Appendix B – IEPA Permit History

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
Development	03/21/97	1995-343	09/22/95	Site 2 Expansion.
1	07/08/97	1997-127	04/10/97	Correction to Leachate List L2, Correction of AGQSs/MAPCs for Select Parameters on Lists G1 and G2, Addition of AGQSs/MAPCs For Select Parameters on Lists G1 and G2.
2	03/24/98	1997-378	11/07/97	Approved Construction Acceptance Report for Cell 1 and its Subsequent Operation. Modified Closure and Post-Closure Care Plans and Costs. Approved use of Alternate Daily Cover. Adjusted Saturday Operating Hours. Added Leachate Monitoring Points. Approved Corrections to the List of Wells Included in the Groundwater Monitoring Program.
3	04/29/98	1998-062	02/16/98	Approved CQA report for Active Gas Collection and Leachate Extraction System for Site 2 and their Subsequent Operation.
		1998-116	04/02/98	Approved use of Out-of-State Leachate Disposal Facility.
4	06/04/98	1998-122	04/07/98	Approved the Transfer of the Operating Rights and Land Ownership from BFII, Inc. to BFI Waste Systems of North America, Inc.
5	12/16/98	1998-367	10/23/98	Approved Construction Acceptance Report for Cell 2 and its Subsequent Operation. Modified Closure and Post-Closure Care Cost.
6	12/23/98	1998-242	07/14/98	Approved AGQSs/MAPCs for Select Parameters in the Intratill Sorted Sediments. Approved Request not to add dichloromethyl ether to the Groundwater Monitoring Program. Approved new AGQS/MAPC for total manganese on List G2. Deleted 4,4-DDT from List L2.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
7	12/29/98	1998-325	09/29/98	Approved the Assessment Monitoring Plan for Methane at Groundwater Monitoring Well GG8S and its Proposed Replacement.
8	07/13/99	1999-153	04/14/99	Approved the AGQS/MAPC Values Required by Condition No. VIII.23 of Permit Modification No. 7.
9	10/19/99	1999-257	07/14/99	Approved Installation of a New Gas Extraction Well Near Groundwater Monitoring Well RG8S. Approved the Schedule for Implementation of the Corrective Action Measures at Well RG8S.
		1999-273	07/23/99	Approved Installation of a New Gas Extraction Well Near Groundwater Monitoring Well RG8S. Approved Modifications to the Landfill Gas/Leachate Management System.
10	10/29/99	1999-318	08/19/99	Approved Construction Acceptance Report for Cell 3 and its Subsequent Operation.
11	01/20/00	1999-360	09/23/99	Approved the Addition of a Several Constituents to Groundwater List.
12	04/20/00	1999-482	12/07/99	Approved the Operation of a New Gas Extraction Well and Ancillary Components. Modified Closure and Post-Closure Care Costs.
13	07/25/00	1999-480	12/29/99	Approved Gas Extraction as Source Control to Address Groundwater Exceedances for Landfill Gas Related Parameters at Well RG8S and the Proposal that Groundwater Remediation at Well RG8S was Not Necessary at this Time.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
14	09/29/00	2000-088	03/01/00	Approved Transfer of Land Ownership and Operating Rights from BFI Waste Systems of North America, Inc. to Onyx Zion Landfill, Inc.
		2000-213	06/09/00	Approved Use of Alternate Daily Cover Materials.
15	11/02/00	2000-151	04/26/00	Assessment Monitoring Program for Well G129
		2000-266	07/20/00	Approved temporary monitoring wells T001 and T002 and Revised Monitoring Well Phasing
16	01/12/01	2000-384	09/27/00	Approved operation of a horizontal leachate/gas extraction well and modification of leachate piping and air supply piping between Site 1 Phase A and old Site 2 and construction of leachate load out pad and flare compound for Site 1 Phase A and Site 2.
17	01/18/01	2000-402	11/08/00	Approved operation of Cell 4
18	03/23/01	2000-440	11/22/00	Approved the return of well RG8S to detection monitoring and methane headspace readings in monitoirng well headspaces and the underdrain for Cells 1 and 4.
		2000-460	12/01/00	Approved the construction of the leachate/landfill gas collection trench along the eastern edge of old Site 2

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
19	10/12/01	2001-273	07/13/01	Approved the assessment monitoring report for well B129 and its return to detection monitoring
		2001-274	07/13/01	Approved AGQS values for select organic constituents
20	11/26/01	2001-071	02/19/01	Approved intrawell statistics for boron, sulfate, specific conductance, and total dissolved solids
21	02/15/02	2001-469	12/19/01	Approved construction acceptance report for Cell 5A and its operation and revised Closure and Post-Closure Care Cost Estimates.
22	03/26/02	2001-420	10/25/01	Approved replacement of well GC2S.
		2001-472	12/21/01	Approved renewal of Permit No. 1995-343-LFM, reduced leachate monitoring frequency at L301; reduction in monitoring frequency for List L3 parameters from quarterly to annually; and change in operating hours.
23	05/16/02	2002-044	02/05/02	Approved the design for the combined landfill gas/leachate extraction trench along the north side of old Site 2.
24	06/06/02	2002-009	01/11/02	Approved revised phasing plan and updated Post-Closure Care Cost Estimates.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
25	07/02/02	2001-343	08/31/01	Approved development of the leachate re-circulation system and use of wood chips as alternate daily covers and as road base.
26	10/01/02	2002-239	08/05/02	Approved construction acceptance report for Cell 5B and its operation.
27	11/25/02	2002-126	05/19/02	Approved construction acceptance report for the final cover for old Site 2 outside the piggyback area.
		2002-319	10/11/02	Approved construction acceptance report for landfill gas/leachate collection trench along the east side of old Site 2.
28	12/11/02	2002-292	09/30/02	Approved changes to the design of the landfill gas collection system for the horizontal expansion.
29	03/24/03	2002-387	12/20/02	Approved construction acceptance report for three replacement gas extraction wells along the perimeter of Cell 8 and temporary storage of frozen loaded containers at the facility.
30	04/15/03	2003-023	01/15/03	Approved intrawell statistical values for total and dissolved boron, total and dissolved sulfate, specific conductance, and total dissolved solids.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
31	05/07/03	2003-051	02/04/03	Approved construction acceptance report for the landfill gas/leachate extraction trench along the north side of old Site 2.
		2003-060	02/14/03	Approved exclusion of total organic halogens and fecal coliform from the requirements of condition VII.3, revision of condition VII.3 to exclude other parameters, corrections to typographical errors, deleting total organic halogens from List L1, and activating portions of landfill gas collection system on a temporary basis prior to receipt of authorization to operate.
32	09/02/03	2003-179	05/15/03	Approved updated Closure and Post-Closure Care Cost Estimates, revised interwell AGQS and MAPC values for dissolved boron, total boron, and dissolved manganese, demonstration for well RC2S, and reduced leachate monitoring frequency for leachate at L302.
33	11/06/03	2003-283	07/17/03	Approved construction acceptance report for the leachate re-circulation system in the horizontal expansion area and construction and operation of replacement leachate/gas extraction wells EW-37RR and EW-71R.
		2003-304	08/08/03	Approved reduced groundwater monitoring frequency for 27 wells and updated Closure and Post-Closure Care Cost Estimates.
34	01/28/04	2003-438	11/24/03	Approved the assessment monitoring plan for well GG2S.
35	02/26/04	2003-364	09/30/03	Approved plan to control landfill gas migration in the vicinity of groundwater monitoring well G184.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
36	04/28/04	2003-461	12/16/03	Approved installation of a condensate sump between landfill gas extraction wells EW-41 and EW-42.
		2004-007	01/10/04	Approved proposed changes to methane monitoring program for groundwater monitoring wells located along the separation berm and revisions to the CQA plan to eliminate the minimum 1-foot overlap between sections of geogrid.
37	07/16/04	2004-121	04/19/04	Approved the assessment monitoring plan for well RE2S.
38	09/02/04	2004-187	06/01/04	Approved update of the Closure and Post-Closure Care Cost Estimates.
39	09/09/04	2004-225	07/01/04	Approved interwell and intrawell statistical values for select parameters.
40	12/06/04	2004-328	09/14/04	Approved modification of permit condition No. II.5(s)(4) related to use of wood chips as alternate daily cover.
		2004-348	09/29/04	Approved construction acceptance report for Cell 8A and its operation.
41	06/13/05	2005-101	03/18/05	Approved revised statistical values for dissolved boron in the Shallow Drift Aquifer.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
42	10/07/05	2005-128	04/07/05	Approved plan to address methane exceedences in the headspace of groundwater monitoring well G162.
		2005-171	05/13/05	Approved the continuation of assessment monitoring at well GG2S.
43	11/08/05	2005-287	07/26/05	Approved overnight parking of loaded transfer trailers at the facility.
44	12/20/05	2005-376	09/29/05	Approved the plan to address the methane exceedence at perimeter landfill gas probe GMP-5.
45	01/12/06	2005-419	10/14/05	Approved revised AGQS for dissolved arsenic in the Shallow Drift Aquifer.
46	03/09/06	2005-146	04/19/05	Approved sealing and replacement of well B129, initiation of assessment and at C129, and update of the Closure and Post-Closure Care Cost Estimates.
47	03/16/06	2005-320	08/15/05	Approved the continuation of assessment monitoring at well RE2S.
		2006-001	12/30/05	Approved construction acceptance report for Cell 8B and its operation.
		2006-011	01/09/06	Approved construction acceptance report for leachate re-circulation lines C1 through C5, A6, and A7, and installation of landfill gas extraction wells EW-105, EW-111, EW-112, EW-113, and EW-130.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
48	04/18/06	2006-083	03/20/06	Approved extension of operating hours.
49	07/10/06	2006-149	04/28/06	Approved submittal of landfill gas monitoring results required by permit conditions IX.16 and IX.17.
		2006-163	05/15/06	Approved clay liner re-certification for Cell 8B as required by permit condition II.29.
50	08/24/06	2006-277	07/21/06	Approved sealing and replacing well G166 and initiation of assessment at replacement point G166.
51	09/13/06	2006-251	06/30/06	Approved revised AGQS and MAPC values for chemical oxygen demand in the Intratill Sorted Sediments.
52	11/14/06	2006-309	08/15/06	Approved the continuation of assessment monitoring at well GG2S.
53	02/06/07	2006-457	11/27/06	Approved the construction acceptance report for repairs to the liner geomembrane in Cell 8B.
54	02/14/07	2006-439	11/15/06	Approved continued assessment at well RE2S.
55	04/18/07	2006-456	11/24/06	Approved the revised groundwater monitoring well phasing plan for the facility.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
56	05/22/07	2007-085	03/02/07	Approved modification of leachate collection piping, cleanouts, sumps, and forcemain for Cells 6 and 7.
57	06/13/07	2007-016	01/12/07	Approved measures to address methane detections at GMP-5 and well G162.
		2007-019	03/19/07	Approved the construction acceptance report for 14 landfill gas extraction wells and associated lateral piping.
58	07/03/07	2006-482	12/15/06	Approved renewal of Permit No. 1995-343-LFM, addition of 2-chloroethyl vinyl ether to List G2, semi-annual monitoring at wells G165, G167, G176, and G191, and revised closure and post-closure care cost estimates.
		2007-154	04/13/07	Approved measures to address methane detection at well GG4S.
59	07/10/07	2007-163	04/17/07	Approved the assessment monitoring plan for well GC3S.
60	09/06/07	2007-272	06/05/07	Approved modification of the the final cover slope for Cell 8.
61	09/24/07	2007-062	02/15/07	Approved sealing well B129 and the conclusion of assessment at well C129 and calculation of intrawell AGQS values for this point.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
62	03/07/08	2007-473	11/15/07	Approved continued assessment at well RE2S.
		2007-474	11/15/07	Approved continued assessment at well GG2S.
63	03/14/08	2007-512	12/14/07	Approved sealing well GG3S and installation of RG3S.
		2008-033	01/14/08	Approved installation of 3 dual extraction wells.
64	06/19/08	2008-109	03/28/08	Approved proposed repairs to the leachate extraction system.
65	08/11/08	2008-183	05/15/08	Approved modified schedule for calculation of intrawell AGQS values for well C129, removal of alachor from List G2, addition of chlorobenzene, 1,1,1-trichloroethane, and 1,1,2-trichloroethane to List G2, and intrawell AGQS values for specific conductance, dissolved sulfate, and TDS.
66	08/22/08	2008-105	03/25/08	Approved the construction acceptance report for 24.5-acres of final cover and 19 vertical and 3 horizontal landfill gas extraction wells and associated header and lateral piping, blowers, and enclosed flare and revised closure and post-closure care cost estimates.
		2008-114	03/31/08	Approved the construction acceptance report for Cell 6.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
67	10/22/08	2007-360	08/15/07	Approved the return to detection monitoring at well R166.
68	11/13/08	2008-336	08/15/08	Approved the return to detection monitoring at well GC3S.
69	02/11/09	2008-449	11/14/08	Approved intrawell AGQSs for well C129.
		2008-451	11/14/08	Approved the assessment monitoring plan for well GF7S.
70	03/13/09	2008-410	10/21/08	Approved the alternate source demonstration for well GG5S and repairs to the same.
71	05/12/09	2008-453	11/14/08	Approved measures to address methane detections at GMP-5.
		2009-117	03/11/09	Approved the construction acceptance report for dual extraction wells S-6, S-7, and S-8.
72	06/05/09	2009-076	02/13/09	Approved continued assessment at well RE2S.
		2009-077	02/13/09	Approved continued assessment at well GG2S.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
73	07/15/09	2009-194	04/15/09	Approved AGQS values for dissolved magnesium and dissolved chromium.
74	08/13/09	2009-233	05/15/09	Approved AGQS value for pH.
75	09/02/09	2009-241	05/22/09	Approved AGQS values for dissolved boron, dissolved sulfate, specific conductance, and total dissolved solids for wells G168, G169, G175, T003, and T004.
76	09/15/09	2009-284	05/29/09	Approved the construction acceptance report for leachate re-circulation lines A8 and A9, 10 gas extraction wells and associated header and lateral piping, intallation of pneumatic pumps in 22 gas extraction wells and associated leachate forcemain and air supply lines, and revised closure and post-closure care cost estimates.
77	11/03/09	2009-435	08/26/09	Approved replacement of well G175 with R175.
78	02/11/10	2009-545	11/13/09	Approved replacement of well GG5S with RG5S and alternate source demonstration for dissolved aresenic.
79	03/29/10	2009-463	09/28/09	Approved removal of temporary wells T003 and T004, installation of T005 and T006, and revised groundwater monitoring phasing plan.
80	05/05/10	2010-063	02/15/10	Approved continued assessment at well RE2S.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
81	07/22/10	2010-276	06/01/10	Approved updated closure and post-closure care cost estimates.
82	08/05/10	2010-201	05/06/10	Approved interwell AGQS value for pH.
83	08/13/10	2010-213	05/14/10	Approved continued assessment at well GG2S.
84	10/26/10	2009-552	11/17/09	Approved the alternate source demonstration for well R126.
85	12/02/10	2010-001	12/31/09	Approved measures to address methane detections at GMP-5 and installation of an additional perimeter probe.
86	01/10/11	2010-525	11/01/10	Approved the alternate source demonstration for well G184.
		2010-526	11/01/10	Approved the alternate source demonstration for well C129.
87	05/17/11	2011-065	02/15/11	Approved continued assessment at well RE2S.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
88	06/03/11	2010-572	12/03/10	Approved vertical expansion and final grades of 930-feet msl to increase disposal capacity by 1,720,000 cubic yards and change the facility boundary from 191.7-acres to 318.5-acres. Approved modification of the final cover design. Approved modification of the landfill gas extraction system consistent with the vertical expansion. Approved updated closure and post-closure care cost estimates.
89	07/28/11	2010-164	04/15/10	Approved continued assessment at well GF7S.
		2011-084	03/03/11	Approved measures to address methane detections at GMP-5.
90	08/31/11	2011-192	05/17/11	Approved the construction acceptance report for leachate forcemain, modification of the schedule for addressing condition I.14, and revisions to the CQA plan.
91	10/17/11	2011-169	05/10/11	Approved the construction acceptance report for replacement of 6 gas extraction wells.
		2011-202	05/20/11	Approved the construction acceptance report for 3 replacement and 7 new gas extraction wells, 24-inch diameter landfill gas header piping, and installation of pneumatic pumps in 14 wells and associated leachate forcemain piping and air supply lines. Approved documentation for the landfill gas to energy plant at the facility.
92	11/18/11	2011-383	08/19/11	Approved demonstration of compliance with condition I.14 of the permit.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
93	12/28/11	2011-389	08/29/11	Approved the continuation of assessment monitoring at well GF7S.
94	01/13/12	2011-371	08/15/11	Approved the continuation of assessment monitoring at well GG2S.
95	02/24/12	2011-515	11/23/11	Approved construction of landfill gas extraction wells, piping, air lines, and leachate pumps.
96	04/19/12	2011-537	12/13/11	Approved renewal of the permit and updated closure and post-closure care cost estimates.
97	05/15/12	2012-059	02/15/12	Approved the continuation of assessment monitoring at well RE2S.
98	06/06/12	2012-087	03/07/12	Approved the landfill gas control demonstration for the north side of old Site 2.
		2012-177	04/10/12	Approved relocation of the cell 7 sideslope riser vault and piping.
99	09/21/12	2012-316	06/29/12	Approved removal of interior diversion berms and improved drainage for old Site 2 final cover.
100	11/13/12	2012-392	08/14/12	Approved the continuation of assessment monitoring at well GG2S.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
101	12/14/12	2012-448	09/14/12	Approved the continuation of assessment monitoring at well GF7S.
102	03/25/13	2012-595	12/17/12	Approved change in the name of the facility to Advanced Disposal Services Zion Landfill.
103	05/20/13	2013-078	02/15/13	Approved the continuation of assessment monitoring at well RE2S.
104	07/03/13	2013-133	04/03/13	Approved construction of 18.5-acres of final cover and landfill gas collection infrastructure and updated closure cost estimate and modifications to CQA plan
105	08/14/13	2013-193	05/10/13	Approved construction acceptance report for cell 7 and its operation.
106	09/26/13	2013-137	04/05/13	Approved construction acceptance report for basin 5R and perimeter road and modification of the groundwater monitoring well phasing.
107	11/14/13	2013-392	08/15/13	Approved the continuation of assessment monitoring at well GG2S.
108	12/13/13	2013-441	09/13/13	Approved the continuation of assessment monitoring at well GF7S.
		2013-461	09/30/13	Approved construction of surface water improvements to old Site 2.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
109	03/18/14	2013-569	11/27/13	Approved construction of landfill gas extraction wells, piping, air lines, and leachate pumps.
		2013-583	12/13/13	Approved intrawell statistics for G170, T005, and T006.
110	05/20/14	2014-068	02/14/14	Approved the continuation of assessment monitoring at well RE2S.
111	06/13/14	2011-555	12/23/11	Approved development of the horizontal expansion.
112	07/14/14	2014-071	02/20/14	Approved construction acceptance report for emergency repairs to the leachate forcemain.
113	08/29/14	2014-262	05/30/14	Approved semi-annual monitoring at R166, G168, G169, R175, and GC3S, removal of condition IX.11, and updated financial assurance.
114	12/16/14	2014-406	08/15/14	Approved AGQS values for new Class I parameters.
		2014-407	08/15/14	Approved the conclusion of assessment monitoring at well GG2S.
		2014-446	09/15/14	Approved the continuation of assessment monitoring at well GF7S.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
115	02/14/15	2014-554	11/06/14	Approved proposed changes to the leachate forcemain for old Site 2.
116	03/10/15	2014-596	12/08/14	Approved sealing of wells T005 and T006 and installation of wells G201 through G206.
117	05/06/15	2015-068	02/10/15	Approved design changes to the final cover tie-in between cells 1 and 4 and cells 8A and 8B.
118	05/18/15	2015-084	02/16/15	Approved construction of landfill gas extraction wells, piping, air lines, and leachate pumps.
119	06/16/15	2015-085	02/13/15	Approved the conclusion of assessment monitoring at well RE2S.
120	08/27/15	2015-298	05/29/15	Approved updates to the closure and post-closure care cost estimates.
121	12/03/15	2015-430	09/03/15	Approved construction of piping changes to the leachate forcemain for old Site 2.
122	12/15/15	2015-443	09/15/15	Approved the continuation of assessment monitoring at well GF7S.
123	02/04/16	2015-467	10/05/15	Approved the ASD for total phenols for wells G131, G132, and R133.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
124	03/01/16	2015-577	12/04/15	Approved construction acceptance report for cell 9 and its operation and updates to the closure and post-closure care cost estimates.
125	07/29/16	2016-113	03/31/16	Approved construction of landfill gas extraction wells, piping, air lines, and leachate pumps.
126	08/11/16	2016-192	05/13/16	Approved revised interwell statistics for total phenols.
		2016-197	05/17/16	Approved construction acceptance report for replacement leachate forcemain between wells EW37RR and EW38R.
127	08/26/16	2016-247	05/31/16	Approved updates to the closure and post-closure care cost estimates.
128	12/01/16	2016-393	09/01/16	Approved the reduction in the number of perforations for horizontal landfill gas collection piping.
129	12/15/16	2016-412	09/15/16	Approved the continuation of assessment monitoring at well GF7S.
		2016-445	10/11/16	Approved revised specifications for coarse aggregate for vertical landfill gas collection wells.
		2016-455	10/13/16	Approved construction acceptance report for replacement of leachate forcemain between wells EW41 and EW42.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
130	02/17/17	2016-515	11/18/16	Approved discontinuation of landfill gas collection at leachate cleanout riser CEW-5S.
131	04/05/17	2016-537	12/19/16	Approved the decommissioning of 37 landfill gas collection points.
132	05/16/17	2016-465	10/17/16	Approved construction acceptance report for 13.0 acres of final cover over Site 2 expansion and updates to the closure and post-closure care cost estimates.
		2016-530	12/09/16	Approved renewal of Permit No. 1995-343-LFM and updated closure and post-closure care cost estimates.
		2017-054	02/08/17	Approved construction acceptance report for 1.0 acre of final cover over Old Site 2.
133	06/06/17	2017-095	03/07/17	Approved construction acceptance report for 23 gas extraction wells and associated header and lateral piping, and leachate forcemain and air supply piping to 7 dual extraction wells.
134	06/12/17	2017-100	03/10/17	Approved semi-annual sampling of groundwater monitoring well GG2S.
135	06/20/17	2017-108	03/20/17	Approved the proposed intrawell values for dissolved chromium and dissolved magnesium in Cell 9 monitoring wells.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
136	12/18/17	2017-416	09/15/17	Approved the proposed intrawell values for dissolved and total chloride, dissolved and total sulfate, and total dissolved solids at well GF7S.
137	01/16/18	2017-431	10/03/17	Approved the demonstration of an alternate source for dissolved magnesium concentrations in monitoring well G185.
138	05/16/18	2018-057	02/07/18	Approved proposed modifications to the groundwater monitoring well phasing plan (Table 1 and Drawing 1 of Addendum No. 1 to Log. No. 2018-057, dated May 4, 2018)
139	08/29/18	2018-275	06/01/18	Approved annual update to the closure and post-closure care cost estimates.
140	11/20/18	2018-310	06/28/18	Approved construction acceptance report for 20 gas extraction wells; 24-inch header and 30-inch condesnate sump; associated gas header and lateral piping; and leachate forcemain and air supply piping to 10 dual extraction wells.
141	03/07/19	2018-511	12/12/18	Approved the decommissioning of horizontal landfill gas collector EW154H.
142	08/02/19	2019-185	05/03/19	Approved alternate source demonstration for dissolved sulfate at well G160 and the proposed revision to the intrawell value for dissolved sulfate at well G160.
		2019-191	05/06/19	Approved alternate source demonstration for dissolved chloride at well G167.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
143	10/01/19	2019-283	07/01/19	Approved the annual update to the closure and post-closure care cost estimates.
144	12/24/19	2019-323	08/02/19	Approved semi-annual sampling frequency for groundwater monitoring wells GF0S and G170 and the revised Groundwater Sampling Plan.
145	02/24/20	2020-025	01/22/20	Approved construction acceptance report for Cell 10 A/B covering approximately 9 acres. Approved operation in Cell 10 A/B.
146	04/03/20	2019-416	10/28/19	Approved construction documentation for the following landfill gas management components: modifications to 25 gas extraction wells; 24-inch header and 30-inch condensate sump; associated gas lateral piping; leachate forcemain and air supply piping to gas well EW-151H sump and gas extraction well EW-169A.
147	06/17/20	2020-108	04/08/20	Approved construction acceptance report for landfill gas management components installed in 2019.
148	11/13/20	2020-325	08/21/20	Approved reduced sampling of well RE2S from quarterly to semi-annual monitoring.
149	05/19/21	2021-006	03/01/21	Approved construction acceptance of final cover repairs at Old Site 2
150	05/19/21	2021-069	02/17/21	Approved modifications to conditions VIII.9 and VIII.18.

Summary of Zion Landfill Permit Modifications
IEPA BOL Permit No. 1995-343-LF

Modification Number	Date Permit Issued by IEPA	IEPA Log No.	Application Dated	Description
151	06/09/21	2021-085	03/08/21	Approved intrawell statistics for dissolved chromium and dissolved magnesium for cell 10a/10b wells G207, G208 and G209.
152	07/20/21	2021-177	05/13/21	Approved semi-annual groundwater monitoring at wells G201, G202, G203, G204, G205 and G206 in accordance with condition VIII.18.
153	08/31/21	2021-271	07/06/21	Approved an annual update of the premature closure, decommissioning, and post-closure care cost estimates per Condition X.8.
154	12/22/21	2021-414	11/16/21	Approved construction acceptance of Cell 10C composite liner
155	03/08/22	2022-026	01/31/22	Approved decommission select GCCS elements.
TBD	Due 5/10/22	2022-036	02/09/22	Application Under Review - Addresses Condition V.5 and provides 2022 5 Year Renewal Application
TBD	Due 6/19/22	2022-074	03/21/22	Application Under Review - Request for significant permit modification to operate the Zion Landfill 2020-2021 GCCS Improvements constructed in 2020 and 2021 pursuant to 35IAC Sections 811.505(d) and 813.203.