

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2

In the Matter of:

Toa Alta Municipal Solid Waste Landfill
Toa Alta, Puerto Rico.

Municipality of Toa Alta, Puerto Rico,
Empresas Municipales Toalteña, Corp.,
CMA Environmental, LLC, and
Landfill Technologies of Toa Alta,

Respondents.

Proceeding Under Section 7003 of the
Solid Waste Disposal Act, as amended.

ADMINISTRATIVE ORDER

Docket No.: RCRA-02-2017-7303

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I. JURISDICTION

1. This Administrative Order (the “Order”) is issued to the Municipality of Toa Alta, Puerto Rico (“Municipality” or “Toa Alta”), the Empresas Municipales Toalteña, Corp. (“Municipal Co.” or “Operator”), CMA Environmental, LLC (“CMA”), and Landfill Technologies of Toa Alta (“LandTech”), collectively hereinafter referred to as the “Respondents.”
2. The Order is issued by the United States Environmental Protection Agency (“EPA”) pursuant to the authority vested in the Administrator of EPA by Section 7003 of the Solid Waste Disposal Act, as amended by various laws including the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6901 *et seq.* (collectively hereinafter referred to as “RCRA” or “the Act”), which authority has been duly delegated to the Regional Administrator of EPA, Region 2. This authority has been subsequently delegated to the Deputy Regional Administrator of EPA, Region 2.
3. Notice of this Order has been provided to the Commonwealth of Puerto Rico, pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973.

II. PARTIES BOUND

4. The Toa Alta “Municipal Solid Waste Landfill” as that term is defined at 40 C.F.R. § 258.2 (“Landfill”) is located off PR-165, at Km 8.2, Barrio Contorno, Municipality of Toa Alta, in the Commonwealth of Puerto Rico.
5. Respondent Toa Alta is the owner of the Landfill. Respondent Toa Alta and Respondent Municipal Co. are the current operators of the Landfill.

6. Respondent LandTech operated the Landfill from 2001 until April 2014. Respondents Toa Alta, Municipal Co., and CMA operated the Landfill from April 2014 until March or April 2016.
7. This Order applies to and binds the Respondents and every agent and successor of the Respondents. Each Respondent shall supply any person or entity under the direct or indirect control of the Respondents (including but not limited to any contractor or independent agent retained to perform work on issues related to the Landfill) with a complete copy of the Order. Each Respondent shall nonetheless be responsible for ensuring that its contractors, subcontractors and independent agents comply with the requirements of this Order and perform work in accordance with this Order. (As used throughout this Order, the word “shall” means “must”)
8. Unless otherwise specified by identification of the Respondent responsible for a particular activity or requirement, or unless the Order is modified in the future pursuant to Section XVI. “Transfer of Obligations,” Respondents are collectively responsible for carrying out the terms and requirements of this Order or ensuring that the terms and requirements of this Order are carried out.
9. Respondents are jointly and severally liable (except where the Order assigns specific responsibility) for penalties for violation of the Order, for non-performance of requirements of this Order, and/or for failure or refusal to comply with this Order, pursuant to the Section 7003(b) of RCRA, 42 U.S.C. § 6973(b), as amended.
10. Any change in ownership, control or legal status of Respondents LandTech, CMA, or Municipal Co., including sale of assets, shall not alter their respective responsibilities under this Order, except as may be provided by Sections XV. “Modification” and XVI. “Transfer of Obligations,” herein.
11. The obligations of Respondent Toa Alta under this Order shall be binding on any successor, whether such successor is created under or otherwise designated by the laws of the Commonwealth of Puerto Rico.

III. EPA’S FINDINGS OF FACT AND CONCLUSIONS OF LAW

Statutory and Regulatory Background

12. Section 7003(a) of RCRA, 42 U.S.C. § 6973(a) states in pertinent part that: “upon receipt of evidence that the past or present handling, storage, treatment, transportation or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may ... issu[e] such orders as may be necessary to protect public health and the environment.” This authority has been delegated to the Deputy Regional Administrator of EPA, Region 2.
13. Section 1004 of RCRA, 42 U.S.C. § 6903 defines the term “solid waste” to mean “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural

operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 1342 of Title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) [42 U.S.C. 2011 et seq.].”

14. Section 1004 of RCRA, 42 U.S.C. § 6903 defines the term “hazardous waste” to mean “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

15. Section 1004 of RCRA, 42 U.S.C. § 6903 defines the term “open dump” to mean any facility or site where solid waste is disposed of which does not meet all the criteria for being classified as a sanitary landfill under section 4004 and which is not a facility for disposal of hazardous waste.

16. Section 4004 (a) of RCRA, 42 U.S.C. § 6944 states, in pertinent part, that the “...Administrator shall promulgate regulations containing criteria for determining which facilities shall be classified as sanitary landfills and which shall be classified as open dumps....”

17. The federal regulations promulgated at 40 C.F.R. Part 258, entitled “Criteria for Municipal Solid Waste Landfills,” “establish [the] minimum national criteria ... for all municipal solid waste landfill units.” 40 C.F.R. § 258.1.

18. The Landfill is a “municipal solid waste landfill unit,” as that term is defined at 40 C.F.R. § 258.2.

19. Pursuant to 40 C.F.R. § 258.1(h), municipal solid waste landfill units which fail to meet the criteria set forth in Part 258 constitute open dumps.

20. Section 4005(a) of RCRA, 42 U.S.C. § 6945(a) states, in pertinent part: “...any solid waste management practice or disposal of solid waste or hazardous waste which constitutes the open dumping of solid waste or hazardous waste is prohibited.”

21. The Landfill has been receiving municipal solid waste since at least 1966 and constitutes an “existing landfill” as that term is defined in 40 C.F.R. § 258.2. Existing municipal solid waste landfill units are subject to many of the requirements set forth in 40 C.F.R. Part 258.

22. Pursuant to 40 C.F.R. § 258.1, and the regulations associated with and cross-referenced therein, municipal solid waste landfills in operation as of 1994 that continue to accept solid waste for disposal may not laterally expand unless the expansion cell or area meets certain design criteria set forth in 40 C.F.R. § 258.40, including installation of an impermeable liner membrane and a leachate control system, which acting together, are designed to minimize uncontrolled leachate releases from the landfill.

23. The Landfill is also subject to the Non-Hazardous Solid Waste Management Regulations of Puerto Rico, administered by the Puerto Rico Environmental Quality Board (“EQB”).

24. The Landfill is not authorized by EPA to accept or dispose of “hazardous waste,” as that term is defined in Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), and in 40 C.F.R. § 261.3.

Owner and Operator

25. Respondent Toa Alta, a Municipality of the Commonwealth of Puerto Rico, is the owner of the property on which the Landfill and associated operations are located (“Facility”). The Municipality operated the Landfill from 1966 until 1998, has been an operator of the Facility since April 2014, and has been involved in the management of the Landfill.

26. Respondent Toa Alta has contributed in the past and is currently contributing to the handling and disposal of solid waste at the Facility.

27. Respondent Municipal Co. is a current operator of the Facility, has been an operator of the Facility since April 2014, and has been involved in the management of the Landfill.

28. Respondent Municipal Co. is currently contributing to the handling and disposal of solid waste at the Facility.

29. Respondent CMA is a limited liability company doing business in Puerto Rico. CMA was an operator of the Facility from April 2014 until April 2016, and was involved in the management of the Landfill.

30. Respondent CMA contributed to the handling and disposal of solid waste at the Facility.

31. Respondent LandTech is a corporation doing business in Puerto Rico. LandTech was the primary operator of the Facility from 2001 until April 2014, and was involved in the management of the Landfill.

32. Respondent LandTech contributed to the handling and disposal of solid waste at the Facility.

Each Respondent is a Person

33. Each of Respondents Toa Alta, Municipal Co., CMA, and LandTech is a “person” as that term is defined in Section 1004(15) of the Act, 42 U.S.C. § 6903(15).

Geographic and Geological Background

34. The Municipality of Toa Alta is a municipality in northern Puerto Rico located in the karst belt geologic region, south of Toa Baja; east of Vega Alta; and west of Bayamon. Toa Alta is approximately 70 square kilometers (27 sq. miles) in size and had a population, as of 2010, of 74,066 people.

35. The Landfill is located off the PR-165 thoroughfare, at Km 8.2, Barrio Contorno, Municipality of Toa Alta, Puerto Rico. PR-165 and more than 100 homes and businesses are within 400 meters of the Landfill.

36. The Landfill is located on approximately 31 acres (32 cuerdas) of property. ^{Error! Bookmark not defined.} EPA has estimated that some 30.3 acres bears waste.
37. The Landfill has been filled/constructed in three main stages: the initial unlined waste cell, a newer lined cell, and, finally, a combined waste deposition area overlaying both cells.
38. The Landfill is located in a region that has an annual average rainfall of 74.7 inches.
39. The primary bedrock underlying the Toa Alta Landfill is a carbonate-rock aquifer, the Río Indio Limestone Member, which consists of limestone lenses of marly clay or beds of chalky limestone, grading laterally into an unconsolidated sand and gravel aquifer, Mucarbones Sand.
40. The Landfill abuts and drains into the Mucarbones Sand aquifer, consisting of quartz sand, interbedded with glauconitic, calcareous sand and thin-bedded calcareous clay.
41. The predominant soil type underlying the Landfill is Colinas clay loam.
42. The Landfill is sited in a seismic zone in steep topography.
43. The Landfill is located within karst terrane.
44. The North Coast Limestone aquifer system in Puerto Rico is one of the largest and most productive sources of ground water on Puerto Rico. The aquifer system underlies a populous and industrialized area that extends approximately 90 miles along the north coast of Puerto Rico and encompasses an area of nearly 700 square miles. The aquifer system consists of two limestone aquifers separated by an intervening confining unit.
45. The North Coast Limestone aquifer system's lower aquifer is exposed as a 3- to 11-kilometer wide band along the southern one-third of the North Coast ground-water province. The lower aquifer is recharged by infiltration of precipitation through soil cover or as runoff that enters the aquifer through numerous sinkholes, solution trenches (zanjones), and dry streambeds in the outcrop areas.
46. The Landfill was built into an approximately 11-acre sinkhole within the North Coast Limestone aquifer system's lower aquifer recharge area.
47. The North Coast Limestone aquifer system is a Principal Aquifer of the United States. Principal Aquifers of the United States, or national aquifers, are defined by the U.S. Geological Service ("USGS") as regionally extensive aquifers or aquifer systems that have the potential to be used as a source of potable water.
48. The Landfill discharges to the Río de la Plata valley, a locally significant alluvial valley drinking water aquifer. Alluvial valley aquifers in Puerto Rico consist of river alluvium along the lower part of major river valleys on the east, west, north, and southwestern coastal areas and in the east-central interior valleys of rivers. The alluvial valley aquifers are a locally important source of industrial, municipal, and domestic water supplies for numerous municipalities in the interior and coastal areas of Puerto Rico.

Landfill Background and Regulatory History

49. The Landfill has been receiving municipal solid waste since 1966.
50. Toa Alta Landfill was owned and operated by the Municipality of Toa Alta from 1966 until Landfill Management, S.E., assumed primary operational control in 1998. LandTech took over primary operations in 2001. LandTech operated the landfill until April 2014. From April 2014 until March or April 2016, the Municipality, Municipal Co. and CMA operated the landfill. Since then, the Municipality and Municipal Co. have been the primary operators.
51. EPA's Inventory of Open Dumps, issued in June 1985, included the "Toa Alta Municipal Landfill." The noncompliance categories listed for the Toa Alta Landfill were disease, fires, and access.
52. In 2004, the Puerto Rico Solid Waste Management Authority reported that the Landfill was not equipped with a leachate collection system, that the Landfill had expanded some 12,000 square meters (3.0-acres) beyond its property boundary as of 2003, and that the Landfill would reach the end of its operational life (reach maximum capacity) in July 2007, without an expansion cell, or in June 2012, with such a new cell.
53. On or about August 26, 2004, an authorized representative of EPA inspected the Landfill (the "2004 Inspection"). During the 2004 Inspection, EPA observed inadequate daily cover, no inspection of incoming wastes, limited site security, inadequate inspection access (access was limited to only part of the waste perimeter), visible leachate seepage with no leachate controls, adjacent housing (including food animals), no groundwater monitoring, and stormwater and truck wash runoff that was being directed into surface water streams. Solid wastes accepted for disposal included mixed domestic, construction and demolition debris, scrap white goods (*e.g.*, refrigerators, washing machines), and yard (green) waste. Trash was visible in the stream along the southwest landfill boundary.
54. During a site visit on March 20, 2007 ("2007 Site Visit"), EPA observed improved operational conditions. A new, lined waste cell was nearing the end of construction in the southeast section of the Facility.
55. In 2007, the Puerto Rico Solid Waste Management Authority reported that the Landfill did not meet the 40 C.F.R. Part 258 Subpart B requirements, was located in the karst region, lacked expansion space, and was not recommended for expansion. The Solid Waste Management Authority recommended that the Landfill be closed in 2007.
56. In April 2014, the operator, LandTech, was replaced by the Municipality, the Municipal Co., and CMA.
57. In a letter addressed to the Mayor of Toa Alta, dated November 18, 2014, EQB stated that the Landfill was not in compliance with its solid waste regulations, did not manage leachate, lacked adequate control regarding public access, lacked paved access roads, had no financial assurance, had inadequate heavy equipment, no control of explosive gas, and no groundwater monitoring plan.
58. In a letter to the Mayor of Toa Alta, dated May 20, 2015, EQB stated that the Landfill was not in compliance with its solid waste regulations, did not manage leachate, inadequately

managed stormwater runoff, lacked proper daily cover, failed to sample leachate or stormwater, lacked adequate control regarding public access, lacked paved access roads, and had inadequate heavy equipment.

59. In a Notice of Deficiencies, sent to the Mayor of Toa Alta, dated October 26, 2016, EQB stated that the Landfill was not in compliance with its solid waste regulations, had disconnected the leachate collection system, had no groundwater monitoring plan, did not monitor explosive gases, inadequately managed stormwater runoff, improperly placed waste, lacked proper daily cover, did not properly cap the closed portion of the landfill, and did not maintain proper records.

Respondent-provided Information

60. On or about January 27, 2016, July 1, 2016, and November 18, 2016, authorized representatives of EPA inspected the Landfill (the “January, July, and November Inspections,” respectively). During the January Inspection, EPA representatives met with and were joined by a CMA official. During the July and November Inspections, EPA representatives were accompanied by authorized representatives of EQB and met with and was joined by a Municipal Co. official. During the January, July, and November Inspections and at other times, EPA obtained information concerning the Landfill and its waste disposal practices, including facts set forth in the Findings of Fact.

61. In a meeting on January 26, 2016, held at a LandTech office, officials from LandTech informed EPA of the following:

- a. LandTech started working at the Toa Alta Landfill in 2001;
- b. LandTech began with a contract to run the Landfill and then was contracted to build a new, lined cell in approximately 2003;
- c. New cell was six acres, lined with leachate collection, leachate tanks, and pump system;
- d. In 2004-2005, LandTech began work on the new cell. Leachate was collected and hauled to the Puerto Nuevo Kennedy wastewater treatment plant until 2014;
- e. During the period in 2014 when LandTech operated the Landfill, leachate was disposed at a rate of 4 or 5 trucks/month @5,000 gal/truck [~270,000 gal/year]. An additional amount of leachate was recirculated in the new cell via a spray system;
- f. The Municipality took over running the Landfill in 2014, giving the “push and cover” operations contract to a public/private municipal corporation;
- g. The Municipality took out the leachate tanks and leachate pump system. A separate, half-constructed leachate interception and lined collection system for stormwater and leachate from the older cell, never accepted by EQB, was ripped out;
- h. The Municipality has collected leachate in a pond that is being pumped out into a sinkhole.;

- i. The Landfill was required to install a GCCS [gas collection and control system]. LandTech informed the Municipality of this requirement but no system was installed; and
- j. It is locally known that the small creek northwest of the site is contaminated.

62. In the December 19, 2016, response to a request for more information on past and present Landfill operations (the "December Response"), the Municipality informed EPA, *inter alia*, of the following:

- a. LandTech operated the Landfill from 2001 until April 2014. From April 2014 until 2016, Empresas Municipales Toalteña, Corp., and CMA Environmental, LLC, operated the Landfill. Since 2016, Empresas Municipales Toalteña, Corp. has been the sole operator with, as of August 2016, Environmental Assessment Consulting, Inc. (EACI) serving as consultants;
- b. Estimated Landfill waste intake was reduced by 45% from February to November, 2016;
- c. The Landfill has been operating for approximately 50 years (since 1966). Throughout this time the Facility has received nonhazardous solid wastes from the Municipality of Toa Alta, adjacent municipalities such as Naranjito, Corozal, and Comerío, as well as private entities;
- d. The Landfill's leachate collection and recovery system was inoperative or out of order at the time Empresas Municipales [Municipal Co.] undertook the administration and operation of the Facility with the assistance of CMA Environmental, LLC.
- e. It appears that at some point during the 2010-2014 period, Landfill Technologies of Toa Alta discontinued operating the leachate collection and recovery system and commenced pumping leachate (mixed with rainwater) from the retention pond located to the north of the active cell. In addition, ancillary equipment from the leachate collection and recovery system had been removed prior to Empresas Municipales's involvement as administrator of the Facility in 2014;
- f. Groundwater monitoring wells were not clearly identified. There are three monitoring wells and one production well;
- g. Two uninstalled 6,000-gallon aboveground tanks were identified within the premises;
- h. A damaged leachate sump was identified west of the scale house;
- i. Leachate was [as of December 2016] being collected and disposed [of] regularly at a nearby wastewater treatment plant pursuant to a temporary permit issued by the Puerto Rico Aqueducts and Sewers Authority ("PRASA"); and

- j. Approximately 90% of the incoming waste consists of solid waste generated by the Municipality of Toa Alta.

63. While there are discrepancies in what LandTech and the Municipality reported to EPA, both accounts indicate that above-ground elements of the leachate system used to manage leachate in the past have been removed and that the leachate collection system within the lined cell had ceased operation by late 2014.

Recent Landfill Inspections, Findings and Environmental Impact

- Access Control

64. The Landfill does not have adequate control regarding public access to the Landfill as required by 40 C.F.R. § 258.25. Access is unrestricted for a significant portion of the Landfill perimeter, as the waste extent abuts private properties without any fencing or other access restriction. Failure to completely control public access increases the likelihood of individuals entering the Landfill and the potential for illegal dumping of wastes, thereby potentially jeopardizing human health and the environment.

- Daily Cover

65. Proper cover is required to reduce risk of disease, fires, leachate generation, odors, blowing litter, and scavenging. Proper cover is required by 40 C.F.R. §§ 258.21 and 122.26.

66. During the 2004 Inspection, EPA observed areas of the Landfill with poor and no daily cover.

67. In letters to the Mayor of Toa Alta, dated May 20, 2015, and October 26, 2016, EQB stated that the Landfill lacked proper daily cover.

68. During the January Inspection, EPA observed different areas of the Landfill that had poor daily cover.

69. During the July Inspection, EPA observed different areas of the Landfill that had poor daily cover, no daily cover, eroded daily cover, and trash wash-out.

70. During the November Inspection, EPA observed different areas of the Landfill that had poor daily cover, large expanses without daily cover, eroded daily cover, trash wash-out, and un-compacted waste.

71. The United States Department of Agriculture's Soil Survey rates the Colinas clay loam, which is employed by Toa Alta as cover and structural support soil, as very limited in suitability for use as daily cover. The limited compactability and clayey nature of the material were cited as the main negative issues affecting its suitability for use as daily cover.

- Stormwater

72. During the 2004 Inspection, EPA observed that the Landfill lacked adequate stormwater runoff controls. During the January, July, and November Inspections, EPA observed that the Landfill still lacked adequate stormwater runoff controls. These controls are required by 40

C.F.R. §§ 258.26 and 122.26. The Landfill also had only a limited system for the retention of, and no system for, the treatment of stormwater. The Landfill did not segregate surface flows of leachate from its stormwater system.

73. In the letters to the Mayor of Toa Alta, dated May 20, 2015, and October 26, 2016, EQB stated that the Landfill inadequately managed stormwater runoff.

74. During the November Inspection, EPA observed significant ponding, erosion, and waste washout throughout Landfill.

75. Stormwater, originating from the Landfill, flows to the east overland to an unnamed tributary of the Río de la Plata and to the west to the Arenas Quebrada, a tributary of the Río Lajas, which itself flows into the Río de la Plata.

76. The Río de la Plata is a “navigable water” of the United States pursuant to Section 502(7) of the Federal Water Pollution Control Act, 33 U.S.C. § 1362(7).

77. Uncontrolled surface water run-off can flow onto and infiltrate and percolate into surface soils, potentially adversely impacting soil and/or groundwater. Uncontrolled run-off is more likely to occur in instances where, as at the Landfill, there is substantial rainfall and steep surface gradients with poor stormwater controls.

- Leachate

78. Leachate is a “liquid that has passed through or emerged from solid waste and contains soluble, suspended or miscible materials removed from such waste.” 40 C.F.R. § 258.2. Landfill leachate may be contaminated with hazardous constituents such as toxic chemicals, heavy metals, and complex organic compounds. Leachate can also contain microbial pathogens (a microorganism, such as a bacterium, protozoan, or virus, that causes infection or disease).

79. EPA has found no significant difference in the leachate constituents between municipal solid waste landfill leachate and hazardous waste landfill leachate.

80. Increased volumes of leachate are generated by and released from landfills that do not have requisite engineering controls in place such as surface water run-on controls, impermeable liners and leachate collection systems. The Landfill’s failure to have these controls increases the likelihood that the aquifer beneath it can become contaminated by operations at the Landfill.

81. According to a 2003 Puerto Rico solid waste study, 0.5% of the solid waste discarded into Puerto Rico landfills is composed of household hazardous waste. The study did not include hazardous waste light bulbs or electronic wastes. Household hazardous waste is solid waste composed primarily of materials found in the wastes generated by residents that might otherwise meet the definition of hazardous waste because of listing, ignitability, corrosivity, reactivity, and/or toxicity, but for the exemption from the definition of hazardous waste for household waste. At the end of 2016, the Landfill likely contained at least 30 million pounds of household hazardous waste, less the portion that had leached into the surrounding environment.

82. Municipal solid waste may contain microorganisms that can cause disease in humans and animals. These pathogenic microorganisms include enteric bacteria, fungi, viruses, and human and animal parasites. Pathogenic bacteria and viruses, originating with soiled diapers, animal waste and other sources, may survive conditions within sanitary landfills and may be leached to ground or surface water. One significant potential source of human pathogens, disposable diapers, constitutes some 1.4% of the municipal waste stream in the U.S. (as of 2011).

83. The Landfill does not have an operational impermeable liner. Such liners, which are required for “new municipal solid waste landfill units” and “lateral expansions” as those terms are defined in 40 C.F.R. § 258.2, minimize the possibility that liquids, including leachate, can percolate and seep through a landfill, infiltrate the subsurface, and contaminate soil and groundwater.

84. The Landfill also does not have an operational leachate interception and collection system. Such systems are required in Puerto Rico for “sanitary landfill systems” pursuant to EQB Regulations for the Management of Non-Hazardous Solid Waste, Rule 548 C. Owners or operators of sanitary landfill systems are required to design, construct and maintain a leachate control system to prevent and control the pollution of surface and underground water. Such leachate control systems minimize the possibility that liquids, including leachate, can contaminate surface water or percolate and seep through a landfill, infiltrate the subsurface, and contaminate soil and groundwater.

85. In 2004, the Puerto Rico Solid Waste Management Authority reported that the Landfill did not have a leachate collection system.

86. Pursuant to 40 C.F.R. § 258.1, and the regulations associated with and cross-referenced therein, municipal solid waste landfill facilities (“MSWLF”) in operation as of 1994 that continue to accept solid waste for disposal, may not laterally expand unless the expansion cell or area meets certain design criteria as set forth in 40 C.F.R. § 258.40, including installation of an impermeable liner membrane and a leachate control system, which acting together, prevent uncontrolled leachate releases from the MSWLF.

87. In March 2007, EPA observed a new, lined waste cell nearing the end of construction in the southeast section of the Facility.

88. In July 2007, in a document filed with EQB by LandTech, a newly constructed waste cell which was lined and had a leachate collection system, located in the southeast section of the Facility (“SE Cell”), was certified as completed according to the plans approved by EQB.

89. In a meeting on January 26, 2016, EQB informed EPA that there was no collection of leachate from the new, lined cell [SE Cell].

90. In aerial photographs from October 2013 and August 2014, a physical installation, identified by LandTech as “leachate collection system tanks,” was clearly present along the northeast slope edge of the SE Cell. In aerial photographs from December 2014 and February

2015, the physical installation, identified by LandTech as “leachate collection system tanks,” was not visibly present.

91. During the January, July, and November Inspections, EPA observed two 6,500-gallon polymer tanks that appeared to have been discarded. During the January Inspection, the tanks were on their sides, empty (except for some soil-like material), open, and they appeared to have been cut free of piping. The tanks were located northeast of the Landfill, at the base of a dirt access road and somewhat overgrown with vine-like growth. During the January Inspection, a CMA official, who was the Manager of Landfill Operations (“MOLO”), identified them as the leachate tanks and said that they had been taken out of service 1.5 years prior [approximately August 2014] and that the leachate pump system had failed. During the July Inspection, the out-of-service tanks were stored beside the small heavy equipment lot. During the November Inspection, the tanks remained beside the small heavy equipment lot with one tank somewhat overgrown with vine-like growth.

92. During the January Inspection, the leachate pump-out valve installation on the northeast edge of the SE Cell was not visible to EPA inspectors. The installation was located by the MOLO upslope from the main access roadway. The valve access area was overgrown and unprotected from potential damage by heavy equipment. Leachate was clearly seen flowing from the eastern edge of SE Cell. Two, large, exposed sinkholes or bedrock-cut basins were accumulating leachate and stormwater, one in the north and one in the south-southeast.

93. During the July Inspection, the leachate pump-out valve installation on the northeast edge of the SE Cell was partially buried, somewhat overgrown, and unprotected from potential damage by heavy equipment. Leachate was visibly ponding around the valves. EPA was told by Landfill employees that LandTech broke and disconnected the SE Cell leachate collection system and that LandTech opened a valve and released leachate into the sinkhole. During EPA’s Inspection, the EPA representative saw leachate flowing from the eastern edge of SE Cell.

94. During the November Inspection, the leachate pump-out valve installation on the northeast edge of the SE Cell was completely overgrown. Leachate was reportedly being pumped out of the south-southeast pit/sinkhole and hauled to the Barceloneta wastewater treatment plant. During the Inspection EPA observed leachate visibly ponding in tire/track furrows by the main office and copious leachate surface flows toward the north pit/sinkhole.

95. During the November Inspection, EPA was told by the MOLO that, in the past while the SE Cell leachate collection system was operational, the Landfill collected and disposed of two 10,000-gallon truckloads of leachate each day, with disposal at a PRASA wastewater treatment plant.

96. EPA estimates that the average, annual generation of leachate within the SE Cell is some 4 million gallons.

97. The Landfill site’s shallow depth to bedrock of only 20 to 48 inches presents a high risk of leachate contamination by limiting natural attenuation. Greater depth of soil provides greater capacity to immobilize or otherwise neutralize nutrients and other potential pollutants. The presence of bedrock, fractured bedrock, or other highly conductive bedrock (karst-type

formations) provides efficient transport pathways through which surface pollutants can directly reach ground water aquifers.

- Groundwater Monitoring

98. An adequate groundwater monitoring system is necessary to determine if contaminants are being released into groundwater and are migrating away from the Landfill. Groundwater contaminated by Landfill operations could contain hazardous constituents such as toxic chemicals, heavy metals, and organic compounds. 40 C.F.R. § 258.51.

99. In letters to the Mayor of Toa Alta, dated November 18, 2014, and October 26, 2016, EQB stated that the Landfill did not have a groundwater monitoring plan.

100. In the December Response, the Municipality reported to EPA that the Landfill has three groundwater monitoring wells and one groundwater production well.

101. During the January Inspection, one of the groundwater monitoring wells was found locked in the open position. Such wells are meant to be secured closed to prevent tampering.

102. The Landfill's location within karst terrane significantly complicates effective groundwater monitoring. For monitoring to be relevant and reliable in karst terranes, monitoring procedures must be radically different from those in non-karst terranes.

103. The Landfill groundwater monitoring system has been determined by EPA to be inadequate. The Landfill currently has no known groundwater monitoring plan. Because of the site's location in karst terrane and shallow soil depth to bedrock, it is difficult to design and construct an adequate groundwater monitoring system.

- Drinking Water

104. PRASA's La Virgencita Water Treatment Plant ("WTP"), with a water intake on the Río La Plata within the Municipality of Toa Alta, withdrew some 2.0 million gallons per day from the Río de la Plata from a point downstream from the Landfill discharges. The WTP is out of service, awaiting a rehabilitation and construction project that would increase capacity to 3.0 million gallons per day.

105. There are two PRASA drinking water wells and 14 USGS-listed groundwater wells within 2 miles of the Landfill.

106. A 1989 EPA technical study concluded that locating waste disposal facilities within a karst terrane risks losing a subjacent aquifer as a source of potable water. Error! Bookmark not defined.

107. The Landfill's location within the North Coast Limestone aquifer system's lower aquifer recharge area presents a risk to a Principal Aquifer of the United States.

- Stability, Overcapacity, & Expansion

108. Pursuant to 40 C.F.R. § 258.14, new MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection

systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

109. Pursuant to 40 C.F.R. §§ 258.1 and 258.15, lateral expansions of MSWLF Facilities in operation since 1994 that are located in unstable areas must demonstrate that special engineering measures have been incorporated into the expansion design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted.

110. Landfill side slopes exceeding the standard 3:1 ratio (ratio of horizontal distance to vertical height which may also be described as a slope of 18 degrees or 33 percent) represent an increased potential for unstable slopes. Steep slopes are at higher risk of failure in seismic and extreme weather (*e.g.*, hurricane) zones.

111. EPA observed steep slopes exceeding a 3:1 ratio (*i.e.*, 3 horizontal to 1 vertical, greater than 18 degrees or 33%) during each of its inspections.

112. In the 2004 Inspection, EPA observed that the western slopes were “far greater than 3:1.”

113. In the January Inspection, EPA determined that the east slope of the Landfill was too steep to traverse safely.

114. In the July Inspection, EPA measured different areas of the north slope at 2:1 (27 degrees or 50%), 1.5:1 (34 degrees or 67%), and 1.6:1 (32 degrees or 62%). EPA did not measure the south slope because of its steepness and convexity.

115. In the November Inspection, EPA determined that portions of the north slope were too steep to traverse safely. EPA measured a section of the north slope at 2:1 (27 degrees or 50%).

116. In 2004, the Puerto Rico Solid Waste Management Authority reported that the Landfill was graded with 2:1 (27 degrees or 50%) configuration slopes.

117. The USGS has opined that “Almost all [Puerto Rico] areas having slopes greater than 50 percent should be included in the area of high [landslide] susceptibility except in the arid southwest [of Puerto Rico].”

118. Approximately 60% of the Landfill is sited on steep bedrock foundation slopes of 40% to 60% (22 degrees to 31 degrees or 2.5:1 to 1.7:1).

119. The United States Department of Agriculture’s Soil Survey rates the Landfill’s soil foundation as very limited in suitability for siting a landfill. The steep slopes, limited depth to bedrock, and soil composition were cited as the main negative issues with respect to the suitability of these soils for siting a landfill.

120. The Landfill’s steep slopes, location in a seismic zone, poor waste placement practices (*e.g.*, poor compaction and daily cover), inadequate run-off controls, and the area’s high rainfalls all increase the risk of slope failure.

121. In 2004, the Puerto Rico Solid Waste Management Authority reported that the active portion of the Landfill within the property boundary would reach capacity in August 2007.

122. In 2007, in the *Dynamic Itinerary for Infrastructure Projects Technical Report, PR-SWA, February, 2007*, the Puerto Rico Solid Waste Management Authority, based on estimated site capacity, designated 2007 as the closure date for the Landfill.

123. In 2013, the Operator, LandTech, reported to EPA that the Landfill, including the SE Cell, would be closed by January 2016.

124. Based on observations and measurements made during the 2016 Inspections, reviews of photomap imagery, and other information sources, EPA determined that the Landfill slopes are significantly overbuilt. The southern waste extent, the toe of the slope, abuts household properties.

125. Under 40 C.F.R. § 258.15(b)(1), an unstable area is a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terranes. The Landfill is sited in karst terrane with poor foundation soils, in an area susceptible to mass movements (landslides/seismic zone).

- Mosquito-borne Disease

126. By Executive Order of the Governor of Puerto Rico, on February 5, 2016, a public health emergency was declared in Puerto Rico concerning the Zika virus (Administrative Bulletin Num. OE-2016-003).

127. The Zika virus is mainly transmitted by a bite of an infected *Aedes aegypti* or *Aedes albopictus* mosquito. *Aedes aegypti* is present throughout Puerto Rico. These are the same mosquitoes that spread dengue and chikungunya viruses. These mosquitoes typically lay eggs in and near standing water. They prefer to bite people, and live indoors and outdoors near people. Mosquitoes that spread chikungunya, dengue, and Zika are aggressive daytime biters. They can also bite at night.

128. Zika virus disease is a disease caused by Zika virus that is spread to people primarily through the bite of an infected *Aedes* species mosquito. Zika virus can be spread from a pregnant woman to her fetus and has been linked to a serious birth defect of the brain called microcephaly in babies of mothers who had Zika virus while pregnant. Zika virus can also be sexually transmitted from an infected man or woman to his or her sex partner(s). There has also been a reported increase in the number of people who have been infected with Zika virus who also have Guillain-Barré syndrome in Puerto Rico.

129. Under 40 C.F.R. § 258.22, "Disease Vector Control," owners or operators of all municipal solid waste landfill units must prevent or control on-site populations of disease vectors (*i.e.*, any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans) using techniques appropriate for the protection of human health and the environment.

130. Mosquitoes breed in standing water, including stormwater run on and run off, leachate seepage, surface ponding on and around a landfill, roadway drainage, sedimentation ponds,

conveyance channels and ditches, and exposed waste rainwater catchment receptacles (*e.g.*, scrap tires).

131. Flight range studies suggest that most female *Aedes aegypti* may spend their lifetime in or around the sites where they emerge as adults and they usually have an average range of 400 meters.

132. More than 100 homes and businesses, and the main road, PR-165 thoroughfare, are all located within 400 meters of the Landfill.

133. In EPA's January and July Inspections, an open, stagnant water basin by the office and maintenance area was employed for stormwater collection. Two, large, exposed sinkholes or bedrock-cut basins were accumulating leachate and stormwater, one in the north and one in the south-southeast of the Facility.

134. On September 16, 2016, EQB sent the Municipality a letter strongly recommending the implementation of comprehensive procedures to mitigate the risk posed by mosquito-borne disease. In particular, the letter stressed that the Municipality was required to comply with the EQB solid waste regulations to reduce the potential for mosquito breeding in all standing waters on the property, including those impacted by stormwater run on and run off, leachate seepage, surface ponding on and around the landfill, access and egress roadway drainage, sedimentation ponds, conveyance channels and ditches, and exposed waste rainwater catchment receptacles (*e.g.*, scrap tires). The September 16, 2016 letter was co-signed by EPA.

135. In EPA's November Inspection, standing water was observed throughout the facility with no ongoing mosquito control measures being practiced.

- Operational Permit

136. On January 26, 2016, EQB informed EPA that the Landfill was operating with an expired Commonwealth permit for operation and closure.

Environmental Risk Factors

- Location Within an Extreme Weather Zone

137. The USGS has ranked the U.S. coastal areas by the number of hurricanes expected to occur during a 100-year period based on historical data. Puerto Rico was classified at the most extreme category of risk, with more than 60 hurricanes for a 100-year period.

- Landfill Gas

138. Landfill gas is generated during the natural process of anaerobic decomposition of refuse contained in a landfill. Landfill gas is predominantly methane and carbon dioxide, and small amounts of non-methane organic compounds ("NMOCs") such as ethane, toluene and benzene. NMOCs are a collection of toxic pollutants, which when released into the atmosphere can lead to adverse effects. Methane gas is odorless and highly combustible. The accumulation of methane gas within a landfill can potentially cause fires and/or explosions.

139. Landfills are the third largest anthropogenic source of methane emissions in the United States, accounting for 20.2% of total methane emissions in 2014.

140. There are at least nine carcinogenic constituents known to be present in municipal solid waste landfill air emissions: benzene, carbon tetrachloride, chloroform, ethylene dichloride, methylene chloride, perchloroethylene, trichloroethylene, vinyl chloride, and vinylidene chloride.

141. Subsurface migration is the underground movement of landfill gas from landfills to other areas within or outside the landfill property. Most subsurface migration occurs at older, unlined landfills because there is minimal barrier for lateral migration of landfill gas. It is possible for landfill gas to travel underground, accumulate in enclosed structures, and ignite. Incidences of subsurface migration have caused fires and explosions on both landfill property and private property.

142. People may be exposed to landfill gases either at the landfill or in their communities. Gases can also move through the landfill surface to the ambient air. Once in the air, the landfill gases can be carried with the wind to adjacent communities.

143. The closest residential housing to the Landfill's waste is some 20 meters from the southwest side of the Landfill. More than 100 homes and businesses and PR-165 are all within 400 meters from the Landfill.

144. The Landfill is subject to the 40 C.F.R. Part 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills and the 40 C.F.R. Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants ("NESHAP"): Municipal Solid Waste Landfills. A gas collection and control system ("GCCS") design plan was finalized on September 27, 2013. No GCCS system has been built at the Landfill and installation of such a system is normally coordinated with closure activities.

Other Risk Factors

- Potential Sensitive Receptors

145. Children can be exposed to some chemicals at higher rates or higher concentrations than adults because they consume more of some kinds of foods and water per unit of body weight, have a higher ratio of body surface area to volume, and have different activity patterns. Important behavioral differences can also lead to greater exposures in children. Older adults may be more affected by exposures to some types of environmental agents because of physiological differences associated with age.

146. The 2010 U.S. Census showed total population for Toa Alta of 74,066. Of this, 22,688 were ages 19 and younger and 7,017 were ages 65 and older.

Conclusion

147. Based on i) lateral expansions of the waste footprint of the Landfill (including the SE Cell), made since the 1994 compliance date established at 40 C.F.R. Section 258.1 without meeting the requirements for liners, leachate control, and other operational controls, ii) the

abandonment of the leachate collection system within the SE Cell, and iii) the continued waste placement well beyond the Landfill's capacity, the Landfill constitutes an open dump, as that term is defined in Section 1004 of RCRA. The operation of open dumps is prohibited under Section 4005 of RCRA.

148. The location of the Landfill adjacent to housing, within a seismic zone, in karst terrane, in steep topography, and on poor soil, and the risks of contamination to the underlying and adjacent aquifers and surrounding surface water supplies, are among the factors that indicate that the handling and disposal of solid waste at the Landfill may present an imminent and substantial endangerment to human health and the environment.

149. The lack of proper operational controls at the Landfill, including lack of daily cover, insufficient run-off controls, lack of leachate collection, lack of impermeable liners, lack of a groundwater monitoring plan, lack of explosive gases control, lack of adequate access controls, and the failure to address mosquito-borne disease transmission risk posed by the Landfill are other factors that indicate the handling and disposal of solid waste may present an imminent and substantial endangerment to human health and the environment.

150. The inadequate design of the Landfill, including lack of engineering measures to ensure the integrity of the Landfill's structural components in an unstable area, with high rainfalls, contribute to a situation in which the handling and disposal of solid waste may present an imminent and substantial endangerment to human health and the environment.

IV. DETERMINATION

151. Based on the foregoing EPA's FINDINGS OF FACT AND CONCLUSIONS OF LAW and the full Administrative Record, the Deputy Regional Administrator of EPA Region 2, upon receipt of evidence and information that the past and present handling and disposal of solid wastes at the Landfill may present an imminent and substantial endangerment to human health and the environment, has determined that the issuance of this Order is necessary to protect public health and the environment and that Respondents have contributed and/or are contributing to such handling and disposal of solid waste.

V. ORDER AND WORK REQUIREMENTS

152. IT IS HEREBY ORDERED that Respondents, individually or collectively, as detailed specifically below, shall perform the actions required by this Order and comply with its provisions. Respondents shall cooperate with EPA representatives and each Respondent shall cooperate with all other Respondents and their representatives in carrying out the provisions of this Order. The Appendices referenced below and attached to this Order shall be considered part of this Order and are incorporated by reference into it. If there exists an inconsistency and/or discrepancy between a term or requirement in this Order and a corresponding term or requirement in an appendix, the term and requirement set forth in the appendix shall govern.

153. All submissions of documents to EPA by Respondents pursuant to this Order shall be in English (unless a Spanish-only submission is approved by EPA). Portions of such documents that are intended to direct and execute work and other operations at the Landfill shall be prepared

in both English and Spanish. Documents shall be submitted to EPA electronically in an accessible form that incorporates necessary signatures. Reasonable extensions of deadlines for required translations will be granted by EPA upon request by Respondents in accordance with the section on “Modification,” below.

Immediate Operational Requirements

154. The Municipality and the Municipal Co. shall comply with Appendix 2: *Immediate Operational Requirements*, including: incoming load inspections and prohibitions, maintaining logs, posting of Order notices, providing adequate Landfill security, providing daily cover, providing and maintaining vehicular access, and providing provisional stormwater measures.

Other Operational Requirements

- Safety and Health Program/Operator Oversight

155. The Municipality and the Municipal Co. shall comply with the Facility-wide Safety and Health Program provisions and the On-Site Operator Requirements set forth in Appendix 3.

- Leachate System Evaluation and Remediation

156. Respondent LandTech shall comply with the Evaluation and Remediation section of Appendix 4: *Leachate System*.

157. The Municipality and the Municipal Co. shall comply with the Operations section of Appendix 4: *Leachate System*.

- Waste Delineation

158. Respondent CMA, in cooperation with the Municipality and Municipal Co., shall comply with the terms and requirements of the Appendix 5: *Waste Extent Determination*.

159. The Municipality and the Municipal Co. shall, in cooperation with CMA, comply with the terms and requirements of the Appendix 5: *Waste Extent Determination*.

160. The Municipality and Municipal Co. shall incorporate the Revised Waste Disposal Perimeter into any required Landfill system surveys, designs and/or plans, including closure and gas collection and control system plans. The area within the Revised Waste Disposal Perimeter will constitute the “Existing Landfill” for purposes of this Order.

- Intermediate Cover

161. The Municipality and the Municipal Co. shall comply with the Intermediate Cover provisions set forth in Appendix 6: *Additional Landfill Requirements*.

Landfill Interim Closure

162. The Municipality and the Municipal Co. shall permanently cease waste disposal at the Landfill no later than December 31, 2017.

163. The Municipality and the Municipal Co. shall comply with the Interim Closure provisions set forth in Appendix 7: *Landfill Interim Closure*, including the placement of intermediate cover and carter notification provisions.

Zika Virus & Mosquito Control

164. The Municipality and Municipal Co. shall comply with Appendix 8: *Zika Virus & Mosquito Control*.

RCRA Reports

165. The Municipality and Municipal Co. shall comply with Appendix 9: *RCRA Reports*.

VI. CERTIFICATIONS

166. Wherever this Order (including all appendices) requires that a "Certification" be submitted to accompany written reports or documents, the following certification language shall be submitted, and shall be dated and signed by an authorized senior official of the Respondent(s) making the submission:

"I certify under penalty of perjury that this document [Identify Document] and all attachments being submitted were prepared under my direction or supervision in order to ensure that qualified personnel properly gathered, evaluated and prepared this submission. Based on my review of the documents, data and other information available at the time of this certification, including my inquiry of the person or persons who prepared the submission, the information contained in this submission is to the best of my knowledge and belief, true and correct. I am aware that there are significant potential penalties for knowingly submitting false information."

VII. RETENTION & AVAILABILITY OF RECORDS RELATED TO LANDFILL OPERATIONS AND WORK UNDER THE ORDER

167. The Municipality and Municipal Co. shall maintain records pertaining to the operations of the Landfill and shall make such records available to EPA and its representatives for inspection, and to the EQB, upon request. All Respondents shall also maintain records pertaining to the work being performed pursuant to this Order and shall make such records available to EPA, its representatives, and EQB for inspection, upon request. The Municipality shall also ensure the availability to the public of this Order and key documents related to work being performed pursuant to the terms and requirements of this Order, including those documents prepared pursuant to Appendix 9: *RCRA Reports*.

VIII. PROJECT COORDINATOR

168. On or before 10 days after the effective date of this Order, EPA and the Respondents each shall designate a Project Coordinator ("PC") and the name of at least one alternate who may function in the absence of the designated Project Coordinator. Each Respondent shall provide the name, the address, telephone number, and e-mail address for its PC. The Project Coordinators shall be responsible for overseeing implementation of the work required pursuant to the terms and requirements of this Order. The Municipality's designated PC and alternate(s)

must include a Municipal official with relevant solid waste management experience. EPA and Respondents may each change the PC (and/or an alternate) and shall inform the other parties should such change occur. Unless approved by EPA, any counsel retained by Respondent(s) shall not serve as a PC.

169. The EPA has designated Mr. Carl Plössl, Environmental Engineer, as Project Coordinator and Ms. Emily McCleary, as Alternate Project Coordinator. The address of each is Environmental Protection Agency, RCRA Compliance Branch, 290 Broadway, 21st floor, New York, New York 10007-1866. Mr. Plössl's phone number is 212-637-4088, and his e-mail address is Plossl.Carl@epa.gov; Ms. McCleary's phone number is 212-637-4018, and her e-mail is McCleary.Emily@epa.gov.

170. All communications between Respondents and EPA, and all documents, reports, plans, approvals, and correspondence concerning the activities performed pursuant to the terms and requirements of this Order (hereinafter collectively referred to as "written submissions") shall be directed to and through the respective Project Coordinators unless a party has in writing given prior notice to EPA and the other parties that a different person is to receive written submissions, and complete information (name, address, telephone number and e-mail address) has been provided for the person(s) so designated. Unless otherwise requested by EPA or any Respondent, any such written submissions shall be transmitted either electronically (e.g., by e-mail) or other mutually agreeable means.

IX. EMERGENCY PROVISIONS

171. In the event the Respondents, either individually or jointly, identify a current or immediate threat to human health or the environment at the Landfill, other than those identified in the EPA Findings of Fact and Conclusions of Law section, above, said Respondent(s) (as appropriate) shall immediately notify EPA orally, and in writing within forty-eight (48) hours, summarizing the immediacy and magnitude of the potential threat to human health or the environment. Respondent(s) shall thereafter submit to EPA for approval, as soon as possible, a plan to mitigate this threat. EPA will approve or modify this plan, and the Respondent(s) shall implement this plan as approved or modified by EPA. In the case of an extreme emergency, Respondent(s) may act as it/they deem(s) appropriate at its/their own risk.

172. If EPA determines that activities in compliance or non-compliance with this Order have caused or may cause a release of a hazardous waste or hazardous constituent, or if EPA determines that such activities pose or may pose a threat to human health or the environment, EPA may direct Respondents: (a) to stop further implementation of this Order, or a portion of this Order, for such period of time as EPA determines may be needed to abate any such release or threat, and/or (b) to undertake any action authorized by law, which EPA determines to be necessary to address such release or threat.

X. RESERVATION OF RIGHTS

173. EPA expressly reserves, without limitation, all of its statutory and regulatory powers, authorities, remedies and defenses, both legal and equitable, with respect to any of the Respondents or other parties, including its authority to seek injunctive relief, cost recovery,

monetary penalties, or punitive damages. EPA may exercise its authority under the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA") to undertake removal or remedial actions, including reimbursements for any costs incurred by the United States. Notwithstanding compliance with the requirements and terms of this Order, nothing herein is intended or is to be construed to limit or preclude EPA (or the United States on behalf of EPA) from commencing against any Respondent or third party any lawful action(s) or measure(s) under applicable authority should EPA determine that such action(s) or measure(s) is/are, or might be, necessary or warranted, nor is anything herein intended or to be construed to release Respondents, individually or collectively, or any other party, from liability for the costs of any response actions taken by EPA.

174. This Order shall not be construed as a covenant not to sue, or as a release, waiver or limitation of any claim, remedies, defenses, powers and/or authorities that EPA (or the United States acting on behalf of EPA) has, or might have, against Respondents, individually or collectively, or any other party, under RCRA, CERCLA, or any other statutory, regulatory or common law authority of the United States.

175. Nothing in this Order is intended or is to be construed to constitute a release from any claim, cause of action or demand in law or equity brought by EPA (or the United States on behalf of EPA) against any "person" (as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15)) for any liability it may have arising out of, or relating in any way to, the generation, storage, treatment, handling, transportation, release, or disposal of any "hazardous constituent," "hazardous substance," "solid waste," "hazardous waste," "pollutant," or "contaminant" (as such terms are defined in RCRA and CERCLA) found at, taken to, taken from, or emanating from the Landfill.

XI. OTHER APPLICABLE LAWS

176. Nothing herein shall relieve Respondents, either individually or jointly, of its/their obligations to undertake all actions required by this Order in accordance with applicable local, Commonwealth and federal laws and regulations. Respondents, either individually or jointly, as appropriate, shall obtain all permits or approvals necessary to perform the work required by this Order.

XII. SEVERABILITY

177. If any provision or authority of this Order, or the application of this Order to any party or circumstance, is found to be invalid, declared null and void, and/or is temporarily stayed by a court of competent jurisdiction, the remainder of this Order shall remain in force and effect, and shall not be affected thereby.

XIII. FORCE MAJEURE AND EXCUSABLE DELAY

178. Respondents, either individually or jointly, as appropriate, shall perform all the requirements of this Order within the time limits set forth, approved, or established herein, unless the performance is prevented or delayed solely by events that constitute a *force*

majeure. A *force majeure* is defined as any event arising from causes not reasonably foreseeable and beyond the control of Respondent(s) that could not be overcome by due diligence and which delays or prevents performance by a date required by this Order. Such events do not include unanticipated or increased costs of performance, economic circumstances, normal precipitation events, difficulty in arranging a suitable alternative means of disposing of solid waste previously accepted by the Landfill, or failure to obtain Federal, Commonwealth, or local permits. Nothing herein shall be read to prevent Respondents, either individually or jointly, as appropriate, from requesting a change in the scheduling of events or modification of the Order.

179. Respondents, either individually or jointly, as appropriate, shall notify in writing the EPA Project Coordinator within ten (10) days after becoming aware of any event, which it/they know(s) or should know, constitutes a *force majeure*. Such notice shall detail the estimated length of delay, including necessary demobilization and remobilization, its causes, measures taken or to be taken to minimize the delay, and an estimated timetable for implementation of these measures. Respondents, either individually or jointly, as appropriate, shall adopt all reasonable measures to avoid and minimize the delay. Failure to comply with the notice provision of this section shall constitute a waiver of Respondent(s)' right to assert a *force majeure* and may be grounds for EPA to deny a request for an extension of time for performance.

180. After receiving notice from Respondent(s) that it/they is/are invoking the *force majeure* provisions of this Order, EPA will respond in writing indicating either EPA's agreement that the event constitutes a *force majeure* or its disagreement and the reasons therefor. EPA may require the submission of additional information before making a decision, and if such additional information is requested Respondent(s) shall promptly provide same in response to said request.

181. If the parties agree that a *force majeure* has occurred, the time for performance may be extended, upon EPA approval, for a period equal to the delay resulting from such circumstances. This shall be accomplished through written amendment to this Order, or by a change in the scheduling of activities as provided by paragraph "Scheduling Changes" in Section XV. "Modification," herein. Such an extension of time will not alter the schedule for performance or completion of any other tasks required by this Order unless the schedule for these tasks is also specifically altered.

182. In the event the parties cannot agree that any delay or failure has been or will be caused by a *force majeure*, or if there is no agreement on the length of the extension, the dispute will be resolved in accordance with the process set forth in Section XVII. "Dispute Resolution" of this Order.

XIV. ON-SITE AND OFF-SITE ACCESS

183. Until this Order is terminated, any Respondent, either individually or jointly, with ownership of, responsibility for, and/or control of the Landfill, shall permit EPA and EQB representatives, including authorized designees, employees, agents, contractors,

subcontractors, or consultants to enter and freely move about the Landfill and any adjacent property that any Respondent owns or has lawful access to for (but not limited to) the following purpose(s): observing conditions and/or activities at the Landfill, including work performed pursuant to this Order, interviewing personnel, conducting sampling or monitoring, taking photographs and verifying information or data that have been submitted, and any other lawful activity the purpose of which is (or related to) the investigation and evaluation of conditions and work at the Landfill and/or ensuring compliance with the requirements and terms of this Order.

184. Respondents, either individually or jointly, as appropriate, shall make available to EPA and EQB for inspection, copying, or photographing, all records, files, photographs, documents, or any other information, including monitoring and sampling data that pertain to any work undertaken pursuant to this Order.

185. To the extent that work required by this Order must be performed on property not owned or controlled by Respondent Toa Alta, or for which Respondent Toa Alta is otherwise responsible, said Respondent shall use best efforts to obtain (within forty-five (45) days of the date it becomes aware or should be have become aware of the need to perform such work) "Site Access Agreements" to perform such work. Any such access agreement shall provide for reasonable access by EPA. In the event that Site Access Agreements are not obtained within the forty-five (45) day period, Respondent Toa Alta shall notify EPA, in writing, documenting its best efforts to obtain such agreements.

186. Nothing in this Order is intended or is to be construed to limit or otherwise affect the authority of EPA representatives to have access and entry pursuant to any applicable laws and regulations, including the RCRA and CERCLA.

187. Nothing in this Order is intended or is to be construed to limit or otherwise affect the liabilities or obligations of any Respondent to perform work beyond the Facility property boundary, notwithstanding any lack of access. EPA may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.

XV. MODIFICATION

Modification/Amendment by EPA

188. This Order may be modified/amended by EPA. In the event EPA determines that such a modification/amendment is necessary, the modification/amendment will be in writing. EPA will provide Respondents with an opportunity to confer concerning any material modification/amendment.

Modification/Amendment by EPA at Respondent(s)' Request

189. This Order may also be modified/amended by EPA in its discretion in response to a request by a respondent(s). Any such request shall be in writing and contain detailed justification for any proposed modification(s)/amendment(s).

Scheduling Changes

190. In his/her discretion, EPA's PC may for good cause, either as requested by Respondent(s) in writing or *sua sponte*, extend a deadline(s) for performance of work required pursuant to this Order. In addition, EPA's and Respondents' PCs may agree to changes in the scheduling of events. Any such changes shall normally be requested in writing by Respondents, either individually or jointly, as appropriate, and, if approved, must be approved in writing by the EPA PC.

Limitation on Informal Advice or Guidance

191. No informal advice, guidance, suggestions, or comments by any personnel of EPA regarding reports, plans, specifications, schedules, and any other communication submitted by Respondents, either individually or jointly, as appropriate, are intended or are to be construed as an amendment or modification to this Order, or shall relieve Respondents, either individually or jointly, as appropriate, of its/their obligation to obtain such formal approval as may be required by this Order.

XVI. TRANSFER OF OBLIGATIONS

192. Respondents, either individually or jointly, as appropriate, shall give notice, and a copy, of this Order to any successor-in-interest, assignee and/or transferee prior to any transfer of ownership, responsibility or control of the Landfill. Respondents, either individually or jointly, as appropriate, shall give written notice to EPA at least sixty (60) days prior to any such transfer. No such transfer shall alter, extinguish, pre-empt or otherwise affect the responsibilities and obligations of Respondents, either individually or jointly, as appropriate, to meet all the requirements and terms of this Order or the concomitant liability(ies) for a failure to comply with said requirements and terms. Respondents, either individually or jointly, as appropriate, may, however, transfer the responsibility to undertake unperformed requirements and obligations imposed by this Order to a new owner/operator of the Landfill (or another party), provided there is a demonstration satisfying EPA that the new owner/operator (or another party) is capable of undertaking these requirements and obligations and has expressly agreed to do so in writing, and provided further that EPA has given its approval in writing to any such transfer of obligations, and, finally, provided that this Order has been modified to reflect the transfer and to make the new party responsible for future performance of obligations imposed by this Order. The Order modification reflecting the transfer of obligations to a successor-in-interest, assignee or transferee (party or parties) may, if appropriate, establish modified schedules for continuing obligations imposed by the Order but will not (unless otherwise explicitly stated in the modification) release any respondent(s) of its/their responsibility for the performance of its/their obligations prior to the Order modification.

XVII. DISPUTE RESOLUTION

193. Respondents, either individually or jointly, as appropriate, and EPA shall use their best efforts informally and in good faith to resolve all disputes and differences of opinion, which may arise concerning the provisions and implementation of this Order (including disputes and differences concerning the interpretation of such provisions and compliance with the terms and

requirements). Notwithstanding the above, if Respondents, either individually or jointly, as appropriate, disagree(s), in whole or in part, with any disapproval or modification or other decision or directive made by EPA pursuant to this Order, it/they (as appropriate) shall notify EPA in writing of its/their objections and the basis (bases) therefor within fifteen (15) days of receipt of EPA's disapproval, modification, decision or directive. The notice shall set forth the specific points of the dispute, the position Respondent(s) maintain(s), the basis (bases) for its/their position and any matters Respondent(s) consider(s) necessary for EPA's determination.

194. If Respondents, either individually or jointly, as appropriate, so request(s), EPA will provide Respondent(s) with an opportunity to confer concerning the dispute, either in person or by telephone (or other means of electronic communication to which the parties jointly agree) within twenty (20) days of EPA's receipt of such request, or by such other date as may be agreed to by the parties. EPA thereafter will provide Respondents, either individually or jointly, as appropriate, with its decision on the pending dispute, which decision shall be binding. EPA and Respondents, either individually or jointly, as appropriate, may continue to confer and to use informal efforts to resolve the dispute during the period that EPA's final decision is pending.

195. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute shall excuse, toll, or suspend during the pendency of the dispute resolution process the compliance obligation or deadline which is in dispute and any other obligation or deadline which is demonstrably dependent on the matter in dispute. No obligation or deadline shall be excused, tolled, or suspended, unless the dispute is in good faith and Respondents, either individually or jointly, as appropriate, exercise(s) due diligence to resolve the dispute.

XVIII. TERMINATION

196. This Order and all of its terms and provisions shall remain in force and effect until all of the activities (including work required to be performed thereunder) called for by the Order are completed and Respondents are so notified in writing by the EPA, or until EPA amends the provisions of this paragraph or until EPA issues a new order that supersedes this Order. Such notice shall be signed by the Deputy Regional Administrator, EPA Region 2. Respondents, either individually or jointly, as appropriate, may request that EPA Region 2 provide it/them with such notice, and shall supply EPA with such information, including certifications, as EPA may specify. Upon request, EPA will also notify Respondents, either individually or jointly, as appropriate, in writing confirming the appropriate completion of discrete tasks under the Order. In each instance, such confirmation by EPA will be based on the information then available to EPA, including reports and/or certifications filed by Respondents, either individually or jointly, as appropriate, pursuant to the terms and requirements of the Order.

XIX. ENFORCEMENT

197. The failure of any Respondent to comply with any applicable requirement or term of this Order constitutes a violation of this Order and in response to any such violation, EPA (or the United States acting on behalf of the EPA) may commence and prosecute an enforcement action pursuant to Section 7003(b) of the Act, 42 U.S.C. 6973(b), as amended.

198. Nothing herein is intended or is to be construed to preclude EPA (or the United States on behalf of EPA) from taking any additional enforcement actions, and/or such other actions as it may deem necessary for the abatement, mitigation or prevention of an actual or potential imminent threat to public health or the environment existing, or arising from conditions, at the Landfill. Nor is anything herein intended or is to be construed to preclude EPA (or the United States on behalf of EPA) from taking any such other enforcement actions under RCRA or other applicable authority as EPA may deem necessary.

XX. EFFECTIVE DATE; NOTICE OF INTENT TO COMPLY; OPPORTUNITY TO CONFER

Effective Date, Modification or Reissuance

199. This Order shall become effective on May 10, 2017, unless a Respondent timely requests a conference pursuant to Paragraph 201, below. If a Respondent does timely request a conference, this Order shall become effective ten (10) days after the date of the conference, unless the Deputy Regional Administrator of EPA Region 2 specifies a later date in writing, or unless the Order is withdrawn or modified and reissued.

Notice of Intent to Comply

200. Each Respondent shall notify EPA in writing whether it intends to comply with the requirements and terms of this Order by no later than fifteen (15) days after the effective date of the Order.

Opportunity to Confer

201. Respondents have the opportunity to confer with and/or submit information to EPA concerning this Order. The Respondents may, by April 28, 2017, request a conference with EPA Region 2 concerning this Order. EPA shall deem a failure to request a conference by this date as a waiver of the opportunity to confer. Any request for such a conference shall be sent by email to both Spielemann.Lee@epa.gov and Sawyer.William@epa.gov.

If a conference is timely requested, it shall occur within ten (10) days of the request. The conference will be with a Region 2 RCRA manager and legal and technical staff, and will be held at the offices of EPA Region 2, at:

290 Broadway
New York, New York

At the Respondents' request, the conference may instead be held by telephone or video conference. At the conference, Respondent(s) may be represented by counsel or other designated representative.

The conference is not intended and is not to be construed as constituting an evidentiary hearing for purposes of the Act, the Administrative Procedure Act, 5 U.S.C. § 551 *et seq.*, or any other applicable law. EPA will not make a transcript of, or otherwise electronically record,

the conference. Prior to and/or at such a conference, Respondent(s) may present or submit any information, comments or arguments concerning the Order and its validity, the applicability of the Order to any particular Respondent(s), the basis for the Order, the validity or applicability of any of the terms or requirements of the Order, the factual determinations on which the Order is based, the appropriateness of actions the Respondent(s) is/are to take under the Order, and any other relevant and material issue. Respondent(s) is/are responsible for reducing any oral information, arguments or comments to writing and submitting them in English in time for EPA's receipt thereof within three (3) days following the conference. Such information shall be sent by email to both Lee Spielmann and William Sawyer of EPA at Spielmann.Lee@epa.gov and Sawyer.William@epa.gov, or mailed/delivered to the following address:

Lee A. Spielmann
Office of Regional Counsel
EPA Region 2
16th Floor
290 Broadway
New York, New York 10007-1866

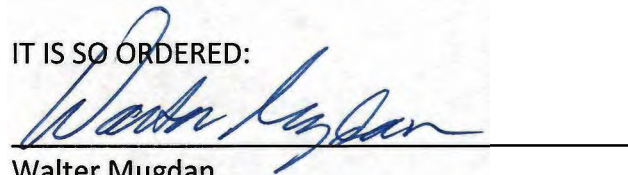
If the Respondents do not request a conference, they may still submit, in writing, in English, any objections, comments or information that they wish EPA to consider before the Order takes effect. Any such written information must be emailed or mailed/delivered to EPA at the addresses listed above, in time for EPA's receipt by April 28, 2017. Any relevant and material written information that EPA receives by such date from the Respondent(s) will be added to the administrative record together with any response by EPA.

The administrative record file concerning this Order is available for review. For such review, please contact Mr. Spielmann and Mr. Sawyer at the email addresses listed above.

If, after a conference is held and/or relevant and material information is submitted, EPA determines that modification/amendment or withdrawal of the Order is warranted, the EPA Deputy Regional Administrator will take appropriate action, pursuant to the paragraph above, "Effective Date; Modification or Reissuance."

Administrative Order
Toa Alta Municipal Solid Waste Landfill
Docket No. RCRA-02-2017-7303

IT IS SO ORDERED:



Walter Mugdan
Acting Deputy Regional Administrator
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, New York 10007-1866

Date: April 11, 2017