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BEAZER EAST, INC., 436 SEVENTH AVENUE, PITTSBURGH, PA 15219

September 9, 1993

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BUREAU OF SOLID -
HAZARDOUS WASTE MANAGEMENT

Ms. Cynthia English
Hazardous Waste Management Section
Bureau of Solid and Hazardous Waste Management
Wisconsin Department of Natural Resources
101 Webster Street
Madison, Wisconsin 53707-7921

Re: Response to Comments
Annual Groundwater Monitoring Reports
Koppers Industries, Inc.
Superior, Wisconsin Facility

Dear Ms. English:

The enclosed document has been prepared in response to Wisconsin Department of Natural Resources comments on the 1991 and 1992 Annual RCRA Groundwater Monitoring Summary Reports for the closed RCRA surface impoundments at the Koppers Industries, Inc. Superior, Wisconsin facility. The comments addressed by this letter (Comments 1 and 2) were included in your letter to Beazer dated July 19, 1993. The remaining comments included in your letter (Comments 3 through 16) were addressed in a letter submitted to you on September 1, 1993.

Comment 1 related to the effective porosity value used by Chester for the clay soils at the Superior facility. Chester has reviewed several references containing effective porosity values and has found that the 0.30 effective porosity used by Chester is supported by literature references. The attachment to this letter provides a more detailed response to Comment 1.

Comment 2 requested a formal response from Beazer with respect to several Preventive Action Limit (PAL) and Enforcement Standard (ES) exceedences, as required by Chapter NR 140, Wisconsin Administrative Code. Beazer feels that the detections of constituents in wells W-10B, W-12B, and W-12C were due to the possible compromised integrity of these wells. This belief is based on the sporadic constituent detections in these wells, no PAL/ES exceedences in other "B" level and "C" level wells, and the hydrogeologic characteristics at the facility which most likely would not have allowed constituents to naturally migrate to the sand zone in this relatively short period of time. In

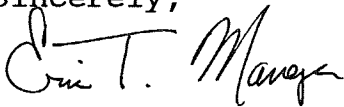
Ms. Cynthia English
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response to the questionable integrity of wells W-10B, W-12B, and W-12C, Beazer has proposed in the attached document and in the letter submitted to you on September 1, 1993 that these three wells be decommissioned and replaced by wells W-10A, W-12A, and W-12CR. The replacement wells will be included in the 635 monitoring program and will be evaluated to verify the PAL exceedences. The attachment to this letter provides a more detailed response to Comment 2.

Beazer maintains that the potential effects of the various RCRA and non-RCRA regulated units will be difficult to distinguish. Any data obtained from the RCRA monitoring program must be evaluated carefully in conjunction with other data collected at the facility during the ongoing RCRA Facility Investigation (RFI). The proximity of the various Solid Waste Management Units that are currently under investigation at the site and the nature of the site conditions, will make it difficult to perform a discrete corrective action, if necessary, on the groundwater potentially affected by the closed RCRA unit. The most effective remedial approach should be selected and implemented through a comprehensive site-wide evaluation of all site data, the potential risks associated with the chemical constituents of interest in the various media, and the effectiveness of various remedial technologies under these site conditions.

Again, Beazer would like to suggest that another meeting may be useful after you have reviewed all responses to your July 19, 1993 letter and the draft Phase III RFI Work Plan submitted to you on August 18, 1993. Please contact me at (412) 227-2683 or Diane McCausland of Chester at (412) 825-9712 with any questions you may have or to make arrangements for our proposed meeting.

Sincerely,



Eric T. Manges
Program Manager
Environmental Group

ETM/sok

Enclosure

cc: D. McCausland - Chester

**RESPONSE TO COMMENTS
ON ANNUAL GROUNDWATER MONITORING
REPORTS FOR CLOSED RCRA SURFACE IMPOUNDMENTS
KOPPERS INDUSTRIES, INC.
SUPERIOR, WISCONSIN
WOOD TREATING FACILITY**

Comment 1: The effective porosity of .30 for the clay was determined from literature references. This value is different from the effective porosity of .01 recommended for clay in the document titled Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Interim Final Guidance - April 1989. Beazer must use the effective porosity values listed in the above guidance document when submitting annual RCRA groundwater monitoring summaries in the future, as well as for any other calculations required by the Department involving effective porosity.

Response: Effective porosity is the porosity available for fluid flow through a porous medium. The effective pore fraction is the ratio of the porosity available for flow versus the total porosity. Effective porosity is thus defined by the product of the total porosity and the effective pore fraction, Fetter (1988). Based on a review of technical references, Chester believes that the effective porosity of 0.30 is more applicable to the clays at the Superior facility than the porosity value of 0.01 suggested by WDNR.

$$EPF = \frac{n_e}{n}$$

Several technical references were consulted which indicated typical effective porosity values at least an order magnitude greater than the 0.01 value. de Marsily (1986) presents a graph showing effective porosity in fine clay to clay ranging from approximately 0.12 to 0.32. Fetter (1988) cites a recent study aimed at determining the effective porosity of fine-grained earth materials. In this study, tests run with tritium-tagged water indicated that lacustrine clay in a permeameter had an effective pore fraction of essentially 1.0. In this case, the effective porosity would be equivalent to the total porosity.

0.12 - 0.32

Fetter
says
goes
both ways,
as does
EPA.

Freeze and Cherry (1979) give a total porosity range for clay of 0.40 to 0.70. As ice-deposited, reworked lacustrine clay constitutes the water-bearing unit at the Superior facility, Chester believes that the combination of these references support the use of 0.30 for effective porosity for the Superior site.

EPA supported
by Heath & Todd.
EPA cites exceptions on
p. 3-8
note:
EPA → .001
for
weathered
clay.

not
always
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case;
Domenico & Schwartz
say Ne
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The reference cited in the WDNR comment was also examined. The footnote beneath the table indicates that weathered and unweathered glacial till may have markedly different effective porosities. As the clay beneath the site is a till, using the value of 0.01 without discretion does not allow for the variability referenced in the footnote and consideration of other literature references.

Comment 2:

The following potential constituents of concern at the KII facility have established ch. NR 140, Wis. Adm. Code groundwater quality standards; benzene, benzo(a)pyrene, ethylbenzene, naphthalene, pentachlorophenol, phenol, toluene and xylene. In 1991, pentachlorophenol was detected above the preventive action limit (PAL) in W-10B and W-12C, and above the enforcement standard (ES) in W-12B. In 1992, pentachlorophenol was again detected above the PAL in W-12C and above the ES in W-12B, while naphthalene was detected above the PAL in W-10B. Therefore, Beazer must formally respond to these PAL and ES exceedences in accordance with the guidelines outlined in ss. NR 140.24 and NR 140.26, Wis. Adm. Code by September 1, 1993.

Response:

Prior to addressing the exceedences in accordance with ss. NR 140.24 and NR 140.26, Wisconsin Administrative Code, Beazer feels that a brief discussion of the nature of the exceedences, the current condition of the monitoring wells in which exceedences were noted, and present and proposed configurations of the monitoring well network for the closed impoundments is warranted. Table 1 summarizes the PAL and ES exceedences referenced in Comment 2, and should be consulted in conjunction with the discussions below.

TABLE 1
 CONCENTRATIONS OF PENTACHLOROPHENOL AND
 NAPHTHALENE IN GROUNDWATER EXCEEDING
 WISCONSIN GROUNDWATER QUALITY STANDARDS

KOPPERS INDUSTRIES, INC.
 SUPERIOR, WISCONSIN

Parameter	Pentachlorophenol ug/L	Naphthalene ug/L
Wisconsin Preventive Action Limit	30	8
Wisconsin Enforcement Standard	300	40
June 4, 1991		
W-12B	360	---
W-12C	59.2	---
July 30 - August 1, 1991		
W-12B	565	---
December 5, 1991		
W-10B	74.5	---
March 3-4, 1992		
W-10B	---	10
W-12B	1000	---
June 1-3, 1992		
W-12B	3100	---
W-12C	85	---
September 17, 1992		
W-12B	880	---
W-12C	130	---
December 16, 1992		
W-12B	1200	---
W-12C	76	---

Historical analyses show that the exceedences in well W-10B are isolated. For 1991 fourth quarter results, the concentration of pentachlorophenol (74.5 ug/L) exceeded the PAL of 30 ug/L. For the 1992 first quarter results, the concentration of naphthalene in well sample W-10B (10 ug/L) exceeded the PAL (8 ug/L) by only 2 ug/L. These were the only two groundwater quality standard exceedences noted for samples collected from well W-10B in calendar years 1991 and 1992. Considering the questionable integrity of well W-10B and the minimal exceedences of the PALs, these isolated detections may not accurately reflect site conditions.

The WDNR has indicated during various conversations in July and August 1993, that Beazer must monitor the "A"-level and "C"-level wells at the Superior site. The WDNR indicated in Comment 8 of the July 19, 1993 letter that Beazer should decommission several "B"-level wells and replace them with "A"-level wells. Well W-10B was the only downgradient "B"-level well remaining in the program, and thus the only well which made it necessary to monitor upgradient well W-4B. During August 1993 telephone conversations with the WDNR, it was agreed that decommissioning well W-10B and replacing it with a new well W-10A would provide a uniform program in which only "A"- and "C"-level wells were monitored. In addition, the installation and monitoring of well W-10A would allow for further evaluation of the limited exceedences recorded at location W-10. In conjunction with this decision, the WDNR agreed that quarterly monitoring of well W-4B would not be necessary. Accordingly, well W-10B will be decommissioned.

The significance of the detections in wells W-12B and W-12C is unclear because the integrity of these wells may also have been compromised after well construction. This is believed to be a possibility, since natural constituent migration to the sand through approximately 40 feet of the clay is unlikely to have yet occurred.

Due to potentially compromised well construction, the detections of pentachlorophenol may not truly indicate natural migration to groundwater but may instead be a reflection of contamination from the surface carried down during well construction or migration of constituents along the annulus of the wells. This is further supported by the fact that the RCRA impoundments were constructed after pentachlorophenol use at the plant ceased. To address this concern, Beazer proposed that wells W-12B and W-12C be decommissioned, and the WDNR has concurred. These wells will be replaced in the quarterly monitoring program by shallow clay well W-12A and a replacement "C"-level well designated W-12CR.

NR 140.24 details required activities which should occur when a PAL is attained or exceeded. In response to the requirements, Beazer has notified WDNR on a quarterly basis of these exceedences (par. (a)), and presented preliminary analyses of cause and significance. Pursuant to the July 19, 1993 letter, WDNR has requested a report to assess the cause and significance of the increased concentration (par. (b)) based on the factors listed in par. (c). The par. (c) factors are thus addressed below. Both PAL and ES exceedences are addressed in the discussion below.

1. Background water quality.

Although it is difficult to separate the effects of other units on the RCRA monitoring program, the well nest at location W-4 is properly positioned to serve as a background well nest for the RCRA impoundments, based on its upgradient position with respect to the impoundments. WDNR has agreed with this conclusion in its review of the Draft Existing Conditions Report. It is proposed that wells W-4A and W-4C be monitored on a quarterly basis in the 635 monitoring program as an indicator of background groundwater quality. Well W-4B is proposed to be omitted from the sampling program, as the future sampling and

analysis program will be limited to "A"- and "C"-level wells per conversations held in August 1993 with the WDNR.

In the Draft Existing Conditions Report as modified by the September 1, 1993 responses to WDNR comments on the report, Beazer has proposed to continue the monitoring program by establishing background groundwater quality in wells W-4A and W-4C for use in the statistical evaluation, upon WDNR's approval.

2. Reliability of sampling data.

The reliability of the Superior groundwater quality data is not believed to be in question based on sampling procedures, precision and accuracy of the laboratory, quality assurance, quality control or data set size. However, the data reliability is questioned based on potential well construction factors, as was discussed previously.

Chester believes that groundwater quality is not impacted in the "C"-level sand unit and the PAL exceedences in samples from wells W-10B, W-12B, and W-12C are suspect. This belief is due to the extremely low permeabilities and groundwater velocities calculated for the clay, the sporadic occurrence of the detections in wells W-10B, W-12B, and W-12C, and because there were no PAL exceedences in other "C"-level wells. This leaves a question of well integrity, as discussed in the March 1992 Draft Existing Conditions Report. One possible explanation for the quarter to quarter differences in water quality may be effects of precipitation. If the annular material in these wells is indeed allowing vertical leakage, then precipitation events may be carrying constituents from the unsaturated zone to the depth of the screened intervals of these monitoring wells.

Wells W-10B, W-12B and W-12C are scheduled for replacement; W-10B will be replaced by W-10A, W-12B will be replaced by W-12A, and W-12C will be replaced by W-12CR. During installation, the replacement wells will be properly cased and grouted with great care to minimize the opportunity for constituent migration along the borehole and annulus. Data reliability should be significantly improved upon the decommissioning and replacement of the suspect wells.

3. Public health, welfare and environmental effects of the substance.

The potential effect to public health, welfare, and the environment by pentachlorophenol detected in groundwater from the clay is limited due to the lack of potential receptors, the hydrogeologic setting in which the Superior facility is located, the characteristics of pentachlorophenol, and the activities conducted to close the RCRA impoundment. The limited sand deposits within the clay at depths of 35 to 50 feet are not believed to be used as a drinking water source in the vicinity of the site, due to the observed discontinuous nature of these sand lenses. However, the use of these sand deposits as a potable water supply will be assessed through the completion of an off-site well inventory within a two mile radius of the site. This survey was requested by WDNR and proposed in the Phase III RFI Work Plan (August 1993) for the Superior facility. At this time, regional information indicates that the Superior sandstone, located approximately 170 to 250 feet below the surface, is the most important aquifer for groundwater sources in the Superior area. Water from Lake Superior is the source for municipal drinking water supplies in the vicinity of the site.

Pentachlorophenol has a low mobility due to its low water solubility, low vapor pressure, and its affinity to preferentially

adsorb to the soil particles. The low mobility in the clay is illustrated by the lack of constituent detections in the "C" zone, with the exception of the anomalous detections in groundwater from well W-12C.

The low permeability cap constructed on the RCRA impoundments during closure prevents the transport of constituents by surface water runoff, volatilization, and fugitive dust emissions and minimizes migration by leaching of constituents from surface soils to subsurface soils and groundwater. Since the facility is located in an isolated and relatively secure industrial setting, access by the general public can be controlled and potential effects to public health through surface contact are unlikely to occur.

These factors combine to greatly limit the potential migration of constituents to significant distances from the closed RCRA impoundments and subsequently limit the site-specific public health, welfare and environmental effects that may occur. Also, the likelihood of any present or future exposure pathways for humans or wildlife to contact or ingest any constituents in groundwater potentially affected by the closed RCRA impoundments is extremely low.

4. Probability that a preventive action limit or an enforcement standard may be attained or exceeded outside the design management zone (DMZ).

The probability that constituents may occur outside the DMZ due to migration from the closed RCRA impoundments is considered to be low based on the hydrogeologic setting as described in Part 8, below; however, the DMZ at this unit has been defined at zero feet from the perimeter of the closed RCRA impoundments. Due to the proximity of other sources, particularly the non-RCRA

impoundments which partially underlie the RCRA impoundments, a PAL or ES may be attained or exceeded outside the DMZ at this site, as a result of the influence of these other sources (detailed in Part 7, below). The Phase III RFI will provide additional data to assess the groundwater quality at various points across the Superior site.

The true source areas of all constituents that may be detected in groundwater beneath the site may not be distinguishable, as many of the same constituents are present in the closed RCRA and former non-RCRA impoundments, the process area, and other areas of the site. Pentachlorophenol use was discontinued three years prior to the construction of the RCRA impoundments and the detection of pentachlorophenol in the RCRA monitoring wells should not be attributed to the closed RCRA units. While these exceedences must be reported, the response to these exceedences should be evaluated in light of the other sources at the site and conclusions of the ongoing Phase III RFI.

5. Performance of the facility, practice or activity.

The RCRA impoundments were excavated, capped, and closed as a landfill in 1989 in accordance with RCRA regulations. The construction report submitted to document closure activities was approved by the WDNR. These are the only "performance" criteria essentially applicable to this unit.

Closure of the RCRA impoundments included placement of a cap to minimize leaching of constituents to the groundwater. The non-RCRA impoundments, which partially underlie the RCRA impoundments were closed prior to RCRA. Similar stringent standards applied to RCRA closure may not have been used in closure of the non-RCRA impoundments; therefore, the area

surrounding the closed RCRA impoundments is more likely to be affected by the non-RCRA units than the RCRA units.

6. Location of the monitoring point.

The locations of the monitoring points in which the exceedences have been noted are appropriate, to the extent possible, to monitor the perimeter of the impoundments as required by WDNR. However, the ability to monitor the closed RCRA impoundments as discrete units not affected by the non-RCRA impoundments, or the other process areas of the site, is limited. As stated in Beazer's letter to WDNR dated September 1, 1993, any data obtained from the RCRA monitoring program must be evaluated in conjunction with all data collected during the RFI to properly evaluate groundwater quality at the site.

Changes to the RCRA monitoring well network are currently proposed based on WDNR's direction and a new 635 monitoring program will be established based upon these revisions and subsequent well installation plans. As discussed above, the integrity of some of the current 635 monitoring wells is in question, and these wells will be replaced.

7. Other known or suspected sources of the substance in the area.

The four former non-RCRA impoundments partially underlying and immediately adjacent (north) to the two closed RCRA impoundments, and the process areas at the site constitute a potential subsurface source of constituents, including phenols. These areas are being assessed under the continuing RFI being conducted for the site. Pentachlorophenol use ceased in 1979, three years prior to construction of the RCRA impoundments. Therefore, pentachlorophenol detections in RCRA monitoring

Administrative
by line
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letter

wells are most likely associated with these other non-RCRA units or process areas at the site and should not be attributed directly to the closed RCRA impoundments. This fact should be considered when assessing the findings of continued monitoring and the need for potential corrective actions.

Distinguishing individual releases from different potential source areas at the site is difficult considering the proximity of the impoundment and units, the similarity of some constituents associated with these units, and the potential for mixing to occur. Again, as stated in the September 1, 1993 letter, Beazer maintains that any future corrective actions and associated performance monitoring would be identified most effectively through a comprehensive site-wide evaluation of the data generated from the RCRA and RFI programs.

8. Hydrogeologic conditions.

The hydrogeologic properties of the clay, such as the hydraulic conductivity, average linear groundwater velocity, and thickness, when combined with the discontinuous nature of the sand lenses and the affinity of pentachlorophenol to adsorb onto clays, result in low mobility of site constituents in the groundwater. This low mobility further supports Beazer's belief that the PAL exceedences were due to the compromised integrity of wells W-10B, W-12B, and W-12C.

The average hydraulic conductivity for the shallow clay and the intermediate clay is 3.33×10^{-7} cm/s and 3.24×10^{-6} cm/s, respectively. These very low conductivities greatly limit groundwater and dissolved constituent migration through the clay.

As stated in Section 2.0 of the Draft Existing Conditions Report, the average linear vertical groundwater velocity within the clay has been calculated to be 1×10^{-4} feet per day (0.04 feet per year), which is an extremely slow rate of vertical groundwater velocity. Both the average linear horizontal groundwater velocity within the clay when compared to that in the sand, and the downward gradient within the clay indicate that any appreciable lateral migration of groundwater at the Superior facility would probably occur within the sand rather than within the clay. The clay, which is approximately 200 feet thick, behaves as an aquitard with respect to the discontinuous sand aquifer located within the clay at approximate depths of 35 feet to 50 feet. A simple calculation dividing the thickness of the clay by the linear vertical velocity indicates that groundwater would take a minimum of approximately 875 years to reach the sand layer.

In addition, constituent migration through the clay would be somewhat slower than groundwater migration because of the affinity of pentachlorophenol for adsorbing onto clays. This is further supported by the fact that excluding the anomalous data from well W-12C, there have been no other detections exceeding the PALs in a "C"-level well across the entire site.

Although it is unlikely that constituents will naturally migrate to the sand within a reasonable time period, if constituents did reach the sand, the discontinuous nature of these deposits would restrict further groundwater mobility. The extent of the discontinuous sand deposits will be more completely addressed in the Phase III RFI.

9. Extent of groundwater contamination.

The Phase II RFI data (June 1992 Phase II RFI Report of Findings) do not portray a constituent plume emanating from the

closed RCRA impoundments. The WDNR PAL and ES exceedences are in the immediate vicinity of the impoundments. The groundwater quality at this site appears to be more closely correlated to soil quality than to plume migration due to the tendency of the constituents of interest to adsorb onto soils and the low permeability nature of the clay. In addition, the PAL for pentachlorophenol was not exceeded in any other "C"-level wells.

The Phase III RFI will provide a three dimensional evaluation of potential off-site migration and exposure pathways for groundwater on a site-wide basis through the following activities.

- Cone penetrometer testing program to better define the occurrence of the sand water bearing zone;
- Installation and sampling of additional "C"-level monitoring wells at the Superior site;
- Potential aquifer characterization program to evaluate the hydraulics of sand lenses located in the cone penetrometer program;
- Collection of additional physical soil data; and
- Domestic well inventory within a two-mile radius of the site.

Limited additional sampling of shallow and intermediate clay ("A"- and "B"-level) monitoring wells will also be part of the Phase III RFI. Details on the "C"-level groundwater well installation and sampling locations will be provided to the WDNR in an Interim Phase III RFI Letter Report upon completion of the cone penetrometer testing program.

At present, it is not believed that the clay and sand water-bearing zones are used for private drinking water sources. Lake Superior and the Superior Sandstone are the main drinking water supply sources in the area; however, the potential for private water supplies to be present in these units will be evaluated in the domestic well inventory proposed as part of the Phase III RFI.

✓ **10. Alternate responses.**

The two impoundments were closed in accordance with RCRA closure requirements and the groundwater monitoring program was initiated. The significance of the detections above PALs in wells W-10B, W-12B and W-12C is unclear because the integrity of these wells may have been compromised during well construction. As the first response to these exceedences, Beazer proposed replacing these wells and continuing the groundwater monitoring program to further evaluate conditions at the closed RCRA units. These wells will be replaced after WDNR approval of the 635 monitoring program proposed in the Draft Existing Conditions Report and modified by Beazer responses to WDNR comments on the report (September 1, 1993). The results of the proposed monitoring program will be used to verify the PAL and ES exceedences.

Key ||

Key ||

Key ||

If the exceedences of the PALs are verified through continued monitoring of the revised well network, this data will be used in conjunction with the data collected as part of the RFI to evaluate potential remedial actions for the site during the Corrective Measures Study (CMS).

ES Exceedence:

The ES for pentachlorophenol was exceeded in samples collected from well W-12B in 1991 and 1992. ES exceedence responses are covered under ss. NR 140.26, Wisconsin Administrative Code (January 1992). As detailed above, preliminary notification

and explanations of causes and significance of these exceedences were presented to WDNR on a quarterly basis. ss. NR 140.26 also requires a response to achieve compliance with the ES at the point of standards application. Well W-12B is scheduled for replacement due to concerns relating to data reliability. As such the ES exceedence is not considered a true exceedence at this time, and no corrective action for the RCRA impoundments is currently proposed.

i.e., not thought to be from the RCRA impoundments, sfc. but from general

facility wide contamination or non-RCRA units

CONCLUSIONS

Exceedences of the PALs and ESs for pentachlorophenol and naphthalene were recorded in the 1991 and 1992 results from the quarterly monitoring program implemented at the closed RCRA impoundment at the KII Superior, Wisconsin facility. A review of the pattern and values of the exceedences, with respect to the site conditions, indicates that these exceedences are not significant and probably do not accurately represent releases from the RCRA impoundments.

Only one exceedence of the naphthalene PAL of 8 ug/L was recorded (well W-10B). This result of 10 ug/L, just above the PAL, was recorded in the first quarter of 1992 and was not replicated in the subsequent sampling events for 1992. Several exceedences of the PAL for pentachlorophenol were recorded in samples from wells W-10B, W-12B, and W-12C, and several samples from W-12B exceeded the pentachlorophenol ES. As discussed previously, the potential individual impacts from the various operational units will be difficult to distinguish since these units are in close physical proximity. However, pentachlorophenol was not in use at the facility during the period of operation of the RCRA impoundments and, therefore, could not have been deposited in them. The other operational units at the facility including the non-RCRA impoundments which partially underly the RCRA impoundments, and the adjacent process areas are likely sources of the pentachlorophenol detected in the monitoring wells.

Also, since the hydraulic conductivity of the clay is low, the site constituents are unlikely to have reached the underlying sand layer (monitored by the "C"-level wells), at a depth of 35 to 50 feet, through natural infiltration and migration, particularly at concentrations which exceed the PALs. In fact, no detections of pentachlorophenol were found in the other "C"-level wells at the site. This information suggests that the integrity of wells W-10B, W-12B, and W-12C has been comprised and the detections in these wells may be a reflection of communication along the borehole or annulus of chemical constituents in soils at the surface rather than an accurate reflection of true groundwater conditions in the vicinity of the closed RCRA impoundments.

To evaluate the significance of the detected exceedences, Beazer has proposed that replacement wells be installed under carefully controlled construction practices in the locations of wells W-10B and W-12B/C. These replacement wells will be incorporated into the revised 635 monitoring program for the closed impoundments that was proposed in the Draft Existing Conditions Report and revised by the Beazer response to WDNR comments in the letter dated September 1, 1993. Data from the revised 635 monitoring program should be obtained and used in conjunction with the information collected during the RFI to evaluate potential site-wide remedial actions during the CMS.

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