ILLINOIS POLLUTION CONTROL BOARD
December 6, 2007

L. KELLER OIL PROPERTIES, INC./ FARINA,	)	
Petitioner,	)	
v.	)	PCB 07-147 (UST Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

CAROLYN S. HESSE AND JONATHAN P. FROEMEL OF BARNES & THORNBURG LLP APPEARED ON BEHALF OF PETITIONER; and

MELANIE A. JARVIS, SPECIAL ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by A.S. Moore):

On June 27, 2007, L. Keller Oil Properties, Inc./Farina (Keller) timely filed a petition asking the Board to review a May 17, 2007 determination of the Illinois Environmental Protection Agency (Agency). *See* 415 ILCS 5/40(a)(1) (2006); 35 Ill. Adm. Code 105.404. The Agency rejected Keller's Stage II Site Investigation Plan and Budget regarding an underground storage tank (UST) site at 1003 West Washington Avenue, Farina, Fayette County (Site).

The Board today partially affirms and partially reverses the Agency's determinations in rejecting Keller's proposed plan and budget. Specifically, the Board for the reasons stated below affirms the Agency by finding that the record supports the Agency's determination that Keller did not construct monitoring wells in a manner that allows for sampling at only the desired interval. The Board also finds that soil borings SB-4 and SB-5 exceed the minimum requirements of the Environmental Protection Act (Act) (415 ILCS 5/1 *et seq*. (2006)) and the Board's regulations. The Board also finds that proposed additional soil sampling between the gasoline tank field and monitoring well MW-2 and that proposed additional soil sampling south of the gasoline tank field exceed the minimum requirements of the Act and the Board's regulations.

Also for the reasons stated below, the Board today reverses the Agency by finding that sampling of soil borings from monitoring wells MW-1, MW-2, and MW-4 does not exceed the minimum requirements of the Act and the Board's regulations. The Board also finds that proposed additional soil sampling in the vicinity of soil boring SB-5 does not exceed those minimum requirements. Accordingly, the Board below directs Keller to submit to the Agency an

amended Stage 2 Site Investigation plan and budget consistent with the terms of this opinion and order.

This opinion first reviews the procedural history of this case before addressing a preliminary matter and the factual background. It then summarizes Keller's amended petition for review, the issues on appeal, and the post-hearing briefs filed by Keller and the Agency. This opinion then sets forth the relevant statutory and regulatory provisions and the burden of proof and standard of review applicable to this case. The Board then discusses and rules upon the issues before providing its conclusion and issuing its order.

PROCEDURAL HISTORY

On June 27, 2007, Keller filed a petition for review of a May 17, 2007 determination of the Agency. On July 6, 2007, the Agency filed the administrative record (R.) of that determination. In an order dated July 12, 2007, the Board accepted Keller's petition for hearing.

On July 12, 2007, the Agency filed a motion to strike portions of Keller's petition for review. Keller did not file a response to this motion. On July 24, 2007, Keller filed a motion to file an amended petition, accompanied by an amended petition for review (Am. Pet.). The Agency did not file a response to Keller's motion.

On July 18, 2007, the Agency filed a motion for summary judgment. On August 1, 2007, Keller filed its response in opposition to the motion for summary judgment. On August 6, 2007, the Agency filed a reply to petitioner's response in opposition to motion for summary judgment.

In an order dated August 9, 2007, the Board granted Keller's motion to file an amended petition, accepted Keller's amended petition for review, denied the Agency's motion to strike portions of Keller's original petition as moot, and denied the Agency's motion for summary judgment.

The Board conducted a hearing (Tr.) on August 22, 2007. Ronald St. John, Carol Rowe, Jeff Wienhoff, and Vince Smith testified at hearing on behalf of Keller. Ten exhibits were admitted into the record at hearing:

Joint exhibit to supplement record (Exh. 1);

August 21, 2007 letter from Carolyn Hesse representing stipulation (Exh. 2);

Resume of Ronald St. John (Exh. 3);

Glossary of Hydrology (Exh. 4);

Two sheets of diagrams corresponding to testimony of Ronald St John. (Exh. 6);

Resume of Carol Rowe (Exh. 7);

Resume of Jeff Weinhoff (Exh. 10);

Diagram of Site (Exh. 11);

Diagram corresponding to testimony of Jeff Weinhoff (Exh. 12);

Resume of Vince Smith (Exh. 13).

On September 18, 2007, Keller filed its post-hearing brief (Keller Brief). On October 9, 2007, the Agency filed its post-hearing brief (Agency Brief). On October 22, 2007, Keller filed a motion for leave to file a reply brief (Mot. Leave), accompanied by its reply (Reply).

PRELIMINARY MATTER

On October 22, 2007, Keller filed a motion for leave to file a reply brief, accompanied by its reply. In its motion, Keller argues that the Agency's response brief raises issues that the Agency had not raised in its denial letter or through any other medium. Mot. Leave at 1-2. Keller also argues that the Agency's brief raises arguments that Keller had not raised in its post-hearing brief. *Id*. at-2. Keller states that it seeks the Board's leave to file a reply in order to address those arguments "and to prevent the material prejudice that will result from the Agency's misleading submissions." *Id*.

Section 101.500(d) of the Board's procedural rules provides that "[w]ithin 14 days after service of a motion, a party may file a response to the motion. If no response is filed, the party will be deemed to have waived objection to the granting of the motion, but the waiver of objection does not bind the Board or the hearing officer in its disposition of the motion." 35 Ill. Adm. Code 101.500(d). The Agency has filed no response to Keller's motion for leave to file a reply brief. Although the Board is not bound by the Agency's failure to respond, the Board grants Keller's motion for leave to file a reply brief and accepts its reply.

FACTUAL BACKGROUND

Keller was the owner of USTs at a gasoline service station located at 1003 West Washington Avenue, Farina, Fayette County. R. at 2, 7. USTs at the Site stored gasoline, diesel, or heating oil. R. at 8. The Site has been assigned LPC #0514144011 – Fayette County. R. at 2, 3. Keller reported a release at the Site to the Illinois Emergency Management Agency (IEMA) on November 15, 2005 and received Incident #2005-1539. R. at 7. Keller removed the tanks associated with this incident from the Site on February 7, 2006. R. at 8. Keller reported a second release at the Site to IEMA on February 10, 2006 and received Incident #2006-0153. R. at 7. Keller removed the tanks associated with this second incident from the Site on March 22, 2006. R. at 8.

On November 28, 2005, Keller submitted to the Agency a 20-Day Certification for Incident #2005-1539. R. at 7, Exh. 1. Also on November 28, 2005, Keller requested an extension of the time for completion of early action activities. Exh. 1. On December 5, 2005, the Agency approved extension of the early action period through April 30, 2006. R. at 7, Exh.

1. By letter dated December 20, 2005, Keller submitted to the Agency a 45-Day Report for Incident #2005-1539. R. at 7, Exh. 1. By letter dated April 24, 2006, Keller submitted to the Agency a 45-Day Report Addendum for Incident #2005-1539. R. at 7, Exh. 1. By letter dated May 9, 2006, the Agency acknowledged receiving that report and approved the Stage 1 Site Investigation Plan for Incident #2005-1539. Exh. 1.

On February 21, 2006, Keller submitted to the Agency a 20-Day Certification for Incident #2006-0153. R. at 7; Exh. 1. In a letter dated March 2, 2005, Keller requested an extension to September 15, 2006 of the time for completion of early action activities. Exh. 1. On March 10, 2006, the Agency approved extension of the early action period to July 9, 2006. R. at 7, Exh. 1. By letter dated March 23, 2006, Keller submitted to the Agency a 45-Day Report for Incident #2006-0153. Exh. 1. By letter dated April 7, 2006, the Agency acknowledged receiving that report and approved the Stage 1 Site Investigation Plan for Incident #2006-0153. Exh. 1. By letter dated July 6, 2006, Keller submitted to the Agency a 45-Day Report Addendum. R. at 7; Exh. 1. By letter dated March 8, 2007, the Agency approved the amended 45-Day Reports for Incident #2005-1539 and 2006-0153. Exh. 1.

On August 7, 2006, Keller submitted to the Agency a Stage 1 Report/Stage 2 Site Investigation Plan and Budget addressing both Incident #2005-1539 and Incident #2006-0153. R. at 144. On October 5, 2006, the Agency issued a letter rejecting the Stage 2 Site Investigation Plan and Budget. R. at 157-64. On January 24, 2007, the Agency received from Keller a Stage 2 Site Investigation Plan and Budget, Additional Information and Reconsideration. R. at 167-245. This document addressed the bases on which the Agency rejected the proposed plan and budget in its October 5, 2006 denial letter. R. at 168-80.

On May 17, 2007, the Agency rejected Keller's Stage 2 Site Investigation Plan and Budget. R. at 256-63. As the bases for its denial, the Agency first stated that Keller had not advanced soil borings SB-4 and SB-5 according to the Board's regulation. R. at 256. As a second basis for denial, the Agency determined that soil samples collected from monitoring wells MW-1, MW-2, MW-4, and MW-5 exceeded the minimum requirements of the Board's regulations. R. at 257. As a third basis, the Agency concluded that Keller had not properly installed monitoring wells. R. at 257-58. As a fourth basis, the Agency stated that Keller's Stage 2 Site Investigation Plan included specific soil borings that exceed the minimum requirements of the Board's regulations and that monitoring wells installed for Stage 1 did not comply with applicable requirements. R. at 259-60. Fifth, the Agency also stated that the Agency had not approved Keller's Stage 2 Site Investigation budget because the Agency had not approved the plan on which the budget is based. R. at 261-62.

KELLER'S AMENDED PETITION FOR REVIEW

In its amended petition, Keller states that it was the owner of USTs for the storage of gasoline, diesel fuel, and heating oil at the site of a former gasoline service station at 1003 West Washington Avenue, Farina, Fayette County. Am. Pet. at 1 (¶1). Keller further states that "LUST Incident Numbers 20051539, 20060136, 20060153, and 20060346 were obtained" and that LPC #0514155011 has been assigned to the Site. *Id*. (¶2).

Keller states that it sent a Stage 2 site investigation plan and budget to the Agency on August 7, 2006. Am. Pet. at 2 (¶3), citing Am. Pet., Exh. 1. Keller further states that, in a letter dated October 5, 2006, the Agency commented on the plan and budget and rejected them. Am. Pet. at 2 (¶4), citing Am. Pet, Exh. 2.

Keller claims it prepared a document entitled "Stage 2 Site Investigation Plan and Budget, Additional Information and Reconsideration" in order to respond to issues raised in the Agency's October 5, 2006 letter. Am. Pet. at 2 (¶5). Keller further claims that the Agency received this document from Keller's consultant on January 24, 2007. *Id*., citing Am. Pet., Exh. 3. Keller maintains that, in a letter dated May 17, 2007, the Agency rejected the Stage 2 plan and budget. Am. Pet. at 2 (¶6), citing Am. Pet., Exh. 4. Keller states that the Agency's May 17, 2007 letter "contains lengthy quotes of several regulations and states that the Stage 2 Plan was rejected for a number of reasons." Am. Pet. at 2 (¶7), citing Am. Pet., Exh. 4. Keller further states that this May 17, 2007 letter forms the basis of its appeal. Am. Pet. at 2 (¶6).

Keller asserts that the Agency approved Keller's Stage 1 site investigation plan and budget in letters dated April 7, 2006 and May 9, 2006. Am. Pet. at 2 (¶), Am. Pet., Exh. 5. Keller argues that comments in item 1 of the Agency's May 17, 2007 letter refer to the Stage 1 investigation, do not relate to the proposed Stage 2 investigation, "and are irrelevant to approval of the Proposed [Stage 2] Plan and Budget." Am. Pet. at 2 (¶8), *see* Am. Pet., Exh. 5 at 1.

Keller argues that item 2 of the Agency's May 17, 2007 letter refers to monitoring wells installed during the Stage 1 investigation according to Board regulations. Am. Pet. at 3 (¶9), citing 35 Ill. Adm. Code 734.315(a)(2)(B), (C). Keller claims that, while the Agency correctly cites subsection 734.315(a)(2)(C) as the source of requirements for installing monitoring wells when groundwater contamination is suspected, the Agency cites no regulatory authority for its comments on whether piping run samples are adequate substitutes for determining whether groundwater and soil are contaminated. Am. Pet. at 3 (¶9); *see* 35 Ill. Adm. Code 734.315(a)(2)(C). Keller argues that, "[s]ince piping runs are typically located two to three feet below grade, they are usually located well above the vadose zone and the groundwater table." *Id*., citing Am. Pet., Exh. 3 at 4.

Keller next argues that, in item 3 of the Agency's May 17, 2007 letter, the Agency cites Section 734.430(a) as the regulatory source of requirements for the installation of monitoring wells. Am. Pet. at 3 (¶10); *see* 35 Ill. Adm. Code 734.430(a). Keller asserts that this regulation does not include "the requirements that the Agency provides as the basis for disapproving the Proposed Plan." Am. Pet. at 3 (¶10). Keller also claims that "the Agency had already been provided with information explaining the location of the monitoring well screens." *Id*., citing Am. Pet., Exh. 3 at 6.

Keller next argues that, in item 4 of the Agency's May 17, 2007 letter, "the Agency misinterprets the applicable regulations and the information Petitioner provided." Am. Pet. at 4 (¶11).

Keller next argues that item 5 of the Agency's May 17, 2007 letter cites a lack of required certifications as a basis for rejecting the proposed plan. Am. Pet. at 4 (¶12). Keller claims that

these certifications "are contained in page 21 of the Proposed Plan and Budget." *Id*., citing *id*., Exh. 3 at 21.

Keller states that the Agency's May 17, 2007 letter rejected the plan's associated budget "for a number of reasons." Am. Pet. at 4 (¶13), citing Am. Pet., Exh. 4. Keller argues that the Agency's rejection of the proposed budget is directly related to rejection of the proposed plan and states that it appeals both denials "as set forth in the May 17, 2007 letter." Am. Pet. at 4 (¶14).

Keller argues that its proposed plan and budget contain detailed technical information providing "the same level of detail that the Agency has approved historically." Am. Pet. at 4 (¶15). Keller further argues that the Agency "violated its statutory authority by re-reviewing information it had previously approved." *Id*. at 4-5 (¶16), citing Reichold Chem. v. PCB, 561 N.E.2d 1333, 1345 (3rd Dist. 1990). Keller asserts that the Agency's May 17, 2007 letter "requires documentation that does not appear on any IEPA forms or in the applicable regulations." Am. Pet. at 5 (¶17). Keller maintains that the Agency "ignored and/or chose not to consider information that was provided with the Stage 2 Site Investigation Plan and Budget." *Id*. (¶18). Keller also argues that the Agency requests installation of monitoring wells in a manner that violates applicable regulatory requirements. *Id*., citing 35 Ill. Adm. Code 734.315(a)(2)(E)(ii).

Concluding, Keller requests a Board order requiring the Agency to approve the proposed Stage 2 site investigation plan and budget. Am. Pet. at 6. Keller also requests its "attorneys' fees and costs in bringing this appeal." *Id*.

SUMMARY OF ISSUES

The issues on appeal are: whether Keller constructed monitoring wells in a manner that will allow sampling only at the desired interval and that will enable collection of representative groundwater samples; whether soil borings SB-4 and SB-5 exceed the minimum requirements of the Act and the Board's regulations; whether soil samples from monitoring wells MW-1 and MW-2, and MW-4 exceed the minimum requirements of the Act and the Board's regulations; whether proposed additional soil borings and soil samples from monitoring wells exceed the minimum requirements of the Act and the Board's regulations; and whether the Agency properly rejected Keller's proposed Stage 2 Site Investigation Budget.

KELLER'S POST-HEARING BRIEF

Keller argues that the Agency's decisions "regarding soils borings SB-4 and SB-5, the installation of monitoring wells, and the analysis of soil samples from MW-1, MW-2, and MW-4 are wrong." Keller Brief at 29. Keller further argues that the Agency incorrectly rejected its Stage 2 site investigation proposal and budget. Keller argues that it has complied with applicable requirements and "requests that the Board overturn the Agency's decisions and approve the completed Stage 1 investigation, the proposed Stage 2 investigation, and the budget." *Id*. The Board below separately summarizes Keller's arguments on these issues.

Monitoring Wells

Well Construction

Keller notes that, in a May 17, 2007 letter rejecting Keller's Stage 2 plan and budget, the Agency stated that "the monitoring well must be installed in a manner to allow sampling only at the desired interval of the groundwater." Keller Brief at 8, citing R. at 258; *see* 35 Ill. Adm. Code 734.340(a)(3) (Monitoring Well Construction and Sampling). Keller further notes that the Agency's letter states that

> the screen must intersect the water level *in the well* for accurate determination of contaminant levels in the groundwater because gasoline contaminants float on the surface of the water. According to the monitoring well completion report, the wells screen were set at a depth that allows total submersion of the screen and the well. Keller Brief at 8 (emphasis in original), citing R. at 258.

Although Keller acknowledges that wells must be screened at the desired interval, Keller argues that the Agency's insistence that the well should be screened at the level of the water in the well is "scientifically inaccurate and contrary to regulatory requirements." Keller Brief at 9. Keller claims that the monitoring wells at issue in this case were constructed according to Board regulations and professional principles. *Id*., citing Tr. at 58-61 (St. John testimony), R. at 90-95 (borehole logs), R. at 102-07 (well completion reports).

Keller states that, in the course of drilling wells at the Site, "[s]oil moisture was encountered at a depth of approximately 10 feet below ground surface." Keller Brief at 9-10, citing Tr. at 23 (St. John testimony), Tr. at 89-90 (Rowe testimony), Tr. at 121 (Rowe testimony), R. at 90-95 (borehole logs). Keller characterized the moist area at this depth as the capillary fringe, an area in which water is drawn above the zone of saturation or the water table. Keller Brief at 10, citing Tr. at 23-25, 90. Keller further states that, at a depth of 12 to 13 ½ feet below ground surface, the well encountered a saturated sand seam or unit. Keller Brief at 10, citing Tr. at 21-23, 29, R. at 90-95.

Keller states that, in constructing its monitoring wells, it used screens that are ten feet in length "because that is the length of well screen that the Agency generally requires." Keller Brief at 10, citing Tr. at 34, 97, R. at 253 (technical review notes). Keller argues that these screens extended from a point approximately 14 ½ or 15 feet below ground surface to a point approximately 4 ½ or five feet below ground surface. Keller Brief at 10, citing Tr. at 124, R. at 102-07 (well completion reports). Keller further argues that construction situated the center of the screens "approximately 10 feet below ground surface, the depth where the first saturated zone was encountered." Keller Brief at 10, citing Tr. at 34, 48, R. at 102-07. Claiming that "the screens intersected both the water bearing sand unit and the capillary fringe, Keller argues that "the well screens were set to intersect the desired groundwater interval." Keller Brief at 10, citing Tr. at 34, 88-91, R. at 90-95, 102-07.

Keller states that sediment displaced in the course of drilling the well is "smeared down into the aquifer from the soil closer to the surface." Keller Brief at 11, citing Tr. at 35-36, 92.

The process of developing the well is intended to loosen that sediment "so that groundwater can come out of formation and flow from the aquifer into the well." Keller Brief at 11, citing Tr. at 35-36, 92. Generally, developing a well involves generating a physical surging action to loosen the sediment smeared by drilling. Keller Brief at 11, citing Tr. at 35. Keller claims that the wells at the Site "were developed by putting a bailer into the well and purging the well." Keller Brief at 11, citing Tr. at 91-92. Keller states that the Board's regulations require that "[w]ells must be developed to allow free entry of groundwater, minimize turbidity of the sample, and minimize clogging." Keller Brief at 10, citing 35 Ill. Adm. Code 734.430(a)(7). Keller further states that it developed wells at the site as soon as they were drilled. Keller Brief at 11, citing Tr. at 91.

Keller states that, after developing the monitoring wells at the Site, its consultant determined the static water levels in them. Keller Brief at 11, citing Tr. at 94. Keller argues that "hydrostatic pressure on the aquifer pushed the groundwater from the saturated zone into the wells to levels closer to the surface than where groundwater was observed during drilling." Keller Brief at 11, citing Tr. at 21, R. at 173. Specifically, Keller claims that "[t]he static water levels in the wells were generally about 4 ½ feet below ground surface and were about 5 to 7 feet above the levels where groundwater was actually encountered when drilling." Keller Brief at 11, citing R. at 102-07. Keller argues that, because the groundwater rose in this fashion, the aquifer is confined groundwater, or "[g]round water under pressure significantly greater than that of the atmosphere." Keller Brief at 11, citing Tr. at 30, Exh. 4 at 40. Keller further argues that the static water level in a well does not indicate the desired groundwater interval for sampling and only determines "the potentiometric surface and the direction that groundwater flows." Keller Brief at 11, citing Tr. at 94-95. Consequently, Keller claims that the desired sampling interval is not the static water level but is instead "where the groundwater was encountered in the course grained confined aquifer at 12 to 13 ½ feet in depth." Keller Brief at 9, citing Tr. at 21, 47, 90-91, 96-97, R. at 90-94.

Determining Groundwater Depth and Static Water Level

Keller states that it is not possible in the course of drilling and constructing a well to determine whether there is a confined aquifer or what will be the ultimate static water level. Keller Brief at 16, citing Tr. at 32-33, 91. Keller further states that, "[t]ypically, the static water level is determined at least a few days or weeks after the well is constructed." Keller Brief at 16, citing Tr. at 94. Keller also states that the static water level only determines which way groundwater flows and "cannot be used to determine where to place well screens." Keller Brief at 16, siting 35 Ill. Adm. Code 734.340(c), Tr. at 31, 94-95.

Keller observes that, in its technical review notes, the Agency stated that "[d]rilling an additional 5 ft below the groundwater tables exceeds the minimum requirements." Keller Brief at 16, citing R. at 250. Keller argues that this statement reveals "[t]he Agency's misunderstanding of hydrogeology." Keller Brief at 16.

Keller claims that the term "water table" is defined as:

> The upper surface of the saturated zone. The surface in an unconfined aquifer or confining bed at which the pore water pressure is atmospheric. Its position can be identified by measuring the water level in a shallow well extending a few feet into the saturated zone. Keller Brief at 16-17, citing Exh. 4 (Glossary of Hydrology).

Keller argues that the water-bearing unit at the Site "was not an unconfined aquifer where the pore water pressure was atmospheric." Keller Brief at 17. Keller claims that groundwater at the Site "is considered to be confined because the water rose in the wells to levels five to seven feet above the saturated zone." *Id*., citing Tr. at 30, R. at 102-07, Exh. 4 (definition of "confined groundwater"). Keller states that hydraulic pressure forced groundwater to rise in the wells "to levels that were several feet above where the groundwater was found in the lithology during drilling." Keller Brief at 17, citing Tr. at 30, R. at 102-07. Because the Site involves a confined aquifer, claims Keller, "the water level in the wells cannot be used to determine the location of the saturated zone or the desired interval of groundwater for sampling." Keller Brief at 17.

Desired Groundwater Interval

> Keller notes that, in its technical review notes, the Agency stated that
>
> [t]he sampling interval should be where the screen intersects the water in the well. If the screen is submerged in the water, contaminants that are generally found "floating" like benzene and naphthalene may not be accurately sampled. Keller Brief at 12, citing R. at 253.

Keller strenuously disagrees with the Agency's apparent "assumption that the indicator contaminants are found only at the uppermost portion of the aquifer." Keller Brief at 13, citing Tr. at 50-51. Keller argues that indicator contaminants for gasoline are soluble in water and will be detected in groundwater. Keller Brief at 12, citing Tr. at 50-52. Keller further argues that the indicator contaminants are neutrally buoyant and "move with the advective flow of groundwater." Keller Brief at 13, citing Tr. at 50, 55. Keller also argues that clean water entering the top of an aquifer through precipitation tends to cause contaminated groundwater to migrate downward. Keller Brief at 13, citing Tr. at 50-51. Keller stresses that the well screens at the Site were placed to include the capillary fringe so that indicator contaminants floating as free product on the groundwater would enter the wells. Keller Brief at 12, citing Tr. at 56-57. Keller further stresses that, even though a free product layer was not found at the Site, groundwater there did contain indicator contaminants for gasoline. Keller Brief at 12, citing Tr. at 56, 59. Keller suggests that this finding confirms the solubility of these contaminants and demonstrates proper installation of its monitoring wells in the water-bearing sand unit found at the Site.

> Keller also notes that the Agency's technical review notes state that,
>
> [i]f GW was encountered 10ft, it is unclear why an additional 5 ft was drilled. Drilling an additional 5 ft beneath the groundwater table exceeds the minimum requirements. None of the well screens intersect the static water levels in the wells. If drilling stopped at the groundwater table, the screens would most likely intersect the groundwater. Keller Brief at 13, citing R. at 250.

Keller argues that this statement demonstrates that the Agency "does not understand basic hydrogeology and is misinterpreting the applicable regulations." Keller Brief at 13. Keller claims that, if the wells had been screened according to this technical review, then "the bottoms of the wells would not intersect the 'desired interval' because the bottoms of the well screens would be set above the surface of the groundwater that was encountered when drilling." Keller Brief at 13, citing Tr. at 49-50. Keller further claims that the Agency's recommendation would result in dry wells, because there would not be good water entry in the absence of condensation or seasonal fluctuation in the groundwater level. Keller Brief at 13, citing Tr. at 36-37, 49-50, 95-96.

Keller acknowledges that the Board's regulations do not define the term "groundwater interval of interest" or "desired groundwater interval." Keller Brief at 14. Keller argues, however, that this interval "is generally considered to be the aquifer that one is interested in sampling to determine if it is contaminated." *Id*., citing Tr. at 48. Keller states that the desired interval at the Site is the sand seam at a depth of 12 to 13 ½ feet and the 12-18 inches above it that appeared during drilling to be saturated. Keller Brief at 14, citing Tr. at 97. Keller claims that, if the wells had been screened according to the Agency's technical review, "the well screens would be located in the tight clay lithology located above the water bearing sand unit and the wells would be dry because groundwater could not flow into the wells." Keller Brief at 14, citing Tr. at 95-96. Keller also claims that it would be "very difficult" to determine in the field how to screen a well at the level to which water rises in it. Keller Brief at 14, citing Tr. at 49. Keller further claims that, because wells screened according to the Agency's technical review would not screen at the desired groundwater level and would not generate representative samples, they would not satisfy the Board's regulations. Keller Brief at 14, citing Tr. at 37, 49-50, 95-96; *see* 35 Ill. Adm. Code 734.430(a).

Keller also argues that the Agency apparently believes "that wells should be screened at the static water level, no matter how close to the surface of the ground that may be." Keller Brief at 14, citing R. at 258. Keller claims that wells at the Site screened at the static water level would have to be screened "within 2 ½ feet of the ground surface." Keller Brief at 14, citing R. at 90-94 (borehole logs). Keller states that construction at the Site must be at least 40 inches below ground surface in order to be below the frost line. Keller Brief at 14, citing Tr. at 39. Keller argues that, if constructed according to the Agency's apparent recommendation, wells at the Site would not be grouted below the frost line, resulting in heaving in the winter. Keller Brief at 14-15, citing Tr. at 38-41. Keller further argues that such wells would violate the Board's regulation requiring wells to be grouted below the frost line. Keller Brief at 14, citing 35 Ill. Adm. Code 734.430(a)(5).

Keller also argues that screening the Site's monitoring wells within two to three feet of the ground surface would allow those wells to become easily contaminated with surface contaminants. Keller Brief at 15, citing Tr. at 36, 41-43. Keller notes that "[t]here are at least two feet of compacted gravel and subbase below the asphalt that could act as a pathway for contamination to enter the well." Keller Brief at 15, citing Tr. at 42-43, R. at 92. Keller also argues that the Agency has at least twice approved monitoring wells "where the static water level rose above the top of the well screen." Keller Brief at 15, citing Tr. at 98-99, 113-14. Keller

concludes by arguing that placing well screens close to the ground surface would not comply with the Board's regulations or be consistent with accepted engineering practices or principles of geology. Keller Brief at 15, citing 35 Ill. Adm. Code 734.430(a)(4).

Sampling of Monitoring Wells

Keller states that, before obtaining a sample from a monitoring well, it is an accepted practice to purge from the well stagnant water that "is not representative of the formational groundwater." Keller Brief at 15, citing Tr. at 44. Keller further states that it is accepted practice then to draw fresh water "into the well from the water bearing unit." Keller Brief at 15, citing Tr. at 93-94. Keller also states that the monitoring wells at the Site were purged before sampling, allowing fresh water into those wells. Keller Brief at 15-16, citing Tr. at 44, 58-59, 93-94. Keller argues that, "Even though the static water levels in the monitoring wells may be above the upper extent of the screens in the monitoring wells (Keller Brief at 15), "the samples from those wells provided acceptable data to determine the concentrations of the indicator contaminants, benzene, ethylbenzene, toluene, and xylene" (Keller Brief at 16, citing Tr. at 58-59, 93-94).

Soil Samples

Soil Boring Locations

Keller notes that, in a May 17, 2007 letter rejecting the Stage 2 Site Investigation Plan, the Agency included as reasons for that rejection the locations of soil borings SB-4 and SB-5. Keller Brief at 18, citing R. at 256. Keller claims that, although Board regulations allow as many as four soil borings around a UST field, SB-3 and SB-4 are the two samples collected near the gasoline tank excavation at the Site. Keller Brief at 18, citing 35 Ill. Adm. Code 734.315(a)(1)(A), Tr. at 131-32 (Weinhoff testimony). Keller states that SB-4 is approximately 20 feet directly north of the contaminated excavation sidewall sample E-1. Keller Brief at 18, citing Tr. at 134, 154, Exh. 11 (diagram of site). Keller argues that "SB-4 is necessary because no other samples are located directly north of E-1." Keller Brief at 18, citing Tr. at 134-35, Exh. 11. Keller states that, although the Agency claims that samples N-1 and SB-3 define this area, those samples are "located to the northwest and to the east, respectively, of E-1 and cannot be used to define contamination to the north." Keller Brief at 18, citing R. at 256; *see* Exh. 11. Keller further states that SB-3 and SB-4 were collected on the same day, so Keller did not have results from SB-3 when it collected a sample from SB-4. Keller Brief at 18, citing Tr. at 153, R. at 125-26 (chain of custody record). Keller argues that "SB-4 was necessary to determine whether contamination from E-1 extended to the north, and to define the extent of contamination from E-1." Keller Brief at 18, citing Tr. at 134-35.

Keller notes that, in a May 17, 2007 letter rejecting the Stage 2 Site Investigation Plan, the Agency stated that "[t]he benzene contamination noted in SB5 appears to be an anomaly." Keller Brief at 19, citing R. at 256. Keller counters that SB-5 revealed benzene contamination in a sample collected at a depth of 2 ½ feet. Keller Brief at 19, citing Tr. at 170, Exh. 11. Keller claims that this contamination is likely to have resulted from overfill from the diesel UST at the Site. Keller Brief at 19, citing Tr. at 135, 156. Keller further claims that "[t]he fire marshal

onsite determined that piping releases and overfills at the diesel UST were the cause of the release." Keller Brief at 19, citing Tr. at 157, R. at 8. Keller stresses that the Board's UST rules address overfills and that costs of remediating overfills are eligible for reimbursement from the Fund. Keller Brief at 19, citing Tr. at 136.

Keller claims that, although the Agency claims that excavation samples near SB-5 do not show benzene exceedences, the Agency overlooked the greater depth from which those excavation samples were collected. Because they were obtained at a depth of approximately eight feet, Keller argues that they "would not necessarily detect the existence of a release caused by an overfill." Keller Brief at 19, citing Tr. at 157, 177. Keller also supports the location of SB-5 by arguing that it is "located northwest of sample D-10, which detected contamination" and because "there were no other samples in that area to determine whether contamination from D-10 had migrated to that area." Keller Brief at 19, citing Tr. at 134, R. at 170 (Additional Information and Reconsideration).

Monitoring Well Soil Samples

Keller notes that "[t]he Agency has not disputed the locations of the monitoring wells" at the Site. Keller Brief at 20. Keller claims that, in a May 17, 2007 letter rejecting the Stage 2 Site Investigation Plan, the Agency stated without explanation that soil samples collected from monitoring wells MW-1, MW-2, and MW-4 "exceed the minimum requirements to comply with the applicable regulations." *Id*., citing, R. at 257.

Keller states that the Board's UST regulations require collection of soil samples from monitoring well borings but prohibit analyzing those samples "if other soil sampling conducted to date indicates that the soil contamination does not extend to the location of the monitoring well installation boring . . . ." Keller Brief at 20, citing 35 Ill. Adm. Code 734.315(a)(2)(C). Keller notes that its consultant collected samples from the monitoring well on the same day that it collected soil boring samples. Keller Brief at 20, citing Tr. at 153, 155, 161, R. at 125-26 (Chain of Custody Record). Keller stresses that, when its consultant collected monitoring well samples at the Site, "soil sampling to date had not indicated the absence of soil contamination in these areas." Keller Brief at 20; *see* 35 Ill. Adm. Code 734.315(a)(2)(C).

Keller suggests that it would have been impractical to collect soil borings for analysis without also collecting monitoring well borings at the same time. *See* Keller Brief at 20-21. Keller claims that this may have required an additional trip to the Site for more samples if the soil borings had revealed contamination. *See id*. at 21. Keller argues that "[i]t is more efficient and cheaper to collect all of the samples during the same trip to perform field work." *Id* at 21, citing Tr. at 167, 170. Keller also argues that it could not simply hold monitoring well soil samples until it obtained data from soil borings collected on the same day. Keller Brief at 21, citing Tr. at 139. Keller claims that collected samples have a 14-day holding period, yet laboratories generally require 14 days to produce results. Keller Brief at 21, citing Tr. at 139. Finally, Keller argues that some indicator contaminants are volatile and can evaporate from samples that are held. Keller Brief at 21, citing Tr. at 139. Keller further argues that, if it had waited for results from some of its soil samples before having others analyzed, the lab results of the later analysis would not have been reliable. Keller Brief at 21, citing Tr. at 139-40.

Keller notes the testimony of Jeff Weinhoff that Keller situated monitoring wells MW-1, MW-2, and MW-4 according to the Board's regulations. Keller Brief at 21, citing 35 Ill. Adm. Code 734.315(B). Keller argues that it obtained samples from MW-1 because it had found contamination in sample D-10 near the diesel UST at the Site, "and there was no data between D-10 and MW-1 to show that contamination had no extended to MW-1." Keller Brief at 21, citing Tr. at 138, Exh. 11. Keller also argues that there was no data between P-4 showing contamination in the gasoline UST area and MW-1. Keller Brief at 21, citing Tr. at 138, Exh. 11. Keller claims that it analyzed soil samples from MW-2 because there was nothing to define contamination between that monitoring well and D-10 and P-4. Keller Brief at 21, citing Tr. at 140, 142, 159, Exh. 11. In addition, Keller argues that it analyzed soil samples from MW-4 because there were no soil samples defining contamination between D-10 and MW-4. Keller Brief at 21-22, citing Tr. at 141, 160, Exh. 11. Summarizing, Keller argues that its analysis of soils samples collected in the course of drilling monitoring wells complied with the Board's regulations because "there was no other data to date showing that contamination had not extended to those areas." Keller Brief at 22, citing 35 Ill. Adm. Code 735.315 (a), (b), (c), Tr. at 171-72.

Piping Run Samples

Keller notes that the Agency's May 17, 2007 letter rejecting the Stage 2 Site Investigation Plan stated that, under the Board's UST regulations, "piping run samples are acceptable for determining contamination extent." Keller Brief at 22, citing R. at 257. Keller further notes the Agency's claim that analysis of soil samples from MW-1, MW-2, and MW-4 exceeded the requirements of the regulations "because piping run samples had determined the extent of contamination." Keller Brief at 22; *see* R. at 253, 257. Keller argues that the Agency cites no specific regulation in support of its position and characterizes that position as erroneous. Keller Brief at 22.

Keller argues that the Agency has misread the Board's UST regulations. Keller Brief at 22. Keller states that an "owner or operator must collect certain excavation and piping run samples during early action and analyze the samples." *Id*., citing 35 Ill. Adm. Code 723.210(h)(1). Keller further states that, if all of those samples meet TACO Tier I Remediation Objectives, then no further investigation is required. Keller Brief at 22, citing 35 Ill. Adm. Code 734.210(h)(3). At the Site, however, Keller claims that "some of the early action samples did not meet the most stringent Tier I remediation objectives." Keller Brief at 22-23, citing Exh. 1 (addenda to 45-day reports).

Keller notes that a leak from a pipe occurred at the Site. Keller Brief at 23, citing Exh. 11. Keller argues that leaks from pipes "can migrate downward and then laterally so that contamination could be below the location where nearby piping run samples were collected." Keller Brief at 23, citing Tr. at 143-45, Exh. 12 (diagram including "potential contaminant plume"). Keller claims that soil borings during a Stage 1 investigation should extend to the level at which groundwater is encountered in order "to intercept a plume that may have migrated from a piping release." Keller Brief at 23, citing 35 Ill. Adm. Code 734.315(a)(1), Tr. at 145, 179. Keller claims that it typically drilled soil borings at the Site to a depth of ten feet, the

approximate level at which it first encountered groundwater. Keller Brief at 23, citing R. at 96-101 (drilling borehole logs).

Keller claims that piping run samples "are collected from the bottom of the excavation from which piping was removed." Keller Brief at 23. At the Site, Keller states that it collected piping run samples at a depth of two and one-half to three feet below ground surface. *Id*., citing Tr. at 176. Keller argues that these piping run samples could not detect contamination that had migrated downward and spread laterally. Keller Brief at 23, citing Tr. at 143-45. Keller thus claims that data from the monitoring well soil samples should be allowed because those data "are necessary to determine if there is contamination throughout the entire vadose zone." Keller Brief at 24, citing Tr. at 143, R. at 171.

Proposed Stage 2 Site Investigation Sample Locations

Keller argues that a May 17, 2007 letter from the Agency incorrectly rejected Keller's Stage 2 Site Investigation. Keller Brief at 24. Keller first notes that the Agency rejected the proposed locations of two monitoring wells and a soil boring situated between MW-2 and contamination found at the gasoline pump island. *See id*; *see also* R. at 259, Exh. 11. Keller defends these proposed locations by noting that a Stage 1 investigation compares sampling data to Tier 1 remediation objectives. Keller Brief at 24, citing 35 Ill. Adm. Code 734.210(h)(3), 734.210(h)(4), 734.315(c). Keller argues that a subsequent Stage 2 investigation applying Tier 2 remediation objectives helps define the area of the plume and may reduce the size of the area requiring remediation. Keller Brief at 24, citing Tr. at 149-50, R. at 175; *see* 35 Ill. Adm. Code 734.320. At the Site, Keller claims that "[c]ontamination levels at MW-2 might meet Tier 2 remediation objectives, after Tier 2 remediation objectives are calculated using site specific data." Keller Brief at 24, citing Tr. at 148, R. at 175. Specifically, Keller claims that "[d]ata from samples collected between the known leak at the pump island and MW-2 . . . could reduce corrective action costs by reducing the size of the area that must be remediated." Keller Brief at 24, citing Tr. at 148-49, R. at 175. Stating that the Act prohibits corrective action beyond that required to meet its minimum requirements, Keller claims that these proposed monitoring wells and soil boring should be approved. Keller Brief at 24, citing 415 ICLS 5/57.7(c)(3) (2006).

Second, Keller notes that the Agency rejected a proposed monitoring well situated south of the gasoline pump island. Keller Brief at 25. Keller claims that the Agency bases this rejection on the belief that piping run samples acceptably determine the extent of any contamination to the south of the island. *Id*., citing R. at 259. Keller counter this apparent belief by stating that "such piping run samples are too shallow to determine if contamination that was found at E-1 could have sunk and then migrated beneath the piping run samples." Keller Brief at 26, citing Tr. at 143, Exh. 12. Keller argues that, although piping run samples were taken at a depth of two and one-half to three feet below ground surface, the sample at E-1 was taken at a depth of approximately eight feet. Keller Brief at 25, citing Tr. at 176-77, R. at 171. Consequently, Keller argues that "clean piping run samples cannot be used to define the extent of contamination in the entire vadose zone [], and then proposed monitoring well south of the gasoline pump island should be approved. Keller Brief at 25.

Third, Keller notes that the Agency rejected proposed soil borings SB-5 and SB-6 located west of the diesel tank excavation. Keller Brief at 25, *see* R. at 259-60. Keller counters that a sample from two and one-half feet below ground surface at SB-5 revealed benzene contamination attributed to an overfill. Keller Brief at 25, citing Tr. at 135, R. at 109. Keller claims that the Board's regulations require investigation to determine the extent of this contamination found at D-10 and SB-5. Keller Brief at 25, citing 35 Ill. Adm. Code 734.210(h)(4). Keller further claims that the proposed soil borings SB-5 and SB-6 intend to define contamination found to the west of the diesel tank excavation, "to the west to southwest of D-10 and [to] the south of SB-5." Keller Brief at 25, citing Tr. at 147.

In addition, Keller disputes the Agency's statement that excavation sampling at the Site "missed" benzene contamination in the area of the diesel UST. Keller Brief at 26; *see* R. at 260. Keller states that a representative excavation sample "is a very small portion of the area it represents." Keller Brief at 26. Specifically, Keller states that the Board's regulations require a sample of a three-inch cube from an area 200 feet long and up to 12 feet deep." Keller Brief at 26, citing 35 Ill. Adm. Code 734.210(h)(1)(A), T. at 176-78. Keller argues that, "while every effort is made to collect samples from the most contaminated area, occasionally contamination can be missed." Keller Brief at 26, citing Tr. at 156, 171-77. Keller suggests that, even if sampling at the Site missed contamination, the Agency's comments on the issue are "irrelevant." Keller Brief at 26. Keller argues that it concluded that contamination at SB-5 likely resulted from an overfill and further argues that the State Fire Marshal attributes releases from the diesel UST to piping and overfills. *Id*., citing Tr. at 135. Keller claims that "[t]he data is consistent with that determination." Keller Brief at 26.

Engineering Practices and Principles of Geology

Keller states that the Board's regulations provide the standard by which the Agency reviews plans, budget, and reports submitted to it: [t]he overall goal of the technical review of reports must be to determine if the plan has been fully implemented in accordance with *generally accepted engineering practices or principles of professional geology*." Keller Brief at 27 (emphasis in original), citing 35 Ill. Adm. Code 734.510. Keller claims that it provided testimony showing that early action sampling, soil boring installation and sampling, monitoring well installation and sampling, and the proposed Stage 2 Site Investigation Plan all comply with Board regulations, engineering practices, and principles of geology. Keller Brief at 27, citing Tr. at 58-61, 150, 180-82. Keller states that "[t]he Agency has presented no evidence and provided no witnesses at the hearing to support a contrary position." Keller Brief at 27.

Stage 2 Site Investigation Budget

Keller also disputes the Agency's rejection of the Stage 2 Site Investigation Budget. Keller Brief at 28, citing R. at 261-62. First, Keller notes that the Agency rejected the costs of SB-4 and SB-5 and the costs to analyze soil samples collected from them. Keller Brief at 28. Keller claims that "the Agency incorrectly rejected the location of SB-4 and SB-5 and incorrectly determined that soil samples from the monitoring wells should not have been analyzed." *Id*. Although Keller acknowledges that it analyzed soil samples from MW-5 on the basis of a

clerical error, Keller claims that "the costs related to the other monitoring wells and SB-4 and SB-5 are reimbursable." *Id*., citing Tr. at 8.

Second, Keller notes that Agency rejected costs associated with installation of monitoring wells. Keller Brief at 28. Keller states that "the Agency incorrectly decided that the wells were not installed properly. *Id*., citing R. at 261. Keller argues that it has shown that it properly installed the wells and that the costs to install them should be approved. Keller Brief at 28.

Third, Keller states that the Agency rejected costs of preparing a Stage 1 budget because they are not required. Keller Brief at 28, citing R. at 261. Although Keller agrees that Stage 1 budgets are not required, Keller argues that the costs of Stage 1 investigations and or preparing a reimbursement request are both reimbursable under the Board's UST regulations. Keller Brief at 28-29, citing 35 Ill. Adm. Code 734.625(a), 734.625(a)(14). Keller notes that it presented information on its Stage 1 costs to the Agency but did not request a reimbursement of those costs. Keller Brief at 29, citing R. at 41-66. Consequently, on this matter Keller "consider the Agency's comment merely advisory." Keller Brief at 29.

Fourth, Keller notes that the Agency rejected the budget for the Stage 2 investigation of the Site because it had rejected the underlying plan. Keller Brief at 29, citing R. at 261. Keller claims that the Agency erroneously rejected the proposed plan and that "the plan and associated budget should be approved." Keller Brief at 29.

AGENCY'S POST-HEARING BRIEF

The Agency argues that the information submitted by Keller "fully supports" the Agency's rejection of Keller's Stage 2 Site Investigation Plan and Budget. Agency Brief at 3. The Agency further argues that Keller "failed to demonstrate that the information they submitted to the Illinois EPA and upon which the Illinois EPA based its decision supported any other conclusion than that reached by the Illinois EPA when it issued its May 17, 2007 decision letter." *Id*. In addition, the Agency claims that Keller has presented evidence that is not contained with the administrative record of the proceeding and that was not before the Agency when it decided to reject Keller's plan and budget. *Id*.; *see* R. at 256-63.

The Agency states that its "May 17, 2007 decision letter does not state that the work performed by he Petitioner was not done in accordance with generally accepted engineering practices or principles of professional geology." Agency Brief at 7, citing R. at 256. The Agency claims that the record shows that Keller's plan did not fully comply with the Act and applicable regulations or exceeded their minimum requirements, making the itemized activities in the decision letter ineligible for reimbursement from the Fund. Agency Brief at 7, citing 35 Ill. Adm. Code 734.630(o). The Agency further states that "'[b]y approving the 45-Day Report that icnludes the Stage 1 certification, the Illinois EPA is not approving the Stage 1 activities at the site [and] foreclosing further review of said activities." Agency Brief at 8. The Agency argues that "[activities performed at the site and submitted as part of the Stage 1 Executive Summary in the Stage 2 proposed plan showed that activities for Stage 1 were not conducted in accordance with the minimum requirements to comply with Section 734.315." *Id*. at 9, citing 35

Ill. Adm. Code 734.315. The Board below separately summarizes the Agency's arguments on the issues raised in this appeal.

Monitoring Wells

The Agency argues that the Board's regulations require monitoring wells to be "screened at an interval to allow sampling only at the desired interval." Agency Brief at 15, citing 35 Ill. Adm. Code 734.430(a). For gasoline indicator contaminants such as benzene that are lighter than groundwater, the Agency claims that the well screens must be set to intersect the top layer of groundwater in the well. Agency Brief at 15. The Agency further claims that, "[w]hen the well screen is submerged in the well, the groundwater being sampled is below where most petroleum contaminants are likely to be observed." *Id*. The Agency argues that the record demonstrates that the wells screens at the Site are submerged. *Id*. at 15-16, citing R. at 89.

Addressing specific monitoring wells, the Agency notes that, at MW-1, depth to water is 97.75 feet static. Agency Brief at 16, citing R. at 102 (well completion report). The Agency claims that the top of the ten-foot screen at MW-1 is situated at a depth of 95.50 feet, submerging the screen 2.25 feet below the surface of the groundwater. Agency Brief at 16, citing R. at 102. The Agency argues that "[i]f the screen is submerged 2.25 feet below the surface, the well is not constructed in a manner that will enable the collection of representative groundwater samples. Nor is it screened to allow sampling only at the desired interval." Agency Brief at 16-17, citing 35 Ill. Adm. Code 734.430. The Agency further argues that the tops of the well screens at MW-2, MW-3, MW-4, and MW-5 are also submerged below the surface of the groundwater, making them also unable to provide sampling at the desired interval or to allow the collection of representative groundwater samples. Agency Brief at 17.

The Agency disagrees with Keller's claim that the monitoring wells would be dry if constructed according to the Agency's specifications. Agency Brief at 16. Referring to monitoring well construction diagrams, the Agency argues that even a significant drop in the groundwater level would not have cause a dry well. Agency Brief at 16, citing R. at 89. Although the Agency claims that Keller fails to support its own conclusion that water levels rose in the monitoring wells as a result of hydro-static pressure, the Agency argues that even this unsupported conclusion makes it "very unlikely" that raising the screens would result in dry wells. Agency Brief at 16, citing R. at 173. Specifically, the Agency claims that, if Keller raised the top of the well screens above the groundwater surface level, there would remain "adequate screen interval below the surface to collect the necessary samples of the contaminants." Agency Brief at 17.

The Agency notes that Keller installed wells at the Site on July 12, 2006. Agency Brief at 15, citing R. at 102-07. The Agency claims that it is common after installation to wait "for a few days for the well to stabilize to a natural groundwater flow state after boring into the soil and setting the well, which can disrupt the groundwater at that location." Agency Brief at 15. The Agency suggests that it is common to record groundwater elevation and collect samples only after this stabilization has occurred. *See id*.; citing R. at 93-94. At the Site, however, the Agency notes that Keller allowed only two days for this stabilization to occur. Agency Brief at 15-16, citing R. at 111. The Agency argues that, "by not allowing the water in the well to recharge after

drilling and by placing the screens in the wells to the depth of groundwater during drilling, instead of placing the screens in the wells to the depth of groundwater after drilling, the wells were not screened in a manner to satisfy the requirements of Section 734.430." Agency Brief at 18, citing 35 Ill. Adm. Code 734.430.

The Agency expresses surprise that the person who supervised field work at the Site testified "that the wells were not screened as she intended" and that "she's not sure what strata is producing the groundwater." Agency Brief at 18, citing Tr. at 122, 123. The Agency suggests that this testimony conflicts with information submitted by Keller and locating groundwater in the silty clay layer. Agency Brief at 18. The Agency argues that this testimony "is irrelevant to the question before the Board as to whether the Illinois EPA made the correct decision based upon the record it had in front of it at the time." Agency Brief at 19.

The Agency dismisses Keller's argument that constructing wells to allow for sampling only at the desired interval would violate the requirement that the well screen be submerged to analyze hydraulic conductivity. Agency Brief at 18, citing 35 Ill. Adm. Code 734.315(a)(2)(E)(ii), 734.430. The Agency claims that it did not reject Keller's plan on the basis of the hydraulic conductivity analysis. The Agency characterizes Keller's argument as "a red herring to distract the Board from the real issue" and argues that "the issues are defined by the Illinois EPA decision letter." Agency Brief at 18; *see* R. at 256-63.

The Agency discounts Keller's statement that the Agency "has approved monitoring wells where the water level rose above the top of the well screen at two other sites." Agency Brief at 33, citing Keller Brief at 15. The Agency argues that Ms. Rowe's testimony at hearing admits that the geologies at those two sites differ from the geology at the Keller site. Agency Brief at 33-34, citing Tr. at 105-07, 109. The Agency further argues that Ms. Rowe also admitted that Keller did not produce a complete record of the two sites and, at one site, provided documentation for only two of an estimated 30 monitoring wells. Agency Brief at 34, citing Tr. at 110. Claiming that Keller has selectively offered data from only two sites of the hundreds handled by the Agency, the Agency argues that "the Board should find this argument unpersuasive." Agency Brief at 34.

The Agency argues that testimony on the issue of monitoring wells offered on behalf of Keller by Ms. Carol Rowe failed to cast persuasive doubt on the Agency's decision and even confirmed elements of the record upon which the Agency had relied. Agency Brief at 30. First, the Agency claims that Ms. Rowe admitted that Keller had not determined groundwater depth after drilling and before installing monitoring wells. Agency Brief at 32, citing Tr. at 120. The Agency argues that this made it more difficult to set well screens at the proper depth and violates Board regulations. Agency Brief at 32, citing 35 Ill. Adm. Code 734.425(c)(6).

The Agency notes that Ms. Rowe's testimony acknowledges the possibility that the silty clay layer at the Site produced water. Agency Brief at 32, citing Tr. at 122. The Agency argues that this acknowledgement "appears to contradict the testimony of the Petitioner's own witness Mr. St. John." Agency Brief at 32. The Agency further argues that Ms. Rowe testified that Keller submitted information to the Agency stating "that groundwater was located in the silty clay layer because it was saturated during drilling." *Id*. at 32-33, citing Tr. at 122. The Agency

claims that Ms. Rowe agrees that Keller did not submit any information contradicting its original statement that groundwater was located in the silty clay layer. Agency Brief at 32, citing Tr. at 122. The Agency argues that she has thus admitted that Keller never submitted anything to the Agency stating that it found groundwater in the sand layer instead. Agency Brief at 32. The Agency suggests that, in the absence of a submission of this kind, it had no sound basis on which it could conclude that groundwater at the Site is present under confined conditions or that hydrostatic pressure raised the level of the water column in the well. *Id*. at 33. The Agency further suggests that, without this information from Keller, the Agency lacked data that play an important role in determining whether field activities at the Site are consistent with generally acceptable engineering practices. *Id.*

The Agency also notes Ms. Rowe's testimony "that she did not intend for the well screen to be submerged within the well." Agency Brief at 33, citing Tr. at 123. The Agency characterizes this testimony as being consistent with its own position on well construction. Agency Brief at 33. The Agency argues that these submerged wells are not consistent with the requirements of the Board's regulations and do ensure the most representative sampling of groundwater. *Id*., citing 35 Ill. Adm. Code 734.430(a)(1), 734.430(a)(3).

The Agency also dismisses the testimony on the issue of monitoring wells offered on behalf of Keller by Mr. Ron St. John. First, the Agency disputes Mr. St. John's "opinion that indicator contaminants found in gasoline generally migrate downward when dissolved in groundwater." Agency Brief at 29. While the Agency acknowledges that contaminants may migrate downward in a diving plume, the Agency argues that there was no testimony or other evidence that they do so at the Site. *Id*. The Agency stresses that, in its experience, indicator contaminant for gasoline and diesel weigh less than water and "the uppermost layer of the aquifer will be the most representative of the contamination located at the site." *Id*. at 30.

Second, the Agency argues that nothing in the record supports Mr. St. John's claim that saturated groundwater at the Site is located in a sand layer 12 to 13 ½ feet below ground. Agency Brief at 28, citing Tr. at 21; *see* R. at 35 (groundwater elevation map), 37 (geologic cross section), 90-101 (drilling borehole logs), 224-25 (drilling borehole logs). The Agency further argues that Mr. St. John agreed that groundwater can infiltrate a silty clay layer, suggesting that groundwater at the Site may enter the well above the sand layer. Agency Brief at 29, citing Tr. at 72. The Agency further suggests that Mr. St. John could not reconcile the hydraulic conductivity he expected for the porous grain found at a depth of 12 to 13 ½ feet with the hydraulic conductivity submitted by Keller with its plan. Agency Brief at 29, citing Tr. at 72; *see* R. at 13 (Site Specific Physical Parameters).

After claiming that Mr. St. John's testimony has been found unreliable by a federal court, the Agency argues that Mr. St. John did not visit the Site, and either failed to review the entire record or used facts within it selectively in order to reach conclusions favoring Keller. Agency Brief at 28, citing LeClerq v. Lockformer Co., 2005 WL 1162979 (N.D. Ill. 2005). The Agency claims that "Mr. St. John's testimony should be ignored by the Board for its unreliabilty." Agency Brief at 30. The Agency further claims that, because Mr. St. John offered testimony that was not part of the record and not before the Agency when it reviewed Keller's plan, his testimony should be struck. *Id*.

The Agency argues that "[t]he Stage 1 monitoring well construction diagrams provided in the Stage 2 plans indicate the wells were not screened properly to allow for sampling at the desired interval." Agency Brief at 8, citing R. at 89. The Agency continues by arguing that, "[d]ue to this fact, a Stage 2 plan for determining the full extent of groundwater contamination resulting form the release can not be formulated based on the data provided from these improperly screened wells." Agency Brief at 8. The Agency claims that the record "clearly supports" its decision that monitoring wells constructed by Keller did not allow samples to be taken at the desired interval and thus did not comply with the Board's regulations. Agency Brief at 19, citing 35 Ill. Adm. Code 734.430.

Soil Borings

Generally, the Agency argues that Board regulations concerning early action require the owner or operator removing a UST to collect excavation samples and piping run samples during removal. These samples determine whether any contamination that is discovered meets Tier 1 remediation objectives. Agency Brief at 10, citing 35 Ill. Adm. Code 734.210(h). The Agency further argues that, if excavation samples and piping run samples meet those objectives, then the Agency issues a No Further Remediation letter to the owner or operator. Agency Brief at 10, citing 35 Ill. Adm. Code 734.201(h)(3). The Agency claims that "[t]his provides regulatory authority for the Illinois EPA to accept piping run samples as acceptable samples to determine if soil surrounding the underground storage tank system meet remediation objectives." Agency Brief at 10.

Soil Boring Locations

The Agency argues that the Board must determine whether soil borings drilled by Keller during the Stage I investigation of the Site exceeded the minimum requirements of the Act and the Board's regulations. Agency Brief at 9-10, citing 35 Ill. Adm. Code 734.315. The Agency argues that the Board's regulations regarding a Stage 1 soil investigation require up to four borings around each UST field. Agency Brief at 22, citing 35 Ill. Adm. Code 734.315(a). The Agency further argues that a witness for Keller interpreted these regulations as requiring placement of the borings "in the direction of the contamination emanating from tank excavation." Agency Brief at 22, citing Tr. at 163.

With regard to specific borings, the Agency first argues that SB-4 exceeded minimum requirements of the Act and applicable regulations "because the wall of the excavation closest to SB4 was clean during early action." Agency Brief at 10, citing R. at 99. The Agency claims that, because the nearest excavation wall was clean, "SB4 did not need to be drilled under the regulations." Agency Brief at 11. The Agency argues that contamination revealed by excavation samples N-1 and N-2 as demonstrated by the Petitioner as *not* emanating from the tank excavation in the northern direction." Agency Brief at 22 (emphasis in original).

The Agency claims that Keller acknowledged placing SB4 in an incorrect position on a map submitted to the Agency. *Id.*, citing R. at 157; *see* R. at 170. The Agency further claims that, even after Keller stated that it would correct that error, SB4 remained in the same location

in a map filed later with additional information. Agency Brief at 11, citing R. at 28, 214. The Agency also argues that Keller has acknowledged submitting maps that contained errors and that are not consistent with one another. Agency Brief at 11, citing Tr. at 152-53. The Agency claims that, even after amending the location of SB-4, that boring "still attempts to further define contamination emanating northward." Agency Brief at 22. The Agency agues that, because only the single tank basin excavation sample E-1 exceeded the most stringent remediation objectives, the Board's regulations require only the drilling of SB-3. *Id*., citing 35 Ill. Adm. Code 734.315(a)(1)(A). The Agency concludes that "[a]ny other soil boring such as SB-4 exceeds the minimum requirements of the Act and regulations" and is therefore ineleiglbe for reimbursement. Agency Brief at 22, citing 35 Ill. Adm. Code 734.630(o). With regard to SB-4, the Agency suggests that it reached a correct decision on the basis of information supplied by Keller and that the consequences of any inaccuracies or errors in that information should fall on Keller as the source of that information. *See* Agency Brief at 11.

The Agency argues that SB-5 also "exceeded the minimum requirements of the Act and regulations because no contamination was found during early action in the excavation wall in that area." Agency Brief at 11, citing Exh. 1. The Agency claims that Keller has acknowledged that the SB-5 and SB-6 were placed to define contamination from sample D-7, which was incorrectly identified as contaminated, and not from sample D-10, at which contamination required definition. Agency Brief at 11, citing R. at 170. The Agency argues that a Keller witness has acknowledged that SB-5 was drilled as a result of "clerical error." Agency Brief at 22, citing Tr. at 154.

The Agency dismisses the claim "that contamination noted as the result of drilling SB-5 should make the boring an acceptable location for fulfilling the requirements of Section 734.315(a)(1)(A)." Agency Brief at 23, citing 35 Ill. Adm. Code 734.315(a)(1)(A). The Agency notes that samples from the diesel tank excavation in that vicinity did not exceed the most stringent remediation objectives. Agency Brief at 23. Because the applicable regulation prescribes borings where excavation samples exceed the most stringent objectives, the Agency argues that SB-5 exceeded the minimum requirements of the Act and regulations and is not reimbursable. *Id*., citing 35 Ill. Adm. Code 734.315(a)(1)(A), 734.630(o).

The Agency claims that borings including SB-5 "should have been drilled in the area of the piping run and not near the excavation." Agency Brief at 11. The Agency disputes Keller's claim that SB-5 is appropriate because it detected benzene and because it is located to the northwest of D-10 and naphthalene contamination found there. Specifically, the Agency argues that Keller failed to link the benzene detected by SB-5 to the nearby diesel tank when early action excavation at that tank did not identify benzene as a contaminant of concern. Agency Brief at 12. The Agency also disputes Keller's claim by noting that "the only contaminant of concern in the area was naphthalene." *Id*.

The Agency states that the Board's regulations governing Stage 1 site investigations require that "borings must be advanced through the entire vertical extent, based on field observations." Agency Brief at 12, citing 35 Ill. Adm. Code 734.315(a)(1). The Agency further states that Keller has claimed that it based the location and depth of its borings on samples collected during early action and on field observation. Agency Brief at 12. The Agency argues

that Keller has acknowledged advancing SB-5 and SB-6 in an incorrect area in order to define soil contamination from excavation sample D-7, which was incorrectly logged as contaminated. *Id*.; *see* R. at 170. The Agency claims that "[i]t is unclear what field observation and data from sampling was used, as borings were placed in areas previously defined by early action samples." Agency Brief at 12.

The Agency states that Keller submitted no data with regard to contamination ten feet below the surface. Agency Brief at 12. The Agency notes that Keller's 45-Day Report indicated that it could not collect samples required by the Board's regulations because there was groundwater at the bottom of the excavation. *Id*, citing 35 Ill. Adm. Code 734.210(h), Exh. 1. The Agency suggests that, in the absence of these samples from the floor of the excavation, there is no way to determine conclusively whether there had been a release there. *See* Agency Brief at 12. The Agency stresses that "the excavation sidewalls did not show contamination in the diesel excavation and the piping runs samples did not demonstrate contamination from the piping runs." *Id*. at 13. The Agency argues that this data provide an adequate basis to define contamination in the unsaturated soils "without further sampling." *Id*.

Monitoring Well Soil Samples

The Agency first notes Keller's stipulation that analysis of soil samples from MW-5 was not necessary. Agency Brief at 13, citing Tr. at 8. The Agency then argues that soil samples from MW-1, MW-2, MW-3, and MW-4 exceed the applicable minimum requirements. Agency Brief at 13. The Agency claims that Board regulations require examination of soil samples from monitoring wells, "provided that the samples must not be analyzed if other soil samples conducted to date indicate that soil contamination does not extend to the location of the monitoring well installation boring." *Id*., citing 35 Ill. Adm. Code 734.315(a)(2)(C). In this case, the Agency argues that "soil samples taken from the soil borings defined the area of contamination." Agency Brief at 13. The Agency claims that "[s]oil samples are not required from the monitoring well borings because sampling conducted from the soil borings indicated soil contamination did not extend to that area." *Id*. The Agency argues that Keller sought to justify these monitoring well samples by explaining that "it was more convenient to take all of the samples at once and not wait for the results to see if more sampling was needed." Agency Brief at 13, citing Tr. at 167. The Agency claims that Keller's witness admitted knowing that this practice was contrary to the Board's regulations. Agency Brief at 13.

The Agency disputes Keller's statement that it sampled MW-2, MW-4, and MW-5 "to further define the contamination from sample D-10 (the diesel piping excavation)." Agency Brief at 24, citing R. at 171. The Agency argues that, when Keller sampled those three wells for soil contamination, Keller believed that it was determining contamination from sample D-7 and not from D-10. Agency Brief at 24. The Agency states that, in response to its October 15, 2006 denial letter (R. at 157-64), Keller advanced SB-7 and SB-8 "[i]n order to further define the piping run sample D-10." *Id*., citing 35 Ill. Adm. Code 734.315(a)(1)(B). The Agency argues that these additional borings were necessary to meet soil boring requirements but had been omitted from Keller's original activities. Agency Brief at 24. The Agency further argues that "[c]onducting additional sampling because the first set of sample locations were not placed in

accordance with the regulations does not make the additional activities eligible for reimbursement." *Id*. at 24-25.

The Agency states that Stage 2 site investigations complete identification of the extent to which soil and groundwater contamination at the Site exceed the most stringent Tier I remediation objectives for applicable indicator contaminants. Agency Brief at 25, citing 35 Ill. Adm. Code 734.320. In this instance, the Agency argues that Stage 1 investigation has sahown contamination to extend to MW-2. Agency Brief at 25. The Agency further argues that Keller should not collect samples where it has already found contamination to have occurred and should collect samples during Stage 2 only in order "to identify the further extent of the soil and groundwater plume." *Id*. The Agency claims that any additional sampling that does not identify this further extent exceeds the minimum requirements of the Act and regulations. *Id*., citing 35 Ill. Adm. Code 734.630(o).

Proposed Additional Soil Borings

Although the Agency notes that Keller proposed additional soil borings, the Agency argues that "[t]hese proposed borings are not reimbursable under the Act and regulations." Agency Brief at 14, citing R. at 29 (proposed soil boring location map). The Agency claims that a proposed soil boring south of the pump island exceeds applicable minimum requirements "because the wall of the early action excavation was clean, as was MW-1." Agency Brief at 14, citing Exh. 1. The Agency further claims that soil borings between the tank field and MW-2 also exceed those regulations because MW-2 exceeds clean-up objectives, demonstrating that contamination extends beyond the proposed borings. Agency Brief at 14. The Agency also notes that Keller proposes additional borings in the vicinity of SB-5 on the basis of benzene detected there. *Id*. The Agency claims that Keller failed to link the benzene detected by SB-5 to the nearby diesel tank, noting that early action excavation at that tank did not identify benzene as a contaminant of concern. Agency Brief at 12, 14. The Agency also disputes Keller's claim by noting that "the only contaminant of concern in the area was naphthalene." *Id*., citing Exh. 1.

With regard to these additional soil borings, the Agency notes Keller's argument that piping run samples "are not deep enough to sample the entire vadose zone." Agency Brief at 14, citing R. at 171. The Agency responds that piping run samples determine whether the piping run has leaked. Agency Brief at 14. The Agency further claims that, because the walls of the excavation facing the piping run and the piping run samples themselves were both clean, no further sampling is required. *Id*., citing 35 Ill. Adm. Code 734.210(h)(1)(C). The Agency states that Keller appears to argue that, if piping run samples determine the extent of contamination, then "the Board's regulations are not expansive enough to cover contamination throughout the vadose zone." Agency Brief at 14. The Agency claims that this argument would be more appropriately addressed in a rulemaking procedure as a proposal to amend the Board's UST regulations. *Id*.

The Agency states that, despite certifying that it would conduct Stage 1 activities according to the Board's regulations, Keller "failed to do so." Agency Brief at 9, citing 35 Ill. Adm. Code 734.315. The Agency argues that the record "clearly supports" its decision that soil

boring at the Site exceeded the minimum requirements of the Act and cannot be reimbursed from the Fund. Agency Brief at 15.

Stage 2 Site Investigation Budget

Noting that it has not approved a Stage 2 Site Investigation plan, the Agency argues that "a proposed budget may not be approved unless the corresponding plan is approved." Agency Brief at 19. The Agency further argues that the applicable statutory and regulatory authorities and the administrative record support its decision to reject Keller's proposed budget. *Id*. at 21.

The Agency states that the Board's regulations specify in detail those items that are both eligible and ineligible for reimbursement from the Fund. Agency Brief at 19, citing 35 Ill. Adm. Code 734.625, 734.630. The Agency further states that those regulations provide specific requirements for the performance of Stage 1 and Stage 2 site investigations. Agency Brief at 20, citing 35 Ill. Adm. Code 734.315, 734.320. The Agency claims that any activities not specifically required by those authorities exceed the minimum requirements necessary to comply with the Act and the Board's regulations. Agency Brief at 20. The Agency further claims that, "[p]ursuant to [Section] 734.630(o), costs for corrective action and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund." *Id*. at 19-20, citing 35 Ill. Adm. Code 734.630(o).

The Agency also states that the Stage 1 site investigation must be conducted on the basis of data obtained during early action. Agency Brief at 20, citing 35 Ill. Adm. Code 734.210. The Agency states, although requirements for site investigations are based specifically on excavation samples, Keller "claimed at hearing that they missed the contamination." Agency Brief at 20, citing Tr. at 131-34, 137. The Agency argues that "missing contamination" violates the Board's regulations and provides no basis to approve costs related to this non-compliance. Agency Brief at 20, citing 35 Ill. Adm. Code 734.210(h), Tr. at 125 *et seq*. (Weinhoff testimony).

The Agency further states that the Board's regulations prescribe monitoring well construction requirements. Agency Brief at 20-21, citing 35 Ill. Adm. Code 734.430. The Agency argues that, in this case, "[t]he monitoring wells were not constructed in a manner that allows for the screen to be placed at the desired interval." Agency Brief at 21. Having concluded that Keller's wells do not comply with the Board's regulations, the Agency states that it cannot determine the validity of the samples drawn from them. *Id*. Accordingly, since Keller did not satisfy the Board's Stage 1 regulations, the Agency states that "[a]ctivities for Stage 2 may not proceed until all the requirements of Stage 1 have been satisfied." Agency Brief at 19. The Agency further states that "costs associated with improperly installed sampling or monitoring wells are not eligible for payment from the Fund." *Id*. at 20, citing 35 Ill. Adm. Code 734.630(p).

KELLER'S REPLY BRIEF

Keller emphasizes that, after acknowledging and correcting a limited number of its own errors, it continues to contest the Agency's decisions on the issues of monitoring well

construction, analysis of samples from four monitoring wells, two soil borings, and the Stage 2 site investigation and budget. Reply at 2. Specifically, Keller claims that its

> monitoring wells were installed in accordance with all applicable regulatory requirements, the soil boring samples were drilled in compliance with Part 734, soil samples that were collected while the monitoring wells were being installed were correctly submitted for analysis, and the proposed additional Stage 2 site investigation plan and budget comply with applicable regulations. *Id*.

The Board below separately summarizes Keller's arguments on these issues.

Monitoring Wells

Well Construction

Keller argues that the record demonstrates that the monitoring wells at the Site were screened to intersect the desired groundwater level. Reply at 4. Keller states that borings first encountered moisture approximately 10 feet below ground surface and found a lithology of wet sand between approximately 12 and 13 ½ feet below ground surface. Specifically, Keller argues that borehole logs generally showed clayey silt beginning two to three feet below ground surface and extending to 11 ½ feet below ground surface. Reply at 4-5, citing R. at 90-94. Keller further argues that this clayey silt became moist at a depth of nine and one-half to 10 ½ feet below ground surface. Reply at 4-5, citing R. at 90-94. Keller further argues that the logs show a saturated zone of very fine sand from a depth of 12 to 13 ½ feet below ground surface. Reply at 4-5, citing R. at 90-94, Tr. at 30, 90. Keller accounts for the moist layer above that zone as being "likely the capillary fringe, which is an area above an aquifer that becomes moist due to capillary action of water rising into the soil layer." Reply at 5, citing Exh. 4 (glossary of hydrology). Keller claims that the record demonstrates that its well screens intersect both the saturated sandy zone and the moist clayey silt above it. Reply at 5, citing R at 90-94, 102-06; Tr. at 34, 48, 88-91, 123-24. Keller argues that "because the wells were screened where the wet sand was located, they were screened in accordance with IEPA regulations and samples from the desired groundwater interval could be and, in fact, were collected." Reply at 5-6, citing Tr. at 34, 47-48, 94, 96-97.

Keller disputes the Agency's position "that the wells should have been screened at the water level in the wells, which is the static water level." Reply at 6. For the five monitoring wells at the Site, Keller argues that the depth to groundwater ranges from 2.25 to 4.36 feet below ground surface. *Id*., citing R. at 102-06. Keller claims that bore hole logs show "that the clayey silt located at the same elevation as the static water level is not wet and is not even moist. Thus, there is no water in the lithology at the same level as the static water level." *Id*.

Keller responds by arguing that the record clearly demonstrates that the groundwater producing layer at the Site begins at a depth of approximately ten feet below ground surface and becomes saturated in a sand seam at 12 to 13 ½ feet below ground surface. Reply at 10, citing R. at 90-94, Tr. at 81, 97. Because this wet sand seam is the water-bearing unit closest to the ground surface and most likely to become contaminated by releases from USTs, Keller claims

that it is the water-bearing unit of interest. Reply at 10-11, citing R. at 90-94. After stating that it screened the wet sand seam and the moist zone above it for sampling, Keller argues that "[t]he Agency never presented any evidence that the desired groundwater level is located anywhere else." Reply at 11, citing R. at 102-06; Tr. at 81, 88-91, 121.

Keller disputes the Agency's apparent view that, where there exists a confined aquifer, "water can enter through a well screen located at the same elevation as the static water level in the well." Reply at 11, citing R. at 258; Tr. at 29-30. After noting that borehole logs do not show wetness or moisture at the static water level, Keller argues that water cannot enter the well at that level if it is not present in the lithology at that level. Reply at 11, citing R. at 90-94, 102-06. Although acknowledging that static water level can be used to determine the hydraulic gradient and groundwater flow, Keller argues that

> the static water level for a confined aquifer, such as the one at this site, is no more representative of the location of the groundwater interval in the lithology for sampling purposes, than is groundwater that is pumped from the well, contained in a sample jar, and place on a table. In both cases the position of the water is different than where it was originally located in the lithology. Reply at 11-12.

Keller further argues that its witnesses testified that the well screens had been properly placed (Reply at 12 n.6, citing Tr. at 47-48, 94, 96-97) and that the Board's regulations "do not prohibit submerging the well screens" (Reply at 12 n.6, citing Agency Brief at 33. Keller concludes by claiming that "[t]he Agency's arguments that the monitoring wells should have been screened at the level of the water in the wells are erroneous and contrary to generally accepted professional engineering practices and principles of professional geology."

Keller disputes the Agency's emphasis on the issue of the hydraulic conductivity test at the Site. Specifically, Keller argues that the Agency was misguided in attempting to discredit Mr. St. John's testimony because he did not review in detail information about that test. Keller claims that he did not perform that review because the Agency had accepted the results of that test, because the Agency's denial letter did not address that test, and because the test is not an issue in this appeal. Reply at 13. Keller also argues that the Agency has inappropriately sought to discredit Mr. St. John on the basis of a case in which he was found not to be an expert in wastewater treatment. Reply at 14, citing Agency Brief at 27-28. Keller argues that the court found Mr. St. John qualified to offer expert testimony of hydrogeology, the field in which he was presented as an expert in this case. Reply at 14, citing LeClerq v. Lockformer Co., 2005 WL 1162979 at * 3 (N.D. Ill. 2005). More generally, Keller argues that it offered his testimony to explain generally accepted principles of hydrogeology that "[t]he Agency does not understand." Reply at 21. Because the Agency did not contradict Mr. St. John's testimony, because the hearing officer admitted it, and because of his expertise in hydrogeology, Keller argues that his testimony should not be struck. *Id*.

Determining Groundwater Depth and Static Water Level

Keller casts doubt on the Agency's emphasis on obtaining the groundwater depth after drilling. Reply at 14-15. Keller argues that this request "demonstrates the Agency's lack of

experience and understanding of hydrogeology." *Id*. at 14. Keller argues that, "[g]enerally, static groundwater elevations do not stabilize on the date of well installation and well development procedures interfere with determination of static elevation." *Id*. at 14-15, citing R. at 11, Tr. at 32-33. Keller claims that the issue of groundwater depth after drilling, particularly in the case of a confined aquifer, "is not relevant." Reply at 14. In addition, Keller argues that did not raise this issue in it's denial letter, did not rely on it as a basis for rejecting the plan, and "should be precluded from raising it now." Reply at 15; *see* R. at 256-63.

Soil Samples

Soil Boring Locations

Keller claims that the Agency has attempted to apply a definition of "tank field" from Part 732 of the Board's UST regulations. Reply at 8; *see* Agency Brief at 21-22. Keller notes that Part 732 defines "tank field" as "all underground storage tanks at a site that reside within a circle with a 100 foot radius." Reply at 8, citing 35 Ill. Adm. Code 732.103 (definitions applying to releases reported between September 23, 1994 and June 23, 2002). Keller further notes that Part 734 does not define this term. Reply at 8; *see* 35 Ill. Adm. Code 734.115 (definitions applying to releases reported on and after June 24, 2002). Keller argues that, "[b]ecause the term 'tank field' does not appear in the Part 734 rules, and this site is not subject to Part 732, IEPA should not be allowed to use the definition."

Keller argues that, instead of the term "tank field," Part 734 uses the term "each independent UST field" in describing Stage 1 site investigations. Reply at 8. Specifically, Keller argues that the applicable Board regulations require "that up to four borings be 'drilled around each independent UST field where one or more UST excavation samples,' excluding backfill samples, exceed the most stringent TACO Tier 1 Remediation Objectives." *Id*., citing 35 Ill. Adm. Code 734.315(a)(1)(A). Noting that Part 734 does not define the term "each independent UST field," Keller argues that "the term should be given its plain, ordinary meaning." Reply at 8-9 (citations omitted); *see* 35 Ill. Adm. Code 734.115.

Keller claims that this plain, ordinary meaning "is that each separate tank basin that contains one or more USTs and associated piping is considered an independent UST field." Reply at 9. Keller further claims that, because excavation samples from two of the three independent UST fields at the Site showed indicator contaminants at concentrations greater than applicable objectives, the Board's regulations allow Keller to drill up to four borings around the gasoline UST excavation and up to four borings around the diesel UST excavation. *Id*., citing 35 Ill. Adm. Code 734.315(a)(1)(A). Also, because two piping runs also exceeded applicable remediation objectives, Keller claims that the Board's regulations allow Keller to drill up to two borings around the gasoline piping run and up to two borings around the diesel piping run. Reply at 9, citing 35 Ill. Adm. Code 734.315(a)(1)(B). Keller argues that these regulations allow it to drill as many as 12 soil borings during the Stage 1 site investigation. Reply at 9, citing 35 Ill. Adm. Code 734.315(A)(1(A), 734.315(a)(1)(B). Noting that it drilled a total of eight soil borings at the Site, Keller argues that the Agency's application of the term "tank field" should be struck because it does not apply to this release, because it was not cited in the denial letter as a basis for rejecting Keller's work, and because Keller drilled fewer than the number of samples

allowed by the Board's regulations. Reply at 9-10, citing 35 Ill. Adm. Code 734.315(a)(1); *see also* Reply at 15-16.

Keller disputes the Agency's argument that, "[s]ince only one tank basin excavation sample exceeded the most stringent remediation objectives, soil sample E-1, only one soil boring (SB-3) is needed per the minimum requirements of Section 734.315(a)(1)(A). Any other soil borings such as SB-4 exceeds the minimum requirements of the Act and its regulations." Reply at 16, citing Agency Brief at 22. Keller suggests that the Agency has misinterpreted the applicable regulations, arguing that the regulations provide for up to four borings around each independent UST field where one or more excavation samples exceeds them most stringent remediation objectives. Reply at 16, citing 35 Ill. Adm. Code 734.315(a)(1)(A).

Keller notes that it could not collect samples from the bottom of tank excavations at the Site because groundwater had infiltrated there. Reply at 16. Keller also notes a Board regulation providing that "[t]he Agency must allow an alternate location for , or excuse the collection of, one or more samples if sample collection in the following location is made impracticable by site-specific circumstances." *Id.*, citing 35 Ill. Adm. Code 734.210(h)(1). Keller stresses that the named locations include the excavation floor. Reply at 17, citing 35 Ill. Adm. Code 734.210(h)(1)(B). Keller argues that "additional samples were needed near the excavations to document whether a release occurred or not." Reply at 17. Keller further argues that "[t]he lack of samples collected from the bottom of the excavation cannot be used to demonstrate that there were no leaks from the diesel tanks nor can the lack of samples be used to determine that unsaturated soil had been adequately defined in that area." *Id.*

Specifically, Keller claims that, because it could not collect samples from the bottom of the diesel tank excavation to show that it was clean, it became necessary to drill SB-5 near that excavation because of a release associated with the diesel UST piping. Reply at 17, citing R. at 9; Tr. at 134, 176; Exh. 11. Keller also claims that, because it could not collect samples from the bottom of the gasoline tank excavation to show that it was clean, it became necessary to drill SB-4 "because no other data was available to document whether contamination migrated north from the sidewall sample E-1 in the gasoline tank excavation." Reply at 17. Keller concludes that it correctly drilled soil boring SB-4 and SB-5 and analyzed samples from them for contamination. *Id.*

Monitoring Well Soil Samples

Keller argues that, although the Agency claims that monitoring well soil samples did not need to be analyzed, the record does not support the Agency's "position that there was data available on the date the samples were collected to document that contamination did not extend to the locations of the monitoring wells." Reply at 17, citing Agency Brief at 23. Keller notes that it drilled soil borings and monitoring wells on the same day. Reply at 17, citing R. at 125-26. Keller argues that "it did not have available the results of the soil boring analyses before it was necessary to submit the soil samples from the monitoring wells to the lab for analysis." Reply at 17, citing Tr. at 136-42 (Wienhoff testimony). Keller further argues that, when it submitted soil samples from the monitoring wells for analysis, "there were no sample data available on the date the samples were collected that indicated that soil contamination did not

extend to the location where the monitoring wells were installed." Reply at 18, citing 35 Ill. Adm. Code 734.315(a)(2)(C).

Proposed Stage 2 Site Investigation Plan

Keller notes its testimony that a release form a piping run could sink deeper into the ground and that a piping run sample to a depth of only two to three feet below ground surface would not detect such a diving plume. Reply at 18, citing Tr. at 142-45; Exh. 12. Although the Agency claims "that clean piping run samples can be used to obtain an NFR letter," Keller suggests that the Agency misinterprets the applicable regulation. Reply at 19. Specifically, Keller claims that piping run samples can be the basis for an NFR letter only "when all of the Early Action samples meet the most stringent TACO Tier 1 cleanup objectives." *Id*., citing 35 Ill. Adm. Code 734.210(h)(3). Keller claims that, if any of those piping run samples exceed those objectives, the Board's regulations require steps including a Stage 1 site investigation and the collection of additional samples. Reply at 19, citing 35 Ill. Adm. Code 734.210(h)(4). Keller also argues that the Agency has ignored the requirement that soil borings must "be drilled through the entire vertical extent of contamination, based on filed observations, if a sample from the piping excavation is contaminated." Reply at 19, citing 35 Ill. Adm. Code 734.315(a)(1)(B).

Although Keller accepts the Agency's claim that evidence does not now show that there is a diving plume at the Site, Keller counters by arguing that it is the site investigation's purpose to determine whether one exists. Reply at 19, citing Agency Brief at 29. Keller argues that it must drill soil borings at the Site because Early Action activities found contamination from piping runs there. Reply at 19, citing 35 Ill. Adm. Code 734.315(a)(1)(B). Keller further argues that "shallow piping run samples cannot be used to determine if contamination exists throughout the entire vadose zone." Reply at 19-20. Keller concludes by arguing that,

> [w]ithout installing soils borings at greater depths than piping run samples, a site owner/operator will have no way of knowing whether a diving plume exists or not. The only way to know if one exists is to conduct the Stage 1 and Stage 2 investigations and to sample in areas where a diving plume would most likely be located. *Id*. at 20.

Keller also disputes the Agency's position regarding soil samples proposed to be taken between MW-2 and the gasoline pump island. Keller restates its testimony that contamination at MW-2 might meet Tier 2 Remediation Objectives after collection of additional data calculation of those objectives. Reply at 20, citing Tr. at 147-50. Keller argues that collection of the proposed samples will begin to delineate the area that exceeds remediation objectives and may reduce the size of the area that must be remediated. Reply at 20. Keller further argues that, "[s]ince in all likelihood the samples will need to be collected at some point n the future, it makes more sense and is more cost effective to collect the samples as part of the Stage 2 Site Investigation." *Id*., citing Tr. 147-50.

Stage 2 Site Investigation Budget

Keller again argues that, "[b]ecause the Agency's denial of the proposed budget is based on the Agency's erroneous denial of the proposed Stage 2 site investigation, the Board should approve the proposed budget." Reply at 21.

STATUTORY AND REGULATORY PROVISIONS

Section 734.210(h) of the Board's UST regulations, addressing early action activities with regard to releases reported on or after June 24, 2004, provides in pertinent part that:

> h) The owner or operator must determine whether the areas or locations of soil contamination exposed as a result of early action excavation (e.g., excavation boundaries, piping runs) or surrounding USTs that remain in place meet the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants.
>
> 1) At a minimum, for each UST that is removed, the owner or operator must collect and analyze soil samples as indicated in subsections (h)(1)(A) through (E). The Agency must allow an alternate location for, or excuse the collection of, one or more samples if sample collection in the following locations is made impracticable by site-specific circumstances.
>
> A) One sample must be collected from each UST excavation wall. The samples must be collected from locations representative of soil that is the most contaminated as a result of the release. If an area of contamination cannot be identified on a wall, the sample must be collected from the center of the wall length at a point located one-third of the distance from the excavation floor to the ground surface. For walls that exceed 20 feet in length, one sample must be collected for each 20 feet of wall length, or fraction thereof, and the samples must be evenly spaced along the length of the wall.
>
> B) Two samples must be collected from the excavation floor below each UST with a volume of 1,000 gallons or more. One sample must be collected from the excavation floor below each UST with a volume of less than 1,000 gallons. The samples must be collected from locations representative of soil that is the most contaminated as a result of the release. If areas of contamination cannot be identified, the samples must be collected from below each end of the UST if its volume is 1,000 gallons or more, and from below the center of the UST if its volume is less than 1,000 gallons.
>
> C) One sample must be collected from the floor of each 20 feet of UST piping run excavation, or fraction thereof. The samples must be collected from a location representative of soil that is the most contaminated as a result of the release. If an area of contamination

cannot be identified within a length of piping run excavation being sampled, the sample must be collected from the center of the length being sampled. For UST piping abandoned in place, the samples must be collected in accordance with subsection (h)(2)(B) of this Section.

D) If backfill is returned to the excavation, one representative sample of the backfill must be collected for each 100 cubic yards of backfill returned to the excavation.

E) The samples must be analyzed for the applicable indicator contaminants. In the case of a used oil UST, the sample that appears to be the most contaminated as a result of a release from the used oil UST must be analyzed in accordance with Section 734.405(g) of this Part to determine the indicator contaminants for used oil. The remaining samples collected pursuant to subsections (h)(1)(A) and (B) of this Section must then be analyzed for the applicable used oil indicator contaminants.

* * *

4) If the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants have not been met, or if one or more of the following criteria are met, the owner or operator must continue in accordance with Subpart C of this Part:

A) There is evidence that groundwater wells have been impacted by the release above the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants (e.g., as found during release confirmation or previous corrective action measures);

B) Free product that may impact groundwater is found to need recovery in compliance with Section 734.215 of this Part; or

C) There is evidence that contaminated soils may be or may have been in contact with groundwater, unless:

i) The owner or operator pumps the excavation or tank cavity dry, properly disposes of all contaminated water, and demonstrates to the Agency that no recharge is evident during the 24 hours following pumping; and

ii) The Agency determines that further groundwater investigation is not necessary. 35 Ill. Adm. Code 734.210(h).

Section 734.315 of the Board's UST regulations, addressing Stage 1 Site Investigations for releases reported on or after June 24, 2004, provides that:

> The Stage 1 site investigation must be designed to gather initial information regarding the extent of on-site soil and groundwater contamination that, as a result of the release, exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants.
>
> a) The Stage 1 site investigation must consist of the following:
>
> 1) Soil investigation.
>
> A) Up to four borings must be drilled around each independent UST field where one or more UST excavation samples collected pursuant to 734.210(h), excluding backfill samples, exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants. One additional boring must be drilled as close as practicable to each UST field if a groundwater investigation is not required under subsection (a)(2) of this Section. The borings must be advanced through the entire vertical extent of contamination, based upon field observations and field screening for organic vapors, provided that borings must be drilled below the groundwater table only if site-specific conditions warrant.
>
> B) Up to two borings must be drilled around each UST piping run where one or more piping run samples collected pursuant to Section 734.210(h) exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants. One additional boring must be drilled as close as practicable to each UST piping run if a groundwater investigation is not required under subsection (a)(2) of this Section. The borings must be advanced through the entire vertical extent of contamination, based upon field observations and field screening for organic vapors, provided that borings must be drilled below the groundwater table only if site-specific conditions warrant.
>
> C) One soil sample must be collected from each five-foot interval of each boring drilled pursuant to subsections (a)(1)(A) and (B) of this Section. Each sample must be collected from the location within the five-foot interval that is the most contaminated as a result of the release. If an area of contamination cannot be identified within a five-

foot interval, the sample must be collected from the center of the five-foot interval. All samples must be analyzed for the applicable indicator contaminants.

2) Groundwater investigation.

A) A groundwater investigation is required under the following circumstances:

i) There is evidence that groundwater wells have been impacted by the release above the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants;

ii) Free product that may impact groundwater is found to need recovery in compliance with Section 734.215 of this Part; or

iii) There is evidence that contaminated soils may be or may have been in contact with groundwater, except that, if the owner or operator pumps the excavation or tank cavity dry, properly disposes of all contaminated water, and demonstrates to the Agency that no recharge is evident during the 24 hours following pumping, the owner or operator does not have to complete a groundwater investigation, unless the Agency's review reveals that further groundwater investigation is necessary.

B) If a groundwater investigation is required, the owner or operator must install five groundwater monitoring wells. One monitoring well must be installed in the location where groundwater contamination is most likely to be present. The four remaining wells must be installed at the property boundary line or 200 feet from the UST system, whichever is less, in opposite directions from each other. The wells must be installed in locations where they are most likely to detect groundwater contamination resulting from the release and provide information regarding the groundwater gradient and direction of flow.

C) One soil sample must be collected from each five-foot interval of each monitoring well installation boring drilled pursuant to subsection (a)(2)(B) of this Section. Each sample must be collected from the location within the five-foot interval that is the most contaminated as a result of the

release. If an area of contamination cannot be identified within a five-foot interval, the sample must be collected from the center of the five-foot interval. All soil samples exhibiting signs of contamination must be analyzed for the applicable indicator contaminants. For borings that do not exhibit any signs of soil contamination, samples from the following intervals must be analyzed for the applicable indicator contaminants, provided that the samples must not be analyzed if other soil sampling conducted to date indicates that soil contamination does not extend to the location of the monitoring well installation boring:

i) The five-foot intervals intersecting the elevations of soil samples collected pursuant to Section 734.210(h), excluding backfill samples, that exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants.

ii) The five-foot interval immediately above each five-foot interval identified in subsection (a)(2)(C)(i) of this Section; and

iii) The five-foot interval immediately below each five-foot interval identified in subsection (a)(2)(C)(i) of this Section.

D) Following the installation of the groundwater monitoring wells, groundwater samples must be collected from each well and analyzed for the applicable indicator contaminants.

E) As a part of the groundwater investigation an in-situ hydraulic conductivity test must be performed in the first fully saturated layer below the water table. If multiple water bearing units are encountered, an in-situ hydraulic conductivity test must be performed on each such unit.

i) Wells used for hydraulic conductivity testing must be constructed in a manner that ensures the most accurate results.

ii) The screen must be contained within the saturated zone.

3) An initial water supply well survey in accordance with Section 734.445(a) of this Part.

b) The Stage 1 site investigation plan must consist of a certification signed by the owner or operator, and by a Licensed Professional Engineer or Licensed Professional Geologist, that the Stage 1 site investigation will be conducted in accordance with this Section.

c) If none of the samples collected as part of the Stage 1 site investigation exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants, the owner or operator must cease site investigation and proceed with the submission of a site investigation completion report in accordance with Section 734.330 of this Part. If one or more of the samples collected as part of the Stage 1 site investigation exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants, within 30 days after completing the Stage 1 site investigation the owner or operator must submit to the Agency for review a Stage 2 site investigation plan in accordance with Section 734.320 of this Part. 35 Ill. Adm. Code 734.315.

Section 734.320 of the Board's UST regulations, addressing Stage 2 Site Investigations for releases reported on or after June 24, 2004, provides that:

> The Stage 2 site investigation must be designed to complete the identification of the extent of soil and groundwater contamination at the site that, as a result of the release, exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants. The investigation of any off-site contamination must be conducted as part of the Stage 3 site investigation.
>
> a) The Stage 2 site investigation must consist of the following:
>
> 1) The additional drilling of soil borings and collection of soil samples necessary to identify the extent of soil contamination at the site that exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants. Soil samples must be collected in appropriate locations and at appropriate depths, based upon the results of the soil sampling and other investigation activities conducted to date, provided, however, that soil samples must not be collected below the groundwater table. All samples must be analyzed for the applicable indicator contaminants; and
>
> 2) The additional installation of groundwater monitoring wells and collection of groundwater samples necessary to identify the extent of groundwater contamination at the site that exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742

for the applicable indicator contaminants. If soil samples are collected from a monitoring well boring, the samples must be collected in appropriate locations and at appropriate depths, based upon the results of the soil sampling and other investigation activities conducted to date, provided, however, that soil samples must not be collected below the groundwater table. All samples must be analyzed for the applicable indicator contaminants.

b) The Stage 2 site investigation plan must include, but not be limited to, the following:

1) An executive summary of Stage 1 site investigation activities and actions proposed in the Stage 2 site investigation plan to complete the identification of the extent of soil and groundwater contamination at the site that exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants;

2) A characterization of the site and surrounding area, including, but not limited to, the following:

A) The current and projected post-remediation uses of the site and surrounding properties; and

B) The physical setting of the site and surrounding area including, but not limited to, features relevant to environmental, geographic, geologic, hydrologic, hydrogeologic, and topographic conditions;

3) The results of the Stage 1 site investigation, including but not limited to the following:

A) One or more site maps meeting the requirements of Section 734.440 that show the locations of all borings and groundwater monitoring wells completed to date, and the groundwater flow direction;

B) One or more site maps meeting the requirements of Section 734.440 that show the locations of all samples collected to date and analyzed for the applicable indicator contaminants;

C) One or more site maps meeting the requirements of Section 734.440 that show the extent of soil and groundwater contamination at the site that exceeds the most stringent

Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants;

D) One or more cross-sections of the site that show the geology of the site and the horizontal and vertical extent of soil and groundwater contamination at the site that exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants;

E) Analytical results, chain of custody forms, and laboratory certifications for all samples analyzed for the applicable indicator contaminants as part of the Stage 1 site investigation;

F) One or more tables comparing the analytical results of the samples collected to date to the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants;

G) Water supply well survey documentation required pursuant to Section 734.445(d) of this Part for water supply well survey activities conducted as part of the Stage 1 site investigation; and

H) For soil borings and groundwater monitoring wells installed as part of the Stage 1 site investigation, soil boring logs and monitoring well construction diagrams meeting the requirements of Sections 734.425 and 734.430 of this Part; and

4) A Stage 2 sampling plan that includes, but is not limited to, the following:

A) A narrative justifying the activities proposed as part of the Stage 2 site investigation;

B) A map depicting the location of additional soil borings and groundwater monitoring wells proposed to complete the identification of the extent of soil and groundwater contamination at the site that exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants; and

C) The depth and construction details of the proposed soil borings and groundwater monitoring wells.

c) If the owner or operator proposes no site investigation activities in the Stage 2 site investigation plan and none of the applicable indicator contaminants that exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 as a result of the release extend beyond the site's property boundaries, upon submission of the Stage 2 site investigation plan the owner or operator must cease site investigation and proceed with the submission of a site investigation completion report in accordance with Section 734.330 of this Part. If the owner or operator proposes no site investigation activities in the Stage 2 site investigation plan and applicable indicator contaminants that exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 as a result of the release extend beyond the site's property boundaries, within 30 days after the submission of the Stage 2 site investigation plan the owner or operator must submit to the Agency for review a Stage 3 site investigation plan in accordance with Section 734.325 of this Part.

d) If the results of a Stage 2 site investigation indicate that none of the applicable indicator contaminants that exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 as a result of the release extend beyond the site's property boundaries, upon completion of the Stage 2 site investigation the owner or operator must cease site investigation and proceed with the submission of a site investigation completion report in accordance with Section 734.330 of this Part. If the results of the Stage 2 site investigation indicate that applicable indicator contaminants that exceed the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 as a result of the release extend beyond the site's property boundaries, within 30 days after the completion of the Stage 2 site investigation the owner or operator must submit to the Agency for review a Stage 3 site investigation plan in accordance with Section 734.325 of this Part. 35 Ill. Adm. Code 734.320.

Section 734.430 of the Board's UST regulations, addressing monitoring well construction and sampling for releases reported on or after June 24, 2004, provides that:

a) At a minimum, all monitoring well construction must satisfy the following requirements:

1) Wells must be constructed in a manner that will enable the collection of representative groundwater samples;

2) Wells must be cased in a manner that maintains the integrity of the borehole. Casing material must be inert so as not to affect the water sample. Casing requiring solvent-cement type couplings must not be used;

3) Wells must be screened to allow sampling only at the desired interval. Annular space between the borehole wall and well screen section must be packed with clean, well-rounded and uniform material sized to avoid clogging by the material in the zone being monitored. The slot size of the screen must be designed to minimize clogging. Screens must be fabricated from material that is inert with respect to the constituents of the groundwater to be sampled;

4) Annular space above the well screen section must be sealed with a relatively impermeable, expandable material such as cement/bentonite grout that does not react with or in any way affect the sample, in order to prevent contamination of groundwater samples and groundwater and avoid interconnections. The seal must extend to the highest known seasonal groundwater level;

5) The annular space must be backfilled with expanding cement grout from an elevation below the frost line and mounded above the surface and sloped away from the casing so as to divert surface water away;

6) Wells must be covered with vented caps and equipped with devices to protect against tampering and damage. Locations of wells must be clearly marked and protected against damage from vehicular traffic or other activities associated with expected site use; and

7) Wells must be developed to allow free entry of groundwater, minimize turbidity of the sample, and minimize clogging.

b) Monitoring well construction diagrams must be completed for each monitoring well. The well construction diagrams must be submitted in the corresponding site investigation plan, site investigation completion report, or corrective action completion report on forms prescribed and provided by the Agency and, if specified by the Agency in writing, in an electronic format.

c) Static groundwater elevations in each well must be determined and recorded following well construction and prior to each sample collection to determine the gradient of the groundwater table, and must be reported in the corresponding site investigation plan, site investigation completion report or corrective action completion report. 35 Ill. Adm. Code 734.430.

Section 734.510(a) of the Board's UST regulations, addressing standards for review of plan, budget, or reports regarding releases reported on or after June 24, 2004, provides that:

A technical review must consist of a detailed review of the steps proposed or completed to accomplish the goals of the plan and to achieve compliance with the Act and regulations. Items to be reviewed, if applicable, must include, but not be limited to, number and placement of wells and borings, number and types of

> samples and analysis, results of sample analysis, and protocols to be followed in making determinations. The overall goal of the technical review for plans must be to determine if the plan is sufficient to satisfy the requirements of the Act and regulations and has been prepared in accordance with generally accepted engineering practices or principles of professional geology. The overall goal of the technical review for reports must be to determine if the plan has been fully implemented in accordance with generally accepted engineering practices or principles of professional geology, if the conclusions are consistent with the information obtained while implementing the plan, and if the requirements of the Act and regulations have been satisfied. 35 Ill. Adm. Code 734.510(a).

STANDARD OF REVIEW AND BURDEN OF PROOF

The standard of review under Section 40 of the Act (415 ILCS 5/40 (2006)) is whether the application, as submitted to the Agency, would not violate the Act and Board regulations. Ted Harrison Oil Co. v. IEPA, PCB 99-127, slip op. at 5 (July 24, 2003); citing Browning Ferris Industries of Illinois v. PCB, 534 N.E.2d 616 (2nd Dist. 1989). The Board will not consider new information that was not before the Agency prior to its final determination regarding the issues on appeal. Kathe's Auto Service Center v. IEPA, PCB 95-43, slip op. at 14 (May 18, 1995). The Agency's denial letter frames the issues on appeal. Pulitzer Community Newspapers, Inc. v. IEPA, PCB 90-142 (Dec. 20, 1990). Finally, the Board's procedural rules provide that, in appeals of final Agency determinations, "[t]he burden of proof shall be on the petitioner." 35 Ill. Adm. Code 105.112(a) (quoting Section 40(a)(1) of Act).

DISCUSSION

Below, the Board separately addresses each of the issues on appeal: whether Keller constructed monitoring wells in a manner that will allow sampling only at the desired interval and that will enable collection of representative groundwater samples; whether soil borings SB-4 and SB-5 exceed the minimum requirements of the Act and the Board's regulations; whether soil samples from monitoring wells MW-1 and MW-2, and MW-4 exceed the minimum requirements of the Act and the Board's regulations; whether proposed additional soil borings and soil samples from monitoring wells exceed the minimum requirements of the Act and the Board's regulations; and whether the Agency properly rejected Keller's proposed Stage 2 Site Investigation Budget.

Monitoring Well Construction

The Agency argues that Keller did not construct monitoring wells in a manner that allows for samples to be taken at the desired interval in accordance with 35 Ill. Adm. Code 734.430. Agency Brief at 19. According to the Agency, a monitoring well screen must intersect the water level in the well for accurate determination of contaminant levels in groundwater because gasoline contaminants float on the surface of the water. R. at 258. The Agency claims that, by placing the top of the monitoring well screens below the static water levels in the monitoring wells, Keller submerged the well screens in the five monitoring wells MW-1 through MW-5 at depths ranging from 0.14 feet to 2.25 feet below the static water level in the wells. Agency Brief 16-18. The Agency therefore asserts that Keller did not construct the wells in a manner that will

allow sampling only at the desired interval or that will enable the collection of representative groundwater samples.

Keller claims that the desired interval is the saturated zone located approximately 12 to 13.5 feet below ground surface and not the static water level in the monitoring well. Keller asserts that the static water level in the monitoring wells was several feet above the level where groundwater was actually encountered in the lithology because the aquifer is confined. Keller Brief at 9. The Agency responds by stating that it can only review the information submitted by the petitioner prior to its final determination. Agency Brief at 18. The Agency further states that, in reviewing site investigation plans, it relies on the Professional Engineer or Geologist hired by the owner or operator to make appropriate determinations based on field conditions at the site. *Id*. at 33. The Agency maintains that Keller never submitted information demonstrating that groundwater encountered at the site, as depicted in soil boring logs, monitoring well construction diagrams, and geologic cross-sections, is present under confined conditions, causing hydrostatic pressure to raise the water column in the monitoring wells. *Id.* at 33.

The Board agrees that the Agency's review is generally limited to the information submitted by the petitioner. Further, the Board's review of the Agency's determination is also limited to the information in the Agency's administrative record. In light of this, the Board will examine the Agency's administrative record to determine if the information in the record supports the Agency's determination that Keller's monitoring wells were not constructed in a manner that will allow sampling only at the desired interval. The Board notes that the requirements of Section 734.430 at issue in this case are based on similar requirements adopted by the Board at 35 Ill. Adm. Code 732.307. *See* Regulation of Petroleum Underground Storage Tanks, R94-2(A) (Sept. 15, 1994). The Agency's testimony in support of monitoring well construction and sampling requirements at Section 732.307(j) states that "[w]ells must be installed in a manner that provides the greatest likelihood of detecting migration of groundwater contamination." *Id.* (April 19, 1994) *(*prefiled Testimony of Mr. Harry Chappel). The provision at issue in this case requiring the placement of well screen at only the desired interval is intended to provide the greatest likelihood of detecting migration of groundwater contaminants. *See* 35 Ill. Adm. Code 734.430(a)(3).

The Board finds that the Agency's policy of requiring the well screen to intersect the water level in the well in order to meet the performance standard specified at Section 734.430(a)(3) is reasonable for detecting petroleum indicator contaminants, as those contaminants are lighter than the groundwater. In this regard, the Board notes that the administrative record does not include any detailed discussion or determination to indicate that site-specific conditions warrant the location of the well screen below the static water level in the monitoring wells. The information submitted by the petitioner to the Agency, including geologic cross-sections, soil boring logs, monitoring well construction diagrams, groundwater elevation map, and in-situ hydraulic conductivity, supports the Agency's determination that the monitoring wells were not constructed in a manner that allows for sampling at only the desired interval.

The Board notes that monitoring well boring logs show that groundwater was encountered in the silty clay unit at 10.5 feet below ground surface. R at 90-94. Furthermore, the static water level in the groundwater elevation map and the depth to groundwater shown in

the well construction diagram clearly show that well screens were placed below the static water levels. R at 35, 102-107. In addition, as noted by the Agency, the results of the hydraulic conductivity tests are consistent with the silty clay unit being the groundwater-producing layer. R at 13; Agency Brief 29.

The Board notes that Keller's response to the Agency's October 5, 2006 determination regarding the well screen placement does not address the Agency's concerns. R at 159, 173. Keller claims that well screens were placed at desired interval to intersect the saturated zone located approximately 12 to 13.5 feet below ground surface. Keller Brief at 9; R at 173. However, neither Keller's plan nor its response to Agency's initial rejection letter mentions that the geologic unit of interest is a confined aquifer located 12 to 13.5 feet below the surface. The information submitted to the Agency indicates the silty clay layer as the uppermost water-bearing unit. Regarding the static water level in the wells, Keller states that the levels in the wells rose due to hydrostatic pressure or the hydraulic head of the formation and that the levels represent the potentiometric surface. R at 173. Keller did not substantiate its claims with a detailed analysis of the site's hydrogeology to show that groundwater encountered at the site is present under confined conditions.

Keller claims that setting well screens at shallower depths would have resulted in no production. However, the Board notes that, even if the well screens were raised above the static water levels, the well screen interval of 10 feet would have provided adequate screen interval below the surface for collection of groundwater samples. Further, the Board agrees with the Agency that assertions made by Mr. St. John regarding the confined layer as being the water-bearing unit and regarding advective flow of dissolved indicator contaminants are not reflected in the administrative record.

The Board agrees with the Agency that, when reviewing plans under the Act and Board regulations, the Agency must rely on the determinations made by the Professional Engineer or Geologist hired by the owner or operator. In this case, the plan submitted to Agency by the petitioner's consultant did not include sufficient information for the Agency to determine that Keller constructed the monitoring wells in accordance with the requirements of Section 734.430(a).

Soil Borings

The Agency maintains that soil samples from several Stage 1 soil borings and monitoring wells and a number of proposed Stage 2 soil borings and monitoring wells exceed the minimum requirements of the Act and Board regulations. The Stage 1 borings at issue are soil borings SB-4 and SB-5 and soil samples collected from monitoring well borings MW-1, MW-2 and MW-4. Agency Brief at 11-13. The proposed Stage 2 soil borings rejected by the Agency include: two monitoring wells and one soil boring located between the gasoline pump and monitoring well MW-2; a proposed monitoring well located south of the gasoline pump island; and two proposed soil borings located west of the diesel tank excavation. Agency Brief at 14 and Keller Brief at 24-25. The location of the Stage 1 and Stage 2 soil borings and monitoring wells are shown on the soil boring location map. *See* R at 29. The Board will discuss the parties' arguments and

determine whether Keller's actions regarding the soil sampling exceeded the minimum requirements of the Act and regulations.

Soil Boring SB-4

The Agency states that soil boring SB-4 exceeds the minimum requirements of the Act and regulations because the wall of the excavation closest to SB-4 was clean during early action. Agency Brief at 11. The location of SB-4 is approximately at the midpoint of the excavation wall from which Keller took clean samples N-1 and N-2. R at 28. Keller argues that the Agency's decision was based on the incorrect placement of SB-4 on the map contained in its plan. Keller states that SB-4 was placed directly north of E-1 at the site and submitted revised maps showing correct location of SB-4. R at 170. Keller submitted four revised location maps. R at 213-216. However, the Agency notes that the revised map submitted by Keller prior to Agency's final decision still showed SB-4 in the same location as the original map. Agency Brief at 11.

The Board notes that, while in three of the four revised maps Keller moved the location of SB-4 east of the original location and north of sample E-1, Keller did not change the location of SB-4 in one of the revised maps entitled "Proposed Soil Boring Location Map." *See* R at 214. This map has the most recent revision date of January 22, 2007. At hearing, Keller's consultant, Mr. Jeff Wienhoff, admitted that as a result of a clerical error only some of the maps were revised to reflect the proper location of SB-4. Tr. at 152-153. While the Board recognizes that clerical errors do happen in preparing site remediation plans, the Board notes that Keller had an opportunity to rectify the error in revised maps but did not do so until the hearing. The Board agrees with the Agency that the Agency must rely on the information in the administrative record to make its decisions. The location of soil boring SB-4 was clearly shown to be close to the clean excavation wall samples N-1 and N-2 both in the original map and in map last revised on January 22, 2007, and submitted by the petitioner prior to the Agency's final decision. AR. at 28, 214. In light of this, the Board agrees with the Agency that soil boring SB-4 exceeded the minimum requirements of the Act and Board regulations.

Soil Boring SB5

The Agency also rejected Keller's plan because SB-5 exceeded the minimum requirements of the Act and the Board regulations. Specifically, the Agency concluded that no contamination was found in the excavation wall samples D-8 taken during the early action in the area near of SB-5. Agency Brief at 11. The Board notes that Keller drilled SB-5 west of the diesel tank excavation sample D-8. *See* Exh. 11. The Agency maintains that SB-5 should have been drilled near the piping run and not near the excavation. *Id*.

While Keller agrees that SB-5 was drilled in the wrong location as a result of clerical error, Keller asserts that the location is appropriate because of the benzene contamination detected in SB-5. Keller contends that the benzene contamination resulted from overfill at the diesel UST. Keller Brief at 19. In this regard, the Agency argues that Keller did not show that the hit for benzene in SB-5 was associated with the diesel UST, particularly since the excavation wall sample closest to SB-5 was clean. Keller maintains that excavation samples were clean

because those samples were taken approximately 8 feet below the ground while the soil boring sample was taken approximately 2.5 feet below the ground surface. *Id*. At hearing, Keller also argued that SB-5 is appropriately located because there are no other samples to determine whether contaminants from piping run sample D-10 migrated towards SB-5. Tr. at 134.

The Board notes that the location of SB-5 as shown in the soil boring map is clearly in the vicinity of excavation sample D-8, which indicated no contamination. R at 28; Exh. 11. Further, contamination was not found in the excavation sample D-9, which was taken between D-10 and SB-5. *See* Exh. 11. While the Board agrees that it would have been appropriate to take additional soil boring samples in the area of the piping run to determine whether contamination from early action sample D-10 has migrated, SB-5 was drilled in the wrong location approximately 40 feet away from D-10. Although Keller attempts to justify the location of SB-5 after admittedly locating the boring in the wrong location, the Board is not persuaded by Keller's arguments. The Board finds that detection of benzene by itself does not justify SB-5. As noted by the Agency, the information in the record is not adequate to link the benzene hit in SB-5 to the diesel UST. Additionally, as noted by the Agency, the Board finds that SB-5 is not appropriately located to detect migration of contaminants from piping run sample D-10. Therefore, the Board finds that the Agency correctly determined that SB-5 exceeds the minimum requirements of the Act and the Board regulations.

Soil Samples from Monitoring Wells MW-1, MW-2, and MW-4

The Agency claims that the soil samples collected from MW-1, MW-2, and MW-4 exceed the minimum requirements of the Act and regulations. Agency Brief at 13. The Agency argues that, under Section 734.315(a)(2)(C), monitoring well soil samples must not be analyzed if other sampling conducted to date indicates that soil contamination does not extend to the monitoring well boring. The Agency maintains that soil samples from monitoring wells were unnecessary, since the samples taken from soil borings indicated that soil contamination did not extend to that area.

Keller responds that it did not have the analytical results of the soil boring samples at the time it took the monitoring well samples, because the samples from the borings and the wells were collected on the same day. As such, Keller argues that soil samples for MW-1, MW-2, and MW-4 are consistent with the requirements of Section 734.315(a)(2)(C). Keller further argues that the approach taken by its consultant to collect samples from soil borings and monitoring wells on the same day makes practical sense. Keller maintains that it is more efficient and less expensive to collect all of the samples during the same trip rather than making several trips to collect samples and determine where contamination actually ends. Keller Brief at 20-21.

Further, Keller asserts that monitoring well samples could not be held until the analytical results of soil boring samples were obtained because of the relatively short holding time for UST soil samples. Keller Brief at 21. Additionally, Keller argues that it sampled the monitoring wells at issue because there were no soil samples between contaminated early action samples D-10 and MW-1, P-4 and MW-1, P-4 and MW-2, and D-10 and MW-4, respectively. *Id.* at 21-22.

The Board notes that Section 734.315 sets forth the requirement that the Stage 1 investigation "gather initial information regarding the extent of on-site soil and groundwater contamination that, as a result of the release, exceeds the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants." 35 Ill. Adm. Code 734.315. Further, regarding soil sampling from monitoring well borings, Section 734.315(a)(2)(C) provides that "the [soil] samples must not be analyzed if other soil sampling conducted to date indicates that soil contamination does not extend to the location of the monitoring well installation boring." 35 Ill. Adm. Code 734.315.

Regarding the collection of soil samples from monitoring well borings, the Agency's testimony in Docket R04-23 states that "Subsection 734.315(a)(2)(B) further requires the collection of soil samples from groundwater monitoring well installation borings that are located beyond early action soil samples that exceed the Tier 1 remediation objectives. This is necessary to help determine the horizontal and vertical extent of soil contamination that exceeds the Tier 1 remediation objectives. *See* Regulation of Petroleum Underground Storage Tanks (Proposed New 35 Ill. Adm. Code 734), R04-22, 23 (Mar. 8, 2004) (prefiled testimony of Mr. Hernanado Albarracin).

While Section 734.315 sets forth specific requirements for performing soil and groundwater investigation, this section does not specify the chronological order in which the various data collection steps must be performed, *i.e*. whether soil investigation must be completed prior to initiating groundwater investigation. As specified in Section 734.315(b), the rules delegate the responsibility of implementing the site investigation provisions in accordance the requirements of Section 734.315 to the Licensed Professional Engineer or Geologist. In this case, it appears that Keller's consultant believed that the most efficient and practical manner to perform soil sampling would be to sample the soil borings and the monitoring wells on the same day, rather than make multiple trips to the site. Further, since there were no soil sampling results available to define the extent of soil contamination prior to the sampling date, the sampling of monitoring well borings is not inconsistent with Section 734.315(a)(2(C). Therefore, the Board finds that soil sampling of monitoring well borings did not exceed the minimum requirements of the Act and Board regulations.

Proposed Soil Borings/Monitoring Wells

In addition to determining that a number of Stage 1 soil samples exceeded the minimum requirements of the Act and regulations, the Agency determined that several proposed soil borings under Stage 2 are unnecessary. Specifically, the Agency rejected two monitoring well soil borings and one soil boring east of the tank field and west of monitoring well MW-2; one monitoring well soil boring south of gasoline pump island; and two soil borings west of the diesel tank excavation, near soil boring SB-5 and excavation sample D-10. Agency Brief at 14.

The Agency asserts that the proposed borings between the gasoline tank field and MW-2 are not needed since MW-2 exceeds the remediation objectives indicating that contamination goes beyond the proposed borings. Keller disagrees, stating that the site-specific data obtained after the completion of the investigation will be used to calculate Tier 2 remediation objectives. Keller asserts that MW-2 contamination may meet the Tier 2 samples. Keller argues that the

data from the proposed samples would be useful in terms of reducing the area of the plume that needs remediation and reducing corrective action costs. Keller Brief at 24. The Board notes that the Stage 2 site investigation requirements at Section 734.320(a) provides that additional soil samples must be taken to identify the extent of soil contamination exceeding the most stringent Tier 1 remediation objectives. As noted by the Agency, Keller has already established that soils contamination extends beyond the proposed soil borings. In light of this, the Board agrees with the Agency that additional soil sampling between the gasoline tank field and MW-2 exceeds the minimum requirement of the Act.

Next, the Agency states that the proposed boring south of the gasoline tank field is not needed since the wall of the excavation near the proposed boring was clean. Keller argues that the piping run samples relied upon by the Agency are too shallow to determine if contamination found at E-1 could have sunk and then migrated beneath the piping run samples. Keller Brief at 25. Keller notes that piping run samples were taken at a depth of 2-3 feet, while E-1 was sampled at approximately 8 feet. Id. Again, the Board finds that the Agency correctly rejected the proposed boring south of the gasoline tank field. The Board notes that, in addition to the clean piping run samples relied upon by the Agency, the Board notes that soil sample S-1 directly south of soil sample E-1 was also clean. Additionally, Stage 1 soil boring SB-1 was also clean.

Finally, regarding the proposed boring near Stage 1 boring SB-5, the Board agrees with the petitioner that additional investigation is necessary to delineate the contamination identified by piping run sample D-10 and soil boring SB-5. While the Board previously found that SB-5 exceeded the minimum requirements of the Act and regulations, the Board noted that it would have been appropriate to take additional soil boring samples in the area of the piping run to determine the extent of contamination from early action sample D-10. *See supra* at 43. The Agency also states that borings should have been drilled in the area of the piping run. Agency Brief at 11. Further, the Board notes that the additional investigation is consistent with the requirements of Section 734.320(a), as the extent of contamination has not been delineated west of D-10. Additionally, the proposed borings are necessary to delineate the extent of benzene contamination detected at SB-5. As such, the proposed borings in the vicinity of SB-5 do not exceed the minimum requirements of the Act and the Board regulations.

Stage 2 Site Investigation Budget

The Agency rejected Keller's budget for Stage 2 investigation of the Site because the Agency had rejected the underlying plan. *See* R. at 261. Above, the Board found that the record supports the Agency's determinations that Keller did not construct monitoring wells in a manner that allows for sampling at only the desired interval; that soil borings SB-4 and SB-5 exceed the minimum requirements of the Act and the Board's regulations; and that proposed additional soil sampling between the gasoline tank field and MW-2 and south of the gasoline tank field also exceed those minimum requirements. Above, the Board also found that sampling of borings from monitoring wells MW-1, MW-2, and MW-4 does not exceed the minimum requirements of the Act and the Board's regulations and that proposed additional soil sampling in the vicinity of SB-5 also does not exceed those minimum requirements. Accordingly, the Board below directs

Keller to submit to the Agency an amended Stage 2 Site Investigation plan and budget consistent with the terms of his order.

ATTORNEY FEES

Keller has requested that the Board enter an order awarding it attorney fees and costs in bringing this appeal. Am. Pet. at 6, Keller Brief at 30, Reply at 22. The Board notes that the Agency's denial letter states that the Agency rejected Keller's proposed plan and budget and could not make a determination regarding a budget until it approves an associated plan. R. at 256-62.

In a recent decision, Webb & Sons, Inc. v. IEPA, PCB 07-24 (Feb. 15, 2007), the Board partially affirmed and partially reversed the Agency's modification of a budget associated with a high priority corrective action plan. Webb & Sons, PCB 07-24, slip op. at 14. Specifically, the Board affirmed the Agency's rejection of the proposed personnel budget for four positions and reversed the Agency's rejection of the 16 remaining job titles in that proposed budget. *Id*. In considering the petitioner's request for reimbursement of attorney fees, the Board noted that it had in effect reinstated proposed personnel costs for those 16 job titles, which comprised 45% of the originally proposed personnel budget. Webb & Sons, PCB 07-24, slip op. at 5 (May 3, 2007). Responding to the petitioner's brief in support of its request for fees, the Agency stated that it was not difficult to measure the petitioner's degree of success on appeal and agreed that awarding no more than 45% of claimed legal fees would be appropriate and consistent with precedent. *Id.* at 3-4. Noting the facts of the case and the Agency's position, the Board in Webb & Sons directed that the petitioner be reimbursed an amount equal to 45% of its claimed legal fees. *Id*. at 5.

Particularly where the Agency has rejected the plan and associated budget, the Board lacks such a clear basis on which to consider Keller's request for fees. The Board therefore declines to exercise its discretion to order reimbursement of Keller's attorney fees. *See* 415 ILCS 5/57.8(l) (2006).

CONCLUSION

The Board today partially affirms and partially reverses the Agency's determinations in rejecting Keller's proposed plan and budget. Specifically, the Board for the reasons stated above affirms the Agency by finding that the record supports the Agency's determination that Keller did not construct monitoring wells in a manner that allows for sampling at only the desired interval. The Board also finds that soil borings SB-4 and SB-5 exceed the minimum requirements of the Act and the Board's regulations. The Board also finds that proposed additional soil sampling between the gasoline tank field and monitoring well MW-2 and that proposed additional soil sampling south of the gasoline tank field exceed the minimum requirements of the Act and the Board's regulations.

Also for the reasons stated above, the Board reverses the Agency by finding that sampling of soil borings from monitoring wells MW-1, MW-2, and MW-4 does not exceed the minimum requirements of the Act and the Board's regulations. The Board also finds that

proposed additional soil sampling in the vicinity of soil boring SB-5 also does not exceed those minimum requirements. Accordingly, the Board directs Keller to submit to the Agency, consistent with the terms of this opinion, an amended Stage 2 Site Investigation plan and, if Keller continues to pursue reimbursement, an associated budget. The Board also declines to award Keller any legal fees for the reasons discussed above.

ORDER

1. The Board affirms the Agency's determinations that Keller did not construct monitoring wells in a manner that allows for sampling at only the desired interval; that soil borings SB-4 and SB-5 exceed the minimum requirements of the Act and the Board's regulations; and that proposed additional soil sampling between the gasoline tank field and monitoring well MW-2 and that proposed additional soil sampling south of the gasoline tank field exceed the minimum requirements of the Act and the Board's regulations.

2. The Board reverses the Agency's determinations that sampling of soil borings from monitoring wells MW-1, MW-2, and MW-4 exceeds the minimum requirements of the Act and the Board's regulations and that proposed additional soil sampling in the vicinity of soil boring SB-5 exceeds those minimum requirements.

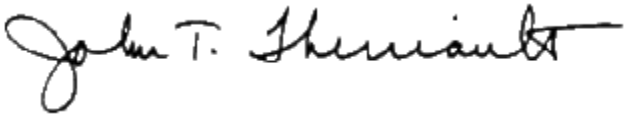
3. The Board directs Keller to submit to the Agency an amended Stage 2 Site Investigation plan consistent with the terms of this opinion and, if Keller continues to pursue reimbursement, an associated budget.

4. The Board declines to award Keller any legal fees.

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2006); see also 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; see also 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on December 6, 2007, by a vote of 4-0.



_____

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board