, the Court should award Appellants their attorneys' fees and costs.

DATED this 19th day of September, 2018.

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