EXPLANATION OF SIGNIFICANT DIFFERENCE

for the

Former Koppers Wood-Treating Facility Beazer East, Inc.

Carbondale, Illinois

EPA ID: ILD 000 819 946

Issued by:		
Tinka G. Hyde Division Director	Date	

Division Director
Land and Chemicals Division
U.S. Environmental Protection Agency

TABLE OF CONTENTS

EXPLANATION OF SIGNIFICANT DIFFERENCE

Former Koppers Wood-Treating Facility, Carbondale, Illinois

ILD 000 819 946

I.	Purpose

- II. Facility Description and Selected Remedy
- III. Description of Change to the Selected RemedyTable 1. Summary of Significant Change to the Selected Remedy
- IV. Statutory Determinations
- V. Public Participation

Attachment 1 Figure 1. Site Plan and Remediation Areas

Attachment 2 Administrative Record

EXPLANATION OF SIGNIFICANT DIFFERENCE

Former Koppers Wood-Treating Facility, Carbondale, Illinois EPA ID: ILD 000 819 946

I. PURPOSE

The U.S. Environmental Protection Agency (EPA) issued a Final Decision and Response to Comments (Final Decision and Selected Remedy) in 2004 for the Beazer East, Inc. ("Beazer") former Koppers Wood-Treating Facility ("Facility" or "Site"), located in Carbondale, Illinois. The Final Decision required Beazer to excavate contaminated soils and Glade Creek sediments, reroute a segment of Glade Creek, construct soil covers, install trenches and a well to collect subsurface creosote and creosote chemicals, and to construct an on-site containment cell for placement of consolidated remediation waste. In addition, the Final Decision required Beazer to place an institutional control on the property deed restricting the use of land and groundwater; and to monitor groundwater conditions and the natural recovery of creek sediments.

This Explanation of Significant Difference (ESD) document describes and records the EPA's decision to modify the final remedy to address additional contaminated soil on the Site. Since the Final Decision, Beazer identified contaminated soil in the former operations area that is above risk standards for the environment. EPA determined that an additional 15.8 acres of contaminated soil needs to be remediated. This is the "significant difference" from the Final Decision.

The soil will be remediated by expanding areas of existing soil covers in some areas and excavating soils for off-site disposal from other areas. The additional soil remediation does not fundamentally alter the overall cleanup approach at the site and it complies with the statutory requirements of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. § 6901 et seq.

EPA is accepting public comment on the modified remedy. Refer to Section V for details.

II. FACILITY DESCRIPTION AND SELECTED REMEDY

The former Koppers Wood-Treating Facility ("Koppers Site") is located at 1555 North Marion Street, Carbondale, Illinois, in Jackson County. A wood-treating facility operated on the Site from 1901 to 1999, treating railroad ties, utility poles, and other wood products with various chemical preservatives. The Koppers Site occupies approximately 219 acres of relatively flat land, of which about 120 acres were used for manufacturing. In 1986, Beazer entered into an Administrative Order on Consent with EPA pursuant to Section 3008(h) of RCRA, and into a Consent Decree with the State of Illinois. Both legal instruments require Beazer to investigate chemical releases and contaminated media, and to remediate contamination at the facility in accordance with plans approved by EPA and Illinois EPA. Beazer performed the required investigations and provided the results to the agencies.

EPA evaluated the investigation results and determined that Beazer must take remedial action to protect human health and the environment. In the 2004 Final Decision, EPA selected a remedy that required the following activities:

- 1) Construct an on-Site containment cell for contaminated media, specifically a "Corrective Action Management Unit";
- 2) Excavate contaminated media, including soils, creek sediment, waste piles and deconstruction debris, and consolidate the material into the containment cell;
- 3) Cover the containment cell with an impermeable geomembrane cap;
- 4) Relocate a portion of Glade Creek;
- 5) Construct interceptor/barrier trenches and a recovery well to collect subsurface creosote chemicals (dense non-aqueous phase liquid) for off-site disposal or off-site re-use:
- 6) Place engineered covers over contaminated soil;
- 7) Seal specific wells, eliminate a subsurface drainage system, backfill a small pond;
- 8) Contain any contaminated groundwater within Site boundaries;
- 9) Monitor natural recovery (MNR) of residual contamination in the creeks;
- 10) Place an institutional control on the property to restrict how land and groundwater are used; and
- 11) Perform a long-term operation, maintenance and monitoring program.

Beazer constructed these remedies between 2004 and 2010. The creosote chemical recovery and MNR remedies are ongoing.

III. DESCRIPTION OF CHANGE TO THE SELECTED REMEDY

Following remedy selection, during a review of historic files and data, EPA noted that dioxin/furans had been detected at high concentrations in a small number of samples in the historic operations area. However, these chemicals had not been included in the original site-wide remedial investigation, risk analyses, or remediation proposal. At EPA's request, Beazer collected additional samples across the Site in areas that had not been remediated, including creeks and floodplains, and analyzed them for Site constituents, including dioxin/furan compounds. In addition, Beazer sampled for dioxin/furan compounds in the nearby neighborhood, which had previously been sampled for Site-related constituents.

The new data generated from these sampling events were used in risk analyses that identified unacceptable risks to the environment in specific areas of soil on the Site, based on dioxin/furan compounds and other constituent concentrations. The risk analysis using data collected in the neighborhood concluded no risk to residents. The changes to the remedy documented herein require remediation of an additional 15.8 acres of soil. The remediation and off-site disposal of additional areas of contaminated soil is the significant difference to the 2004 final remedy decision.

Soil will be excavated from four discrete areas comprising approximately 8.4 acres and taken to a landfill in DeSoto, Illinois. The excavated areas will be filled with clean

backfill. In three other areas comprising 7.4 acres, one-foot thick engineered soil covers will be placed over the contaminated areas. In general, the soil cover will be placed near areas where soil covers have been previously constructed. Excavation will occur generally around areas that have not been disturbed for several years and which have more habitat, including the area with the highest dioxin concentrations. Clearing of trees and brush will be necessary to accomplish this remedy. Impacted areas will be seeded with native grass and other plants. The remediated areas will be added to the routine inspection and maintenance plans for the Site. (See Figure 1.)

The soil remediation work required in this ESD document will proceed in accordance with federal, state, and local regulations; some of these require permits. Under the Clean Water Act, permits will be required for impacts to 4.3 acres of wetlands and ditches, and for preventing pollution of waterways during construction. This ESD requires prevention of soil runoff into waterways during rainfall by using hay bales or silt fences around excavation areas, placing covers over stockpiled soil, and dust suppression measures.

Other requirements of the remedy include construction monitoring, a health and safety plan, transportation safety measures, and perimeter air monitoring. This change also requires the addition of signage on Marion Street warning of truck traffic. The truck beds will be covered with a tarp to prevent material from falling off or blowing out of the truck.

Table 1. Summary of Significant Change to the Selected Remedy (former Koppers Wood-Treating Facility, Carbondale, IL

Remedial Component	Original Remedy Design 2004 and 2010	Significant Difference Remedy Changes2018
Soil Cover	2004 Soil Cover: 27 acres based on original constituents identified in the Final Remedy 2010 Soil Cover: additional 10 acres near a drainage ditch for dioxin/furan contamination placed during final cover of the containment cell; interim stabilization measure	Additional 7.4 acres of soil cover for dioxin/furan compounds, adjacent to existing soil cover
Soil Excavation, backfill, off- site disposal	Less than one-acre total excavation of various small areas with visible surface creosote, placed in the containment cell	Additional 8.4 acres of soil remediation by excavation for dioxin furan contamination, for off-Site disposal

IV. STATUTORY DETERMINATIONS

EPA's approval of the soil remediation expansion will prevent environmental exposure to unacceptable levels of Site constituents, including dioxin/furan compounds. This revision

to the Final Decision is necessary to ensure the remedy protects human health and the environment.

V. PUBLIC PARTICIPATION

This ESD and copies of other documents related to the corrective action program for the former Koppers Wood-Treating Site are available at:

- Web site: Former Koppers Wood-Treating Site Carbondale

 https://www.epa.gov/hwcorrectiveactionsites/hazardous-waste-cleanup-former-koppers-wood-treatment-facility-carbondale
- Carbondale Public Library 405 W. Main Street Carbondale, IL 62901
- U.S. EPA Region 5 Records Center 77 West Jackson Boulevard Chicago, Illinois 60604

The significant change described in this ESD involves expanding the soil contamination remedy based on additional characterization of Site constituents that were identified after the initial remedy was selected and constructed. Soil excavation and additional soil cover are proposed based on dioxin/furan concentrations above risk-based levels for environmental, or ecological exposure. The expansion does not fundamentally alter the overall remedial design or objectives.

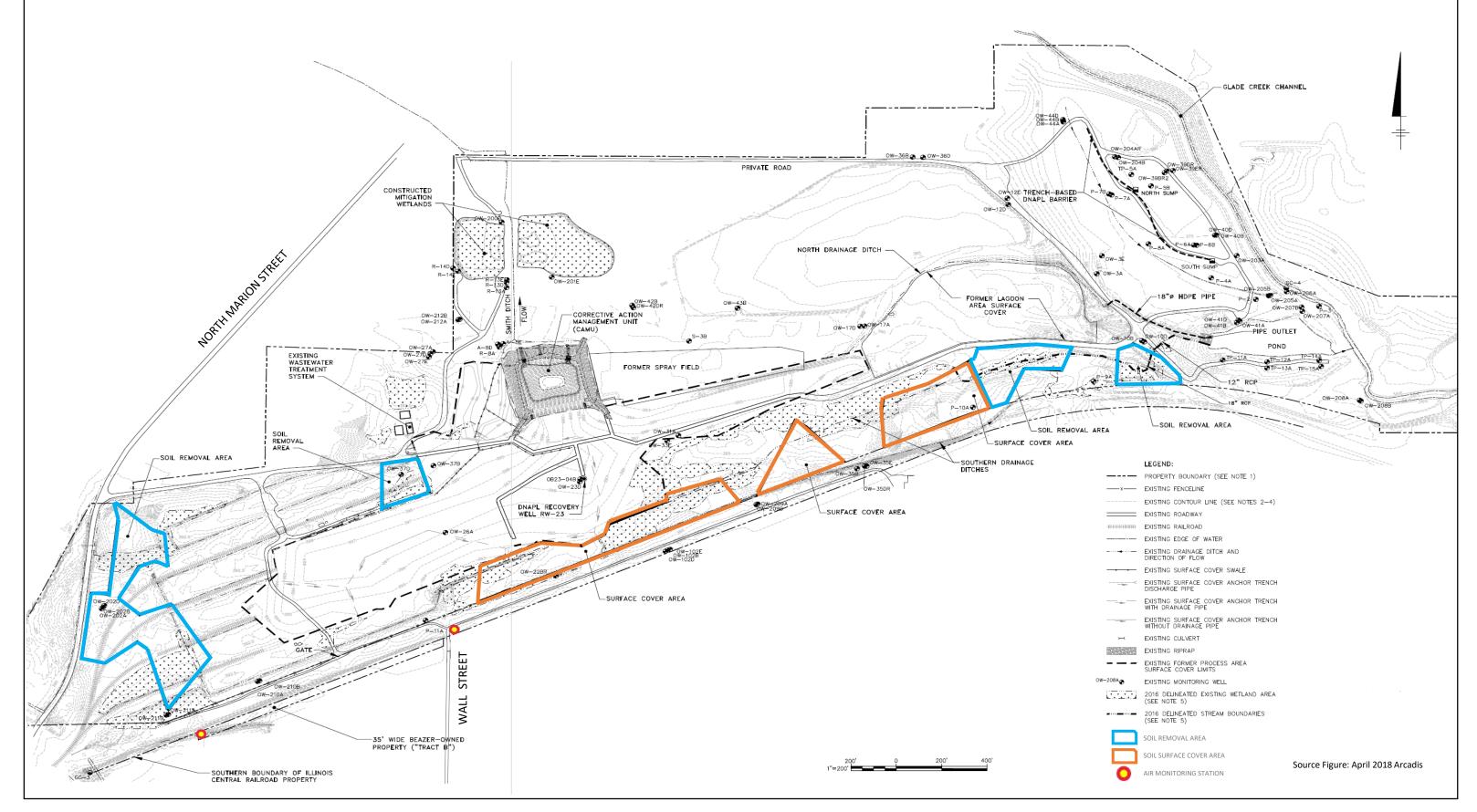
A formal public comment period is from March 28, 2019 to April 19, 2019. Please provide comments to Ms. Carolyn Bury via email or post:

bury.carolyn@epa.gov

Carolyn Bury
Corrective Action Project Manager
Remediation and Re-use Branch
Land and Chemicals Division
U.S. Environmental Protection Agency
77 W. Jackson Blvd. LU-16J
Chicago, IL 60604

If requested, EPA will hold a public meeting to accept additional comments.

Attachment One Figure 1.
Former Koppers Wood-Treating Site, Carbondale, IL
New Soil Remediation Areas – May 2018



ADMINISTRATIVE RECORD FOR THE

FORMER KOPPERS WOOD-TREATING FACILITY BEAZER, EAST, INC.

CARBONDALE, JACKSON COUNTY, ILLINOIS EPA ID NO: ILD 000 819 946

EXPLANATION OF SIGNIFICANT DIFFERENCE

SEMS ID: 943716

<u>NO.</u>	SEMS ID	DATE	<u>AUTHOR</u>	<u>RECIPIENT</u>	TITLE/DESCRIPTION	PAGES
1	942586	5/1/04	U.S. EPA	File	RCRA Corrective Action Final Decision and Response to Comments on the Selection of Remedies to Address Contamination	68
2	940614	5/22/08	Arcadis	File	Glade Creek Floodplain Sample Location - Figure 1	1
3	940615	7/21/08	File	File	Glade Creek Floodplain Soil Sample Analytical Data	23
4	940601	12/18/08	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Administrative Order on Consent - Response to August 2008 Conceptual Site Model for Dioxin/Furan Transport at the South Drainage Ditch Area and Request for Soil/Sediment Sap	6
5	940620	5/7/09	Beazer East, Inc.	Bury, C., U.S. EPA	PCDD/PCDF Characterization Work Plan - (Attached with Cover Letter)	16
6	940621	5/7/09	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Beazer East, Inc Sampling And Analysis Plan For Crab Orchard Creek	5
7	940622	5/7/09	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Beazer East, Inc Sampling And Analysis Plan For Southern Drainage Ditches Area	22
8	940602	8/10/09	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Review of Sampling and Analysis Plans for Dioxin/Furan Evaluation Areas	2

<u>NO.</u>	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
9	<u>941136</u>	8/10/09	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Review of Sampling and Analysis Plans for Dioxin/Furan Evaluation Areas	13
10	<u>941138</u>	8/10/09	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Enclosure To August 10, 2009 Letter PCDD-PCDFS Sap	11
11	940604	9/2/09	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Letter Re: Former Koppers Wood- Treating Site - Response to August 10, 2009 Comment Letter	5
12	<u>940605</u>	9/24/09	Bury, C., U.S. EPA		Letter Re: Draft February 2008 Quality Assurance Plan and EA Saps	3
13	940609	10/1/09	Holden, J., Arcadis	Bury, C., U.S. EPA	Letter Re: Responses to USEPA's September 24, 2009 Comment Letter	6
14	940598	10/26/09	Beazer East, Inc.	U.S. EPA	Work Plan for Additional Investigations - (Attached W/Cover Letter)	113
15	940613	10/26/09	Bessingpas, D., Arcadis	Bury, C., U.S. EPA	Email Re: Work Plan for Additional Investigations	1
16	<u>940616</u>	11/6/09	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Conditional EA Saps Work Plan for Additional Investigations	3
17	940600	11/24/09	U.S. EPA	File	Functional QAPP Approval/Signature Page	3
18	941153	3/11/10	File	File	Former Koppers Wood Treating Site - Meeting Agenda	1
19	941125	6/3/10	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	March 2010 Investigation Analytical Data Submittal - (Attached Cover Letter)	273
20	941149	6/30/10	Arcadis	File	Summary of TCDD-TEQ Concentrations and On-Property Locations Exceeding 5,000 PPT - Figure 9	1
21	942584	6/30/10	Beazer East, Inc.	Bury, C., U.S. EPA	Proposed Interim Measures	79
22	<u>941144</u>	8/11/10	Arcadis	Bury, C., U.S. EPA	Soil Removal and CAMU Closure	15
23	942585	8/24/10	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Conditional Conceptual Design for Soil Removal and CAMU Closure	12

<u>NO.</u>	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
24	943713	9/7/10	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Letter Re: Response to USEPA Conditional Approval Conceptual Design for Soil Removal and CAMU Closure	24
25	<u>941150</u>	10/25/10	Beazer East, Inc.	File	Draft Work Plan for Additional PCDD/PCDF Sampling	7
26	<u>941151</u>	1/5/11	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: October 2010 Final Draft DF Additional Sampling Work Plan	2
27	<u>941137</u>	1/24/11	Beazer East, Inc.	U.S. EPA	Work Plan for Additional PCDD/PCDF Sampling	5
28	944525	3/12/12	Kieninger, T., Illinois Dept. of Natural Resources	Beauchemin, M., Arcadis	Email Re: Natural Heritage Database Request	2
29	941139	6/21/12	Arcadis	File	Carbondale Final Draft - Proposed Additional PCDD/PCDF Sample Locations - Figure 1	1
30	941128	10/17/12	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	August 2012 Dioxin Sampling Final/Validated Data Submittal - (Attached W/Cover Letter)	72
31	941140	11/1/12	Arcadis	File	Carbondale Soil Sample Locations - Figure 1	1
32	942869	5/1/13	Arcadis	Arcadis	Potential Exposure and Future Use Areas	1
33	944501	5/1/13	File	File	Carbondale Draft Screening ERA Summary Tables	8
34	944516	5/16/13	Dodds, J., U.S. EPA	Bury, C., U.S. EPA	Memo Re: Review of the Draft Carbondale Screening Ecological Risk Assessment (ERA) Summary Tables 1, 2, 4, and 6 for the Carbondale, IL Site	3
35	<u>943714</u>	6/4/13	File	File	Carbondale Terrestrial Dose Modeling - Bootstrap	1
36	<u>943715</u>	6/4/13	File	File	Carbondale Terrestrial Dose Modeling - Spatially Weighted EPCs	1
37	942871	6/4/13	File	File	Screening-Level Ecological Risk Assessment Results, Rev. 4	13

<u>NO.</u>	SEMS ID	DATE	<u>AUTHOR</u>	RECIPIENT	TITLE/DESCRIPTION	PAGES
38	<u>944505</u>	6/24/13	U.S. EPA	File	Memo Re: Preliminary Responses to EPA Comments - SLERA Tables, Carbondale, IL	4
39	944504	7/18/13	Bury, C., U.S. EPA		Memo Re: EPA Preliminary Review of June 24, July 15, and July 16, 2013	2
40	944512	8/13/13	Arcadis	File	Dioxin-Furan Thiessen Polygon Map	1
41	<u>944526</u>	8/23/13	Anderson, P., Arcadis; Weaver, A., Arcadis	Bury, C., U.S. EPA	Memo Re: Derivation of Spatially- Weighted Exposure Point Concentrations	7
42	944502	9/9/13	Anderson, P., Arcadis; Beauchemin, M., Arcadis	Bury, C., U.S. EPA	Memo Re: Summary of Ecological Risk Assessment Findings and Path Forward	27
43	<u>944503</u>	1/22/14	File	File	Memo Re: Summary - Afternoon Technical Meeting	4
44	944509	2/20/14	Holden, J., Arcadis	Bury, C., U.S. EPA	Email Re: Carbondale - Eco-Risk Tables	2
45	944513	3/12/14	File	File	Memo Re: PA Notes From 03-04- 2014 Conference Call With Beazer, Carbondale, IL Site	2
46	<u>944506</u>	3/18/14	Anderson, P., Arcadis; Beauchemin, M., Arcadis	Bury, C., U.S. EPA	Memo Re: Ecological Risk Evaluation Follow-Up Action Items: January 22, 2014 Meeting Former Koppers Wood-Treating Site in Carbondale, Illinois	19
47	<u>944511</u>	3/18/14	Arcadis	File	Dioxin-Furan Thiessen Polygon Map, New Boundary	1
48	944515	4/7/14	Dodds, J., U.S. EPA	Bury, C., U.S. EPA	Memo Re: Review of the March 18, 2014 Technical Memorandum Regarding Ecological Risk Evaluation Follow-Up Action Items (Memo), For the Former Koppers Wood-Treating Site Located in Carbondale, IL	3
49	<u>942868</u>	4/18/14	Beazer East, Inc.	File	Memo Re: Response to "Draft Ecological Risk Perspective"	4
50	<u>944508</u>	4/18/14	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Email Re: Ecological Risk Perspective Draft	6

<u>NO.</u>	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
51	944518	4/18/14	Holden, J., Arcadis; Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Email Re: Koppers Site - Eco-Risk Teleconference Discussion Document, April 21, 2014	1
52	944520	4/21/14	Slenska, M., Beazer East, Inc.	U.S. EPA	Email Re: Eco-Risk Conference, Analysis	1
53	944524	4/21/14	Cisneros, J., U.S. EPA	Slenska, M., Beazer East, Inc.	Email Re: Koppers Site - Eco risk Teleconference Discussion Document	2
54	942579	4/21/14	Slenska, M., Beazer East, Inc.	Bury, C., & Cisneros, J., U.S. EPA	Email Re: Koppers Site: Eco Risk Teleconference Discussion Document April 21, 2014	2
55	942865	5/5/14	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Memo Re: Teleconference Discussion	1
56	944510	5/20/14	Arcadis	File	Dioxin-Furan Thiessen Polygon Map	1
57	<u>942581</u>	5/28/14	Holden, J., Arcadis	Bury, C., & Cisneros, J., U.S. EPA	Email Re: Carbondale - Revised Eco Risk Table and Figures	2
58	944517	5/29/14	Holden, J., Arcadis	Bury, C., U.S. EPA	Email Re: Draft and Figure Review	1
59	944500	10/13/14	Arcadis	U.S. EPA	Proposed Scope and Rationale for Ecological-Based Remediation at the Former Koppers Wood-Treating Site in Carbondale, IL	
60	944514	11/4/14	Dodds, J., U.S. EPA	Bury, C., U.S. EPA	Memo Re: Review of the October 14, 2014 Proposed Scope and Rationale for Ecological-Based Remediation at the Former Koppers Wood-Treating Site Located in Carbondale, IL	5
61	944521	10/1/15	File	File	Briefing Presentation Power Point Slide, Simulated Remedial Analysis	1
62	944507	10/16/15	Cisneros, J., U.S. EPA	Charters, D., U.S. EPA; Greenberg, M., U.S. EPA	Memo Re: Ecological Risk Evaluation and Risk Management Decisions at the Former Koppers Wood-Treating Corrective Action Site, Carbondale, IL	4

<u>NO.</u>	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
63	944519	10/19/15	Charters, D., U.S. EPA; Greenberg, M., U.S. EPA	Cisneros, J., U.S. EPA	Memo Re: Ecological Risk Evaluation and Risk Management Decisions at the Former Koppers Wood-Treating Corrective Action Site, Carbondale, IL	2
64	943705	12/8/15	Cisneros, J., U.S. EPA	Slenska, M., Beazer East, Inc. & Holden, J., Arcadis	Email Re: Additional Clarification on Ecological Risk Approach to the Dioxin Contamination at the Koppers Site	2
65	941009	1/26/16	Slenska, M., Beazer East, Inc.	Cisneros, J., U.S. EPA	Draft of Proposed Conceptual Approach for Additional Ecological- Based Remediation	23
66	942580	3/11/16	Cisneros, J., U.S. EPA	Bury, C., & Dodds, J., U.S. EPA	EPA Re: EPA Response to January 26th Ecological-Based Remediation Proposal	2
67	942866	4/4/16	Cisneros, J., U.S. EPA	Slenska, M., Beazer East, Inc.	Email Re: EPA Response to January 26th Ecological-Based Remediation Proposal	4
68	942582	4/4/16	Slenska, M., Beazer East, Inc.	Bury, C., & Dodds, J., U.S. EPA	Email Re: EPA Response to January 26th Ecological-Based Remediation Proposal	3
69	941010	5/11/16	Slenska, M., Beazer East, Inc.	Cisneros, J., U.S. EPA	Revised Draft of Proposed Conceptual Approach for Additional Ecological-Based Remediation	34
70	941006	8/10/16	Arcadis U.S. Inc.	File	2016 Delineated Wetland and Proposed Remediation Areas Overlay	1
71	941008	8/16/16	Arcadis U.S. Inc.	File	Delineated Wetlands and Surface Waters - West and East	2
72	940623	9/27/16	Bury, C., U.S. EPA	Bury, C., U.S. EPA	Letter Email FW Carbondale Update	3
73	941015	10/24/16	Slenska, M., Beazer East, Inc.	Bury, C., U.S. EPA	Email Re: Question - Draft Proposed Conceptual Approach for Additional Ecological Based Remediation	2
74	941012	11/29/16	Cisneros, J., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Review of May 11, 2016 Draft Proposed Conceptual Approach for Additional Ecological Based Remediation, Former Koppers Company Wood-Treating Site, Carbondale, Illinois	24

<u>NO.</u>	SEMS ID	DATE	<u>AUTHOR</u>	RECIPIENT	TITLE/DESCRIPTION	PAGES
75	941000	10/27/17	Arcadis U.S. Inc.	Beazer East, Inc.	Soil Removal and Surface Cover Remedial Design	53
76	<u>941011</u>	12/19/17	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: Review/Disapproval of Soil Removal and Surface Cover Remedial Design	2
77	943708	2/1/18	Arcadis U.S. Inc.	Beazer East, Inc.	Soil Removal and Surface Cover Remedial Design (Draft)	20
78	941003	2/1/18	Arcadis U.S. Inc.	Beazer East, Inc.	Appendix B - Calculation Sheet: Pre- and Post-Construction Stormwater Hydrologic Analysis	22
79	941004	2/1/18	Google	File	Appendix C - Maps - 1555 N. Marion St., Carbondale, IL 62901 to Southern Illinois Regional Landfill	1
80	941002	2/1/18	Arcadis U.S. Inc.	U.S. EPA	Appendix A - Design Drawings, Soil Removal and Surface Cover	10
81	941001	2/1/18	Bessingpas, D., Arcadis U.S. Inc.	Bury, C., U.S. EPA	Letter Re: Response to Comments and Revised Remedial Design Former Koppers Wood-Treating Site - Carbondale, IL	5
82	942583	2/8/18	Holden, J., Arcadis	Bury, C., U.S. EPA	Revised Quality Assurance Project Plan (QAPP)	1243
83	943703	2/23/18	Arcadis U.S. Inc.	File	Site Drainage Plan - Figure 2	1
84	941014	3/8/18	Bury, C., U.S. EPA		Letter Re: Conditional Approval of Soil Removal and Surface Cover Remedial Design	6
85	941013	4/26/18	Bury, C., U.S. EPA		Letter Re: Response to Soil Removal and Surface Cover Remedial Design	2
86	<u>943704</u>	5/24/18	Arcadis U.S. Inc.	Beazer East, Inc.	Final Soil Removal and Surface Cover Remedial Design	58
87	943707	6/19/18	Bury, C., U.S. EPA	Slenska, M., Beazer East, Inc.	Letter Re: May 24, 2018 Soil Removal and Surface Cover Remedial Design	2
88	943706	7/3/18	File	File	Preliminary Project Schedule for Soil Removal and Surface Cover Remediation Activities	1
89	942864	Undated	File	File	Preliminary Evaluation of Potential Remediation Areas to Achieve Various Ecological Risk Outcomes	1

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	<u>PAGES</u>
90	942874	Undated	Arcadis	File	Carbondale Ecological Risk Assessment Scenarios, Table and Figures, A1 Thru C2	7
91	940608	Undated	Beazer East, Inc.	File	Proposed Sample Scope and Rationale SDD & Sap Tables	3
92	<u>940611</u>	Undated	Arcadis	File	Sampling Locations - Figure 1 - 4	4
93	940619	Undated	Arcadis	File	Site Plan and Southern Drainage Ditches Area Sample Locations - Figure 1	1
94	<u>941158</u>	Undated	File	File	Table 1-4 Risk Assumption Tables 1	- 5