also assert that the six gas wells may be insufficiently plugged or have suspect casings that could provide conduits for fluid migration into USDWs. See, e.g., Appeal No. 14-94, at 2 (Vivian Marshall). The Region counters that the one-quarter mile area of review is protective and that "it did not find a technical reason to extend the area of review further at this time." Region's Response at 22.

As noted above in Part IV.A.1, the UIC regulations require that an area of review be established so that the applicant can identify all wells that might allow injected fluid to reach USDWs and take corrective action with respect to any of these wells that is improperly sealed, completed, or abandoned. *See* 40 C.F.R. § 144.55(a). Windfall stated in its application that there are no wells located within the area of review - active, inactive, plugged, or abandoned - that penetrate the injection zone of the proposed well. *See* Windfall Application Attach. C (noting that the lone operating gas well within the area of review, well number 20597, does not penetrate the injection zone and instead has a depth of approximately 3,500 feet); *see also* RTC at 16; Statement of Basis at 2.

Petitioners also raise general concerns that the wells proximate to the area of review may have suspect casings or that they were insufficiently plugged and thus might compromise the USDWs in the area. *See, e.g.*, Appeal No. 14-87, at 2, 5-7, 9 (Barb Emmer). The administrative record contains supporting documentation for all six gas wells located just outside the area of review, including certificates of plugging from the Pennsylvania Department of Environmental Protection (then the Department of Environmental Resources) for wells 20626, 20341, and 20325.¹⁴ Windfall Appl. Attach. D, App. A at 1, 10, 17.

¹⁴ Two of the gas wells located just outside the area of review indicate that neither well reaches the receiving formation for the proposed well, which has an anticipated total depth of 7,500 feet. *See* Windfall Appl. Attach. B (listing anticipated depth of Windfall well); Windfall Appl. Attach. D, App. A at 10-12 (containing plugging certificate for well number 20626 and recorded depth of 3,550 feet), 20-21 (stating total depth for operational well number 20553 as 3,425 feet); *see also* Region's Response at 23. Of the remaining four wells located outside the area of review, two are operational (continued...)

Further, the UIC regulations do not mandate the plugging of an operational well within, or just outside, the area of review absent evidence that the well threatens to serve as a conduit for the migration of fluid from an injection zone to a USDW. See 40 C.F.R. § 144.55(a). The three operating wells located just outside the area of review would not require corrective action even if they were located within the area of review, as they are not potential conduits for fluid migration to USDWs. See RTC at 15, 16; Region's Response at 22-23.

The Region clarified that the plugging certificates served as confirmation that each of the three identified wells (numbers 20626, 20341, and 20325) was plugged properly and in accordance with Pennsylvania state requirements in effect at the time.¹⁵ RTC at 16. Petitioners do not explain why the Region's response to their comments is clearly erroneous, nor do they demonstrate that the Region's decision not to extend the area of review to include the six gas wells just beyond the perimeter is unsupported in the administrative record. Petitioners also do not challenge the Region's reliance on state plugging requirements, nor do they present documentation or other evidence to demonstrate that the plugging methods are insufficient. *See, e.g., In re City of Pittsfield*, NPDES Appeal No. 08-19, at 6 (EAB Mar. 4, 2009)

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^{14(...}continued)

and reach the receiving formation. Windfall Appl. Attach. D, App. A at 6 (records for well number 20333), 22 (records for well number 20327); see also Region's Response at 23. Finally, two plugged wells located just outside the area of review reach the injection zone. Windfall Appl. Attach. D, App. A at 1, 3 (containing plugging certificate for well number 20341 and recorded depth of 7,370 feet), 17 (containing plugging certificate for well number 20325 and recorded depth of 7,637 feet); see also Region's Response at 23.

¹³ Petitioners assert that fumes arising from one of the wells is evidence that it has been improperly plugged and thus may be a conduit for fluid to reach USDWs. *See*, e.g., UIC Appeal No. 14-108, at 4 (Loretta Slattery). The Region explained in the Response to Comments that plugged wells may include a venting system to relieve gas pressure build-up downhole, particularly for wells drilled through coal seams that can produce methane. RTC at 16; Region's Response at 23-24. Petitioners do not address the Region's response to their comments in their petitions, nor do they provide information to support their claim that the fumes from the venting system indicate improper or insufficient casing or plugging.

(Order Denying Review) ("Simply stating generalized objections to the permit or making vague and unsubstantiated arguments falls short.") (citing cases), review denied, 614 F.3d 7 (1st Cir. 2010). Similarly, Petitioners do not present any evidence to indicate the three wells still operating just outside the area of review (numbers 20553, 20333, and 20327) either reach the receiving formation (number 20553) or, for the two that do, that they are compromised or could otherwise lead to migration of injection fluids from the injection zone. Finally, the Petitioners do not address the Permit requirement that Windfall conduct a pressure fall-off test prior to commencing injection operations and annually thereafter, which the Region included in the Permit "[f]or ongoing confirmation of the adequacy of the area of review." RTC at 16. The Board finds the Region's decision to exclude the six wells located just outside the area of review rational in light of all of the information in the record and declines to review the Region's decision based on Petitioners' unsupported assertions. See, e.g., NE Hub, 7 E.A.D. at 568.

4. Existence of Fault Blocks

Several Petitioners challenge the Region's reliance on the existence of fault blocks within the injection zone, stating that "no information" is provided regarding the depth of the faults and that there is "no way to prove if the faults are non-transmissive."¹⁶ See, e.g., UIC Appeal No. 14-74, at 2 (Daniel J. & Cindy J. Crytser).¹⁷ These

¹⁶ The Region explained that a fault is "a crack or fracture in the rocks that make up the Earth's crust, along which displacement has occurred." RTC at 7. The difference between transmissive and non-transisvive faults is that "[t]ransmissive faults allow fluids to move along the fault and between formations. Non-transmissive faults, in contrast, act like a barrier, which would prevent movement of fluid along the fault and into another formation across the fault." *Id.* at 7 n.2.

¹⁷ The following petitions also raise this issue: Appeal Nos. 14-73, at 9 (Travis P. Smith); 14-91, at 3 (Rev. James & Sherry Green); 14-92, at 2 (Ethel Marshall); 14-93, at 2 (Robert Marshall); 14-107, at 4 (Terry & Carole Lawson); 14-73, at 9 (Travis P. Smith); 14-80, at 3 (Brady Township Supervisors); 14-82, at 3 (Valerie J. Powers); 14-86, at 3 (Leslie Swope); 14-87, at 6, 9, 10 (Barb Emmer); 14-88, at 8 (Laurie Wayne); 14-89, at 2 (Ralph E. Hamby); 14-90, at 2 (Robert Green); 14-91, at 3 (continued...)

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Petitioners assert that the information on the fault block is "inaccurate" and that, rather than blocking the migration of injection fluid towards the Carlson well (number 20341) or coal mines, the faults actually would direct fluid towards them. *See id.*; *see also* Windfall Appl. Attach. D, App. A at 1 (certificate of plugging indicating Josephine Carlson, et al., owned the farm where the well was located).

The Region explained that because the faults in the Oriskany/Huntersville Chert do not extend to the surface and show displacement caused by the faults extending upward, their existence is inferred from drilling records and geologic cross sections showing displacement of bedrock. RTC at 7-8. Historic gas production results in the vicinity of the injection well "have shown that nearby faults appear to act as a geologic trap for gas production." Statement of Basis at 3; see also RTC at 7-8; Pennsylvania Geological Survey, Geology and Mineral Resources of the Southern Half of the Penfield 15-Minute Quadrangle, Pennsyvlania 123-24 (1971) (structural confinement of faults contributes to gas accumulation) (A.R. 18), cited in Region's Response at 28. More specifically, the Region explained that gas production wells drilled outside of the fault block were plugged for lack of production, including number 20325, see note 14 above, which was documented as a dry hole and "plugged and abandoned in 1960 shortly after completion." RTC at 10. The Region continued:

> This gas well production history helps to illustrate that the displacement of the Huntersville Chert/Oriskany formation created by the faults established confinement of natural gas and formation fluids within the immediate fault block structure and that fluid flow (natural gas and produced water) along or across fault lines is not evident. Because of the non-transmissive nature of the

^{17(...}continued)

⁽Rev. James & Sherry Green); 14-92, at 2 (Ethel Marshall); 14-93, at 2 (Robert Marshall); 14-107, at 4 (Terry & Carole Lawson); 14-108, at 4 (Loretta Slattery); 14-174, at 4, 5 (Darlene Marshall); 14-175, at 2, 11 (Duane Marshall); 14-179, at 1 (City of DuBois); 14-180, at 1-2 (Diane Bernardo); and 14-186, at 2, 3 (Wilson Fisher, Jr.).

faults, fluid that is injected into the Huntersville Chert/Oriskany formation at the proposed injection well location should be confined within the fault block.

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Petitioners disagree with the Region's assessment of both the existence and non-transmissive nature of the fault block in the injection zone for the proposed well. Yet Petitioners do not explain why the Region's response to their comments is clearly erroneous as required by the procedural regulations. See 40 C.F.R. § 124.19(a)(4)(ii) (petitioner must explain why the permit issuer's response to the comment was clearly erroneous or otherwise warrants review). Petitioners do not provide any evidence or supporting documentation to rebut the information in the administrative record that supports the Region's conclusion that the fault block in the injection zone exists and is nontransmissive. As the Board has previously stated, "mere allegations of error are insufficient to support review." In re Town of Westborough, 10 E.A.D. 297, 311 (EAB 2002) (quotations omitted), cited in City of Pittsfield, NPDES Appeal No. 08-19, at 6. Moreover, failure to rebut the Region's technical conclusions leaves a record supportive of the Region's permitting decision. See, e.g., Westborough, 10 E.A.D. at 311.

5. One-Mile Topographic Map

Section 144.31(e)(7) of the UIC regulations requires an applicant for a Class II injection well to include in its permit application a one-mile topographic map depicting certain features. Specifically, the regulation requires:

> A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, and

other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary.

40 C.F.R. § 144.31(e)(7). When deciding whether to issue a permit for a Class II injection well, section 146.24(a) of the UIC regulations also requires a permit issuer to consider a map that shows the injection well and the number or name and location of all existing producing wells. injection wells, abandoned wells, dry holes, and water wells within the area of review, which in this case is a one-quarter mile radius from the proposed well. Id. § 146.24(a)(2); see also Pt. IV.A.2 above. The area of review map "may also show surface bodies of waters, mines (surface or subsurface), quarries and other pertinent surface features including residences and roads, and faults if known or suspended. Only information of public record and pertinent information known to the applicant is required to be on this map." 40 C.F.R. § 146.24(a)(2) (emphasis added). Thus, the UIC regulations require a permit issuer to consider a single one-mile topographic map under 40 C.F.R. § 144.31(e)(7) and a map of the area of review pursuant to 40 C.F.R. § 146.24(a)(2).

In this case, the Region did not fulfill its obligation to ensure that Windfall submitted with its application a single, one-mile topographic map that depicts all of the features that 40 C.F.R. § 144.31(e)(7) requires. Instead, the Region relied on *several* maps that Windfall submitted with its application that each shows some, but not all, of the information that 40 C.F.R. § 144.31(e)(7) requires, and that, taken together, contain all of the required elements. In both its Response to Comments and its response to the petitions for review, the Region acknowledged this fact, stating that while there is not a single, comprehensive one-mile topographic map that depicts all of the features the UIC regulations require, this information was presented on other maps in the administrative record that were available for public review at the public library and at the Region's office. *See* RTC at 4; Region's Response at 48, 49.

The Region further stated in both documents that Windfall provided a one-mile topographic map in its application as Attachment O, but this map did not include drinking water wells, springs, and other surface water bodies located within a guarter-mile of the facility property boundary as required under 40 C.F.R. § 144.31(e)(7). See RTC at 3-4; Region's Response at 48, 49; Windfall Appl. Attach. O, at 5 (containing a one-mile topographic map entitled "Zelman Well #1 Luthersburg Quadrangle" within Windfall's Erosion and Sediment Control Plan). The Region averred that, aside from the proposed Windfall well, none of the structures or facilities that 40 C.F.R. § 144.31(e)(7) requires be shown on the one-mile topographic map exist in this instance. RTC at 3-4 ("The one-mile map must show all intake and discharge structures: all hazardous waste treatment, storage, or disposal facilities; and all injection wells. Besides the proposed Windfall well, none of these structures or facilities were found in this one-mile area."); see also Region's Response at 48-49 (stating the same).

The Board finds, however, that the Region's explanation of where in the administrative record to find the information concerning drinking water wells, springs, and other surface water bodies located within a quarter-mile of the facility property boundary that 40 C.F.R. § 144.31(e)(7) requires varies between the Response to Comments and the response to the petitions for review. In its Response to Comments, the Region stated that, in addition to the one-mile topographic map located in Attachment O of the permit application, Windfall "provided a more detailed map of high resolution" of the area of review developed by Alexander and Associates entitled "Proposed Disposal/Injection Well for Windfall Oil and Gas." RTC at 3; *see also* Region's Response, Docket No. 130, Attach. 12 (B-11)¹⁸ (containing Alexander and

¹⁸ The Board's publicly available electronic docket can be accessed at <u>www.epa.gov/eab</u> (click on "EAB Dockets"). The certified index to the administrative record indicates that Windfall included with its permit application four separate large maps, including the quarter-mile area of review map prepared by Alexander and Associates. The Region submitted the relevant portions of the administrative record with its response to the petitions for review, including the four large maps. The Board refers to the maps on its website, as the maps are stand alone documents that do not appear (continued...)

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Associates high resolution area of review map). Specifically, the Region further stated that "the [one-mile topographic] map must show all drinking water wells, springs, and surface waters within a quarter-mile of the property boundary. These were depicted in the Alexander and Associates map." RTC at 4. While the Alexander and Associates map included most of the regulatory requirements set forth in 40 C.F.R. § 146.24(a)(2), the Board finds that it does not include the drinking water wells required by both 40 C.F.R. §§ 146.24(a)(2) and 144.31(e)(7), nor any springs or surface water bodies required by 40 C.F.R. § 144.31(e)(7), despite the Region's statement to the contrary. See RTC at 4. The Board thus agrees with a petitioner who pointed out that the Region stated "in Response to Comments #5 that the water wells/springs were shown on the Alexander and Associates map, but they were not. They were shown on the Resource Management Services map." UIC Appeal No. 14-187, at 42 (Marianne Atkinson). This petitioner correctly states that the Resource Management Services map, and not the Alexander and Associates map that the Region references in its Response to Comments, depicts the drinking water wells, springs, and surface waters within a quarter-mile of the property boundary. See Region's Response, Docket No. 130, Attach. 9 (B-8) (containing Resource Management Services map).

The Region's response to the petitions for review tacitly acknowledges this by focusing on the information depicted in the Resource Management Services map, and citing only once, by exhibit number only, to the Alexander and Associates map it referenced in the Response to Comments. *See* Region's Response at 48 (citing to Ex. B-11). The Region refers to the Resource Management Services map as a "small inset topographic map within a larger map that focuses on the area of review" and states the following regarding the map:

> While the inset map in Exhibit B-8 does not show the information on the wells and water resources within the one-quarter mile radius area, that information is shown

¹⁸(...continued) within the attachments to Windfall's application.

in greater detail in the topographic map of a larger scale in that same Exhibit.^[19] That topographic map, plotted on April 2012, identifies 17 drinking water wells and one gas well in the area of review, which is the area within a quarter-mile radius of the well. Public commenters did not identify any other drinking water or gas wells within the area of review. The application also includes a well location plat, dated June 2011, that identifies 14 of those water wells, as well as several other topographic maps showing the area within half-mile around the well. *See also* Exs. B-9; B-10; B-11.

Region's Response at 48 (footnote omitted); *see also* Region's Response, Docket No. 130, Attach. 9 (B-8). Similar to its reasoning in the Response to Comments, the Region avers that "[s]ince there are no other injection wells or hazardous waste facilities near the proposed well," the detailed information within the one-quarter mile radius, such as locations of drinking water and gas wells, "is very useful, because it is easier to

¹⁹ The Board notes that the larger of the two topographic maps in Exhibit B-8, ostensibly representing the same area as the much smaller inset directly above it, does show the wells and water resources within the quarter-mile area of review. The Region states in its response to the petitions for review that "[t]he regulations do not specify the size of the map required." Region's Response at 48. The Region is correct that the UIC regulations do not specify the size of the map required, nor is there any requirement to provide an oversize map. However, the regulations do require applicants and permit issuers for Class II injection wells to provide information in the administrative record for public comment that makes clear the information the permit issuer relied upon when making a decision whether to issue a UIC permit. This may include adding additional maps or materials that further explain the permit issuer's rationale. In this case, an inset topographic map that measures 1.5 by 1.5 inches square, with a scale of one inch for every 2,000 feet, does not allow the Region to adequately depict the features required under the UIC regulations. Accordingly, while the regulations do not require a specific size map as the Region notes, public participation requirements do require the Region to exercise its discretion appropriately and ensure the information required to be depicted can be viewed on the map. The Region did so here by including the larger inset map that depicts the water sources and wells. That does not, however, excuse the Region from its duty to provide a single topographic map as set forth in 40 C.F.R. § 144.31(e)(7) that can be fairly read by the public.

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see and to ascertain the information contained in the map." Region's Response at 48-49. Suggesting that the Petitioners' argument is "of form over substance," the Region notes that having one consolidated map with all of this information would not have changed the permit decision. *Id.* at 49.

Petitioners are correct that the Region failed to follow the letter of the law when it did not make available for public review a one-mile radius topographic map that contains all of the specific elements required by the UIC regulations. See, e.g., UIC Appeal No. 14-73, at 4 (Travis P. Smith) (challenging the Region's response to comments that stated a "one mile map was provided yet this is an incorrect statement [because] even after reviewing the maps mentioned it still doesn't provide the information sufficient to fulfill the EPA documentation request").²⁰ The Region's explanations in its Response to Comments and response to the petitions for review are not only less than thorough, they also are difficult to follow. Whereas the Region relied solely on the one-mile topographic map and the Alexander and Associates map in the Response to Comments, see RTC at 3-4, in its response to the petitions for review - which importantly is not part of the administrative record for the permit proceeding - the Region discusses at length the map prepared by Resource Management Services that depicts drinking water wells, springs, and surface waters within the quarter-mile area of review. See Region's Response at 48. The Region's response to the petitions for review also cites no fewer than three other maps and a well location plat to demonstrate that the administrative record contained the information

¹⁰ The following petitions also raise this issue: Appeal Nos. 14-74, at 3 (Daniel J. & Cindy J. Crytser); 14-80, at 1 (Brady Township Supervisors); 14-86, at 1 (Leslie Swope); 14-87, at 3, 5 (Barb Emmer); 14-88, at 2, 4 (Laurie Wayne); 14-89, at 2 (Ralph E. Hamby); 14-90, at 1 (Robert Green); 14-91, at 3 (Rev. James & Sherry Green); 14-92, at 2 (Ethel Marshall); 14-93, at 2 (Robert Marshall); 14-94, at 3 (Vivian Marshall); 14-107, at 5 (Terry & Carole Lawson); 14-108, at 5 (Loretta Slattery); 14-174, at 2, 3-4 (Darlene Marshall); 14-175, at 1, 4, 6 (Duane Marshall); 14-176, at 2 (Nancy Moore); 14-177, Attach. B (Randall R. Baird); 14-179, at 2 (City of DuBois); 14-180, at 1-2 (Diane Bernardo); 14-187, at 42 (Marianne Atkinson); and 14-189, at 1-2 (Rep. Matt Gabler).

required by the UIC regulations for the Region to make an informed permit decision. *Id.*

The Region has a duty to verify and, if necessary, request supplemental information from the applicant when the information submitted does not comply with the UIC regulations. See 40 C.F.R. § 124.3(a)(2), (c) (stating that the Region has the obligation to confirm that "the applicant has fully complied with the application requirements for that permit," and if the application is incomplete, to notify the applicant of any information "necessary to make the application complete"); 40 C.F.R. § 144.31(d) (stating that for EPA-administered UIC programs, the Region must receive either a complete application or the information listed in a notice of deficiency for the application to be complete). The Agency decided through rulemaking what an applicant for a Class II injection well permit must submit for a permit issuer to make an informed decision regarding a permit application. See Environmental Permit Regulations, 48 Fed. Reg. 14,146, 14,189, 14,197 (Apr. 1, 1983) (establishing 40 C.F.R. pt. 144). The Region does not have the discretion under the regulations to accept something different. The Region was aware that the one-mile topographic map did not depict the drinking water wells, springs, and surface water bodies required by the UIC regulations no later than the conclusion of the public comment period. Yet in its response to the petitions for review, the Region only further convoluted its explanation of why the information Windfall submitted was sufficient despite not adhering to the UIC regulations.²¹

²¹ Some Petitioners assert that the Region erred by not including any maps of the coal mines that exist below part of the area of review. See, e.g., UIC Appeal No. 14-187, at 42 (Marianne Atkinson). The regulation requires a permit issuer to consider a map of the applicable area of review that depicts various types of wells, along with dry holes, in the area of review. 40 C.F.R. § 146.24(a)(2). The regulation states that the map "may also show," among other things, surface and subsurface mines. Id. (emphasis added). In this instance, Windfall submitted with its application a map depicting all surface and deep coal mines in the area of the proposed well. See Windfall Appl. Attach. D, Ex. 3 (containing a map entitled "Lower Freeport Coal Extent of Mining, Surface and Deep Luthersburg Quad" that is part of the Hydrology Report prepared by Resource Management Services, Inc.). In addition, Petitioners submitted several additional maps depicting coal mines beneath part of the area of review that the (continued...)

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Notwithstanding the Region's error in failing to ensure that Windfall's application included a single, one-mile topographic map depicting certain features that 40 C.F.R. § 144.31(e)(7) requires be included in the administrative record and available for public comment, the Region argues that because it availed itself of several different maps which, taken together, depict the information required to make an informed permit decision, its failure to abide by the letter of the UIC regulations amounts to harmless error. *See* Region's Response at 49 (characterizing Petitioners' argument as one "of form over substance"). Accordingly, the Board analyzes the Region's actions based on the principles governing harmless error set forth in prior Board precedent and federal case law.

A harmless error occurs "when a mistake of the administrative body is one that clearly had no bearing on the procedure used or the substance of the decision reached." Chemical Mfrs. Ass'n v. U.S. EPA, 870 F.2d 177, 202 (5th Cir. 1989), clarified, 885 F.2d 253 (5th Cir. 1989); see also Black's Law Dictionary 622 (9th ed. 2009) ("A harmless error is an error that does not affect a party's substantive rights or a case's outcome."). To determine whether the Region's failure to provide a single, one-mile topographic map with all of the required information available for public comment amounts to harmless error, and thus is a basis for remanding the permit, the Board looks to the facts of this case. In permit proceedings, the Board has held as harmless errors, mistakes, or oversights made by the permit issuer that did not run afoul of the procedural regulations under 40 C.F.R. part 124 or prejudice a petitioner's ability to meaningfully participate in the permitting process. See, e.g., In re Envi'l Disposal Sys., Inc., 12 E.A.D. 254, 281-82 (EAB 2005) (holding that permit issuer's failure to clearly describe in its response to comments the relationship between UIC permits and Resource Conservation and Recovery Act permits-by-rule was harmless error because the permit issuer had correctly responded to the

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Region also considered. See Region's Response, Docket No. 130, Attach. 19 (G-3), at 58; *id.* Attach. 30 (G-14), at 18; *id.* Attachs. 31-32 (G-15 through G-16); see also Region's Response at 49.

commenter's main objection as required by 40 C.F.R. § 124.17(a)(2)); In re J&L Specialty Prods. Corp., 5 E.A.D. 31, 79-80 (EAB 1994) (holding permit issuer's alleged technical violations of procedural regulations were harmless error absent demonstration of harm to permittee).

By contrast, if the Board determines that an error affects the public's opportunity to meaningfully participate pursuant to the procedural regulations at 40 C.F.R. part 124, the Board will not deem the error harmless and will remand the permit. See, e.g., In re Chevron Michigan, LLC, UIC Appeal No. 12-01, slip op. at 6-8, 11-13 (EAB Mar. 5, 2013), 15 E.A.D. (remanding UIC permit where the region issued responses to comments at different times both before and after issuing the final permit, making it unclear whether the permit issuer based its final decision on the administrative record as required by 40 C.F.R. §§ 124.17, .18); In re D.C. Water & Sewer Auth., 13 E.A.D. 714, 757-64 (EAB 2008) (remanding permit when removal of a compliance provision between the draft and final permit was not a logical outgrowth of the notice and comment period, such that interested parties did not have the opportunity to meaningfully comment before the final permit was issued). Therefore, the question the Board must answer in this case is whether the aggregation of the information that 40 C.F.R. § 144.31(e)(7) requires the Region to provide on a single, one-mile topographic map would have allowed Petitioners to participate in a more meaningful and informed manner, such that they might be able to meet their burden to challenge the Region's decision on appeal.

The administrative record shows that the Region provided for public review several maps, including the Resource Management Services map and the Alexander and Associates map, along with its analysis of those maps, to explain the Region's reasoning underlying its ultimate permit decision. Petitioners do not argue that the lack of a single topographic map containing the information the UIC regulations require in any way prevented them from participating meaningfully in the permit proceeding. Other than statements in their respective petitions that the Region did not provide a topographic map that contains all of the information required by the UIC regulations, Petitioners do not state or

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demonstrate how this prejudiced their efforts to participate in the permitting process through the public comment periods or the public hearing that the Region provided. See, e.g., J&L Specialty Prods., 5 E.A.D. at 80. In fact, the administrative record contains copious amounts of information submitted during the public comment periods and the public hearing that directly relates to the information required by the UIC regulations at 40 C.F.R. § 144.31(e)(7). For example, many Petitioners incorporate by reference a binder submitted by petitioner Darlene Marshall that contains a collection of not only public comments and testimony from several Petitioners, but also maps of gas wells and coal mines in the area and information on water sources and wells in the area. See, e.g., UIC Appeal No. 14-74, at 1 (Daniel J. & Cindy J. Crytser) (stating that "we will mostly cite the binder submitted by Darlene Marshall on behalf of all concerned citizens"); see generally Region's Response. Docket No. 130, Attachs. 20-27 (G-4 through G-11), available at www.epa.gov/eab (click on EAB Dockets) (containing entire contents of Marshall binder). Among other things, the binder includes a list of water sources for the Highland Street Extension Development, as well as a list of 107 water wells identified within a one-mile radius of the proposed well. See Region's Response, Docket No. 130, Attach. 21. (G-5), at 17-31, available at www.epa.gov/eab (click on EAB Dockets).

Similar to the petitioners in J&L Specialty Products, in this case, Petitioners' comments on the draft permit demonstrate that they were fully aware of the substance of the maps that the Region provided. See J&L Specialty Prods., 5 E.A.D. at 80. Accordingly, under the facts of this case, the Board concludes that the Region's failure to include all of the information on a single topographic map that extends one mile from the property boundary amounts to harmless error. See In re Shell Gulf of Mex., Inc., OCS Appeal Nos. 11-02 through 11-04 & 11-08, slip op. at 39 n.38 (EAB Jan. 12, 2012), 15 E.A.D. (holding that an inadvertent, temporary failure of the permit issuer to post a supplemental environmental justice analysis to its website was, at most, harmless error when the supplemental analysis was in the administrative record).

The Board's analysis is consistent with how federal courts have considered the harmless error doctrine under the Administrative Procedure Act, which requires that "due account shall be taken of the rule of prejudicial error" when a court reviews agency action.²² 5 U.S.C. § 706; see also, e.g., United States v. Reynolds, 710 F.3d 498, 515-17 (3d Cir. 2013) (distinguishing between a "complete procedural failure" (i.e., the failure to provide notice and comment) and a "technical failure," where the agency provided for notice and comment but in that process violated a statutory or regulatory requirement); accord City of Sausalito v. O'Neill, 386 F.3d 1186, 1220 (9th Cir. 2004) (same). Circuit courts have stated that the analysis of harmless error should look to the process as well as the result of the administrative action to "avoid gutting the APA's procedural requirements." Reynolds, 710 F.3d at 517 (quoting Riverbend Farms, Inc. v. Madigan, 958 F.2d 1479, 1487 (9th Cir. 1992)); accord Sugar Cane Growers Coop. v. Veneman, 289 F.3d 89, 96 (D.C. Cir. 2002); Cal. Wilderness Coal. v. U.S. DOE, 631 F.3d 1072, 1090 (9th Cir. 2011).

Federal case law also requires a party seeking reversal based on a technical failure to identify the prejudice they have suffered. See Revnolds, 710 F.3d at 516-17; see also City of Sausalito, 386 F.3d at 1220 (stating that "[w]here the agency's error consisted of a failure to comply with the regulations in a timely fashion, we have required plaintiffs to identify the prejudice they have suffered"); Bar MK Ranches v. Yuetter, 994 F.2d 735, 740 (10th Cir. 1993) (same). In this instance, the Petitioners would need to explain how the Region's technical error in the administrative process prevented the "exchange of views, information, and criticism between interested persons and the agency' which is the very essence of notice and comment requirements." Reynolds, 710 F.3d at 518 (quoting Riverbend Farms, 958 F.2d at 1482-84): see also New Mexico ex rel. Richardson v. BLM, 565 F.3d 683, 708 (10th Cir. 2009) ("A public comment period is beneficial only to the extent the public has meaningful information on which to comment * * * .").

²² Although these principles are often applied in the administrative rulemaking context, the Board finds them equally applicable here, where the Region's permit decision amounts to an informal agency adjudication.