State of Ohio Environmental Protection Agency

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September 16, 2009

City of St. Bernard
110 Washington Avenue
St. Bernard, Ohio 45217

CERTIFIED MAIL

Director's Final Findings & Orders

Dear Sir or Madam:

Transmitted herewith are Final Findings & Orders of the Director concerning the matter indicated.

Sincerely,

Kimberly Reese

Kimberly Reese
Systems Management Unit
Division of Solid & Infectious Waste Management

cc: Bruce McCoy, CO, DSIWM
Tracy Buchanan, SWDO, DSIWM
Jeff Hurdley, CO, Legal

OHIO E.P.A.
SEP 16 2009
ENTERED DIRECTOR'S JOURNAL

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter Of:

City of St. Bernard
110 Washington Avenue
St. Bernard, Ohio 45217

Director's Final
Findings and Orders

Respondent

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to the City of St. Bernard ("the City" or "Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") Sections 3734.13, 3734.041, and 3745.01, and Ohio Administrative Code (OAC) Rule 3745-27-12(I) (2008).

II. PARTIES BOUND

These Orders shall apply to and be binding upon the City and its officers, directors, agents, servants, employees, assigns, and successors in interest liable under Ohio law. No change in ownership of the Facility (as hereinafter defined) shall in any way alter the City's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3734. and the rules promulgated thereunder.

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: _____ Date: 9-16-09

IV. FINDINGS

The Director of Ohio EPA has determined the following findings:

1. Respondent is the owner and operator of the closed City of St. Bernard Landfill ("Facility") located east of Interstate 75 and south of Bank Avenue in St. Bernard, Hamilton County, Ohio. The Facility is a "solid waste disposal facility" as that term is defined in OAC Rule 3745-27-01(S)(24) and "sanitary landfill facility" as that term is defined in OAC Rule 3745-27-01(S)(4). Facility means the location of emplaced waste at the closed St. Bernard Landfill and includes waste related to landfill operations and waste from landfill operations that is located on adjacent properties. Facility Property Boundary means the boundary designated by Respondent as the property boundary for the closed St. Bernard Landfill in Respondent's 1991 Explosive Gas Monitoring Plan and approved by Ohio EPA in 1993 discussed herein.

2. Respondent is a "person" as that term is defined in ORC Section 3734.01(G) and OAC Rule 3745-27-01(P)(3).

3. The Facility ceased accepting waste during the 1970s and closed in 1985 under OAC Chapter 3745-27, as effective 1976.

4. OAC Rule 3745-27-10(C)(8), as effective 1976, required the operator of a sanitary landfill to file a plat of the site with the Board of Health having jurisdiction, the County Recorder of the county in which the facility is located, and the Director of Ohio EPA not later than 60 days after closure. The plat shall accurately locate and describe the completed site and include information relating to the area, depth, volume, and nature of the waste materials deposited in the sanitary landfill. Respondent has not filed a plat of the Facility in violation of this rule.

5. In 2008, Respondent confirmed the existence of nine (9) occupied structures within 200 feet of the limits of waste placement at the Facility and an additional 234 occupied structures within 1000 feet of the limits of waste placement at the Facility.

6. Pursuant to ORC Section 3734.041(A), within sixty (60) days after the effective date of the explosive gas monitoring rules (i.e., OAC Rule 3745-27-12), the owner or operator of the closed landfill, or the subsequent owner, lessee, or other person who has control of the land on which the closed landfill is located where the closed landfill is situated within 1000 feet of a residence or other occupied structure shall submit an explosive gas monitoring plan to the Director and, upon approval by the Director, shall conduct monitoring of explosive gas levels at the closed landfill and submit written reports of the results of the monitoring to the Director and the board

of health of the health district in which the landfill is located in accordance with the approved plan and the schedule for implementation contained therein.

7. OAC Rule 3745-27-12 became effective in 1989. It was subsequently revised in 1994 and later in 2003 and 2008.

8. In correspondence dated February 5, 1991, Ohio EPA informed Respondent of its obligations as outlined in ORC Section 3734.041 and OAC Rule 3745-27-12, including the requirement to submit an explosive gas monitoring plan to Ohio EPA.

9. On October 4, 1991, Respondent submitted an Explosive Gas Monitoring Plan (EGMP) for the Facility pursuant to OAC Rule 3745-27-12, as effective 1989. The Director approved the EGMP on April 21, 1993.

10. Under ORC Section 3734.041(C), explosive gas shall be considered to endanger human health or safety or the environment if concentrations of methane generated by a landfill at the landfill boundary exceed the lower explosive limit (LEL), which means the lowest percent by volume of methane that will produce a flame in air at twenty-five degrees centigrade and atmospheric pressure.

11. In order to determine whether the LEL has been exceeded, OAC Rule 3745-27-12(K)(5), as effective 1994, and current OAC Rule 3745-27-12(E)(5), as effective 2008, specifies that the Explosive Gas Threshold Limit (EGTL) at or within the facility boundary is 100% of the LEL, or 5% methane by volume in air. When the EGTL is exceeded, the owner or operator must implement contingency procedures in the EGMP.

12. Between 1994 and 1995, Respondent performed the annual sampling of the explosive gas monitoring probes (probes) (numbered MW1 through MW6) at the Facility in accordance with the approved EGMP. During the annual explosive gas monitoring events in August 1994 and June 1995, Respondent reported exceedances of the LEL in probes MW2, MW3, MW4, MW5, and MW6.

13. During a May 24, 2000 meeting and in follow-up correspondence dated May 31, 2000, Ohio EPA requested that Respondent revise the EGMP to reflect current EGTL determinations and review OAC Rule 3745-27-12 for any outstanding compliance issues.

14. In the May 31, 2000 correspondence, Ohio EPA also requested that Respondent determine current explosive gas levels in the six (6) existing monitoring probes.

15. Sometime before August 18, 2000, Respondent had installed eight (8) new probes (numbered MP-7 through MP-14).

16. During the August 18, 2000 explosive gas monitoring event, Respondent reported exceedances of the LEL in probes MP-7 (37%), MP-9 (5%), MP-11 (33%), MP-12 (20%), MP-13 (19%), and MP-14 (12%).

17. In correspondence dated November 1, 2000, Ohio EPA informed Respondent that it was in violation of OAC Rule 3745-27-12 for explosive gas exceedances of the LEL and failure to submit a remediation plan and implementation schedule to Ohio EPA.

18. On December 5, 2000, Ohio EPA met with Respondent and reiterated the need for a remediation plan to prevent explosive gas migration toward occupied structures adjacent to the Facility, a revised EGMP, and boring logs for probes MP-7 through MP-14.

19. Sometime before April 10, 2001, Respondent installed a passive venting system at the Facility.

20. In correspondence dated April 10, 2001 to Ohio EPA, Respondent stated: "To date, migration of combustible gas has been confirmed at the northern Landfill property boundary .... Potentially impacted residences along this Landfill boundary have been provided with in-building combustible gas indicators as a precautionary measure."

21. In August 2001, Respondent installed an active explosive gas extraction system by converting probes MW2 through MW6 to extraction wells and installing a blower and a vent.

22. In the November and December 2001 explosive gas monitoring reports, Respondent reported exceedances of the LEL in probe MP-8 (11%) and in probes MP-7 and MP-8 (48%, 11%), respectively.

23. In correspondence dated January 11, 2002, Ohio EPA informed Respondent that, as evidenced by the November and December 2001 explosive gas monitoring reports, "current attempts to prevent explosive gas from migrating offsite from the [Facility] do not appear to have remediated the problem."

24. In correspondence dated April 11, 2002, Respondent reported that probes MP-11 (11%) and MP-7 (6%) had exceeded the LEL on February 22 and 28, 2002, respectively.

25. In June 2002, Respondent conducted a pilot test by applying a vacuum directly to probe MP-7.

26. In correspondence dated June 18, 2002, Respondent stated: "Despite continual adjustment of extractors, and maximizing vacuum of system; MP-7 remains out of compliance with the highest recorded methane level of 35% on May 28th and the lowest at 5% on May 20th, 2002."

27. In July 2002, Respondent converted probe MP-7 to an active explosive gas extraction well and installed two (2) new probes, MP-7A and MP-7B, for additional monitoring.

28. During the August 2002 explosive gas monitoring event, Respondent reported that probe MP-7A had exceeded the LEL.

29. On August 23, 2002, Respondent submitted a revised EGMP to Ohio EPA.

30. In September 2002, Ohio EPA sent correspondence informing Respondent of the deficiencies it found in the August 2002 revised EGMP. Because the revised EGMP was not complete, i.e., it did not meet the requirements of OAC Rule 3745-27-12, as effective 1994, it could not be approved by Ohio EPA.

31. In correspondence dated October 4, 2002, Ohio EPA stated that it recognized Respondent's efforts to remediate explosive gas migration at the Facility through use of the passive and active gas extraction systems. However, Ohio EPA informed Respondent that the remediation efforts appeared to not be successful as explosive gas continued to migrate offsite from the Facility above the LEL as evidenced by the April through August 2002 explosive gas monitoring reports.

32. During the September 2002 explosive gas monitoring event, Respondent reported that probe MP-7A had exceeded the LEL: 25% on September 4; 31% on September 10; 27% on September 19; and 23% on September 24, 2002.

33. In October 2002, Respondent installed two (2) additional probes in the vicinity of MP-7A, designated as MP-7C and MP-7D.

34. During the October through December 2002 explosive gas monitoring events, Respondent reported that probes MP-7A, MP-11, and MP-13 had exceeded the LEL in October, probes MP-7C, MP-7D, and MP-11 had exceeded the LEL in November, and probe MP-11 had exceeded the LEL in December.

35. In correspondence dated December 20, 2002, Ohio EPA issued a notice of violation (NOV) to Respondent for failure to submit water levels for each permanent monitoring probe, as required under OAC Rule 3745-27-12, for

the August, September, and November 2002 explosive gas monitoring events.

36. In correspondence dated January 15, 2003, Respondent reported substantial accumulation of condensate in the extraction piping of the active explosive gas extraction system in December 2002.

37. On April 14, 2003, Ohio EPA issued Director's Final Findings and Orders (DFFOs) to Respondent to abate or minimize the formation or migration of explosive gas from the Facility; to develop, submit to Ohio EPA, and implement a remediation plan within sixty (60) days; and to submit a revised EGMP no later than sixty (60) days after commencement of implementation of the remediation plan.

38. In correspondence dated May 14, 2003, Respondent stated that it had installed combustible gas indicators (or explosive gas alarms) within approximately six (6) residences most likely impacted by gas migration, as required by OAC Rule 3745-27-12.

39. On August 25, 2003, Respondent submitted to Ohio EPA a revised EGMP as required by Order 4 of the April 14, 2003 DFFOs.

40. In correspondence dated October 30, 2003, Respondent reported: "Since July, CEC [Civil & Environmental Consultants, Inc., Respondent's consultant,] has monitored the compliance probes .... During this time, compliance probe MP-7C has routinely exceeded the threshold limit of 5% methane by volume. Probes MP-8 and MP-7D ... have also periodically exceed[ed] the 5% limit. Despite numerous attempts to adjust or change operational characteristics of the gas extraction system, no defined response in MP-7C has been achieved."

41. In correspondence dated November 6, 2003, Ohio EPA issued an NOV to Respondent for failure to submit explosive gas monitoring reports within fifteen (15) days of a sampling event, in accordance with OAC Rule 3745-27-12.

42. On January 22, 2004, Ohio EPA met with Respondent to discuss outstanding non-compliance issues at the Facility.

43. In January 2004, Respondent submitted a request, pursuant to OAC Rule 3745-27-13, to Ohio EPA to perform additional activities to identify explosive gas sources and migration pathways at the Facility, including installation of exploratory gas probes and excavation.

44. In correspondence dated March 22, 2004, Thomas A. Winston, Chief of Ohio EPA's Southwest District Office, expressed ongoing concerns to

Respondent regarding Respondent's efforts to remediate explosive gas migration beyond the Facility's boundary toward occupied structures. He stated: "This situation is of significant concern considering the location of occupied structures (single family residences) less than 200 feet from the probes exhibiting the presence of explosive gas above the Lower Explosive Limit. While we recognize your efforts to date, we are concerned that all available options to remediate the situation have not been fully explored. The deadline to comply with the requirements of the Director's Final Findings and Orders has passed without appropriate relief of the situation."

45. In correspondence dated March 26, 2004, in response to Ohio EPA's March 22, 2004 letter, Respondent stated: "Despite numerous efforts to adjust and augment the [gas] extraction system, one of the 15 probes (MP-7C) continues to routinely exhibit explosive gas concentrations in excess of the 5% threshold limit. Probe MP-7C is located less than 2 feet from the property boundary of a private residence (Mr. and Mrs. Robert Schrenk)."

46. In correspondence dated April14, 2004, Ohio EPA issued an NOV to Respondent for failure to comply with the April 14, 2003 DFFOs.

47. During the April 2004 explosive gas monitoring event, Respondent reported that MP-7C had exceeded the LEL.

48. On May 18, 2004, the Director approved an authorization, pursuant to OAC Rule 3745-27-13, for Respondent to perform additional exploratory investigation of explosive gas migration at the Facility.

49. During the May through July 2004 explosive gas monitoring events, Respondent reported that probes MP-7C, MP-7D, T-1, T-2, T-3, T-11, and T-12 exceeded the LEL in May, probes MP-7C and MP-7D exceeded the LEL in June, and probes MP-7C and T-8 exceeded the LEL in July.

50. In correspondence dated July 30, 2004 to Ohio EPA, Respondent stated: "As you are aware, a series of temporary gas monitoring probes was installed at the landfill ..., and data compiled since that time suggests that a gas source or migration pathways exists in the immediate vicinity of monitoring probes 7C, 7A and T-1. *** The mitigation plan proposed for this area includes targeted excavations, and removal of potential gas sources if found."

51. In correspondence dated August 16, 2004, Ohio EPA issued an NOV to Respondent for violation of the April 14, 2003 DFFOs. In part, the NOV stated: "Currently, explosive gas monitoring wells OP-7A, MP-7C and MP-7D located within 50 feet of individual homes on Bank Avenue, continue to exceed the Lower Explosive Limit (5% in air). The City has provided documentation that consistently demonstrates exceedances above the

Lower Explosive Limit ("LEL") in OP-7A, MP-7C and MP-7D, as well as other explosive gas monitoring wells at the Landfill property boundary. It is the responsibility of the City to abate or minimize the migration of explosive gas in an effort to eliminate the threat of fire or explosion to nearby residences. Since the effective date of the 2003 DFF&Os, the City has failed to abate or minimize the formation and migration of explosive gas at the Facility, in violation of Order Number 1 of the 2003 DFF&Os."

52. In August 2004, Respondent installed a forty-eight (48) foot long cutoff trench in the vicinity of probes MP-7C and MP-7D, which were removed as part of the trench installation, pursuant to its OAC Rule 3745-27-13 authorization. In September 2004, Respondent installed two (2) additional probes, MP-7E and MP-7F, to replace removed probes MP-7C and MP-7D.

53. In correspondence dated September 29, 2004, Ohio EPA issued an NOV to Respondent for failure to report all required monitoring parameters in the explosive gas monitoring report for August 2004.

54. During the September through December 2004 explosive gas monitoring events, Respondent reported that probe T-8 exceeded the LEL in September, probes MP-7E and T-8 exceeded the LEL in October, and probe MP-7E exceeded the LEL in November and December. In the December 2004 explosive gas monitoring report, Respondent also stated: "Please note as a contingency measure, vacuum was applied to probe MP-7E on December 21st."

55. In correspondence dated November 10, 2004, Ohio EPA issued an NOV to Respondent for failure to submit a certification report for the installation of new probes (MP-7E and MP-7F) in violation of OAC Rule 3745-27-12(F) and failure to include a revision to the EGMP for these new probes.

56. On December 8, 2004, Ohio EPA met with Respondent to discuss ongoing concerns regarding explosive gas migration offsite at the Facility, current data, past remediation and proposed remediation efforts, and a revised EGMP.

57. In correspondence dated December 9, 2004, Respondent submitted to Ohio EPA an explosive gas mitigation plan for the Facility to address elevated levels in probes MP-7E and MP-7F. In this letter, Respondent stated: "[G]as concentrations within two probes, namely MP-7E and MP-7F remain elevated. These probes are located on City property. However, they are offset approximately 12 inches from the property line of Mr. Robert Schrenk. *** These data trends suggest that a source of explosive gas is located near or perhaps within Mr. Schrenk's property limits...."

58. In correspondence dated December 28, 2004, Ohio EPA issued an NOV to Respondent for failure to submit geologic boring logs for the installation of probes MP-7E and MP-7F, in violation of OAC Rule 3745-27-12(F)(2).

59. In correspondence dated January 14, 2005, Respondent updated its explosive gas mitigation plan and stated: "At this time, it is not proposed that the gas extraction system be extended beyond the City property. However, if data from MP-7E and MP-7F indicate increasing gas concentrations, extension of vacuum to Mr. Schrenk's property will be discussed with him and Ohio EPA at a later date. *** Secondly, to address Ohio EPA concerns regarding other potential gas migration pathways, the City is proposing installation of probes MP-7G, 11R and 12R at locations.... *** Installation of probes MP-11R and 12R is contingent on agreement from the current property owner, which may include re-establishment of property boundaries such that areas of known waste placement are acquired and placed under the control of the City."

60. In correspondence dated February 4, 2005, Respondent reported that probe MP-7E had a reading at 5% on January 4, 2005.

61. On February 15, 2005, Ohio EPA issued an NOV to Respondent for failure to submit all required information (i.e., water levels in all monitoring probes) in explosive gas monitoring reports pursuant to OAC Rule 3745-27-12(E)(2)(c).

62. In correspondence dated March 21, 2005, Civil & Environmental Consultants, Inc. reported to Respondent that the explosive gas alarm at the residence of an adjacent property owner located at 448 Bank Avenue sounded. After reporting recalibration of the alarm, the consultant wrote: "The required adjustment suggested calibration drift ...."

63. In correspondence dated May 5, 2005, Ohio EPA informed Respondent that it was unable to render a recommendation to the Director on Respondent's request to cease explosive gas contingency monitoring because "[t]he City of St. Bernard has not been able to consistently submit complete documentation for explosive gas contingency monitoring. Consequently, the Ohio EPA can not [*sic*] fully evaluate the effectiveness of the remediation .... [T]he Ohio EPA recommends a minimum of six consecutive months of continued weekly contingency and monthly explosive gas compliance monitoring at the City of St. Bernard Closed Landfill to further evaluate the effectiveness of the remediation...."

64. During the May 2005 explosive gas monitoring event, Respondent reported that probes MP-12 and MP-13 had exceeded the LEL, and during the June 2005 explosive gas monitoring event, Respondent reported that probes MP-11, MP-12, and MP-13 had exceeded the LEL.

65. In correspondence dated October 12, 2005 to residents at 433 Bank Road, adjacent landowners, Respondent concluded in response to their explosive gas alarm sounding on or around August 30, 2005: "Based on the evaluation of the CGI [or combustible gas indicator], the alarm appears to have been triggered by a combination of calibration drift, as well as the presence of aerosols within the monitored area."

66. In correspondence dated November 18, 2005, Respondent requested access to inspect and recalibrate the explosive gas alarm at the Schrenk residence located adjacent to the Facility at 429 Bank Avenue.

67. In correspondence dated November 21, 2005, Respondent reported that probe MP-8 (9%) had exceeded the LEL. Respondent, through its consultant, wrote: "[I]t is believed that a source of gas is located to the rear of the residence located at 429 and/or 433 Bank Avenue."

68. In correspondence dated December 28, 2005, Respondent reported the following exceedances of the LEL in probe MP-8: 6% on October 20, 2005; 9% on November 17, 2005; and 6% on November 20, 2005.

69. In correspondence dated April 17, 2006, Respondent reported a loss of vacuum in the explosive gas extraction well network due to high condensate levels in the system in March 2006.

70. In 2006 and in January through May 2007, Respondent reported in monthly monitoring reports relatively low levels of explosive gas at the Facility Property Boundary below the LEL.

71. During the June through September 2007 explosive gas monitoring events, Respondent reported that probes MP-8 and MP-13 had exceeded the LEL in June, probes MP-8 and MP-11 had exceeded the LEL in July, probes MP-8, MP-11, and MP-13 had exceeded the LEL in August, and probes MP-8 and MP-9 had exceeded the LEL in September.

72. In correspondence dated September 25, 2007, Respondent stated: "Based on the most recent data obtained in monitoring probe MP-8, it appears that a shift in gas concentration has occurred, resulting in higher than expected readings in this monitoring location. [W]e cannot affirmatively identify the cause or source of concentrations changes."

73. During the October 2007 explosive gas monitoring event, Respondent reported that probe MP-8 had exceeded the LEL. Subsequently that month, Respondent converted explosive gas monitoring well MP-8 to an extraction well numbered EW-8B and installed another probe, MP-8R.

74. On December 17, 2007, Respondent submitted a revised EGMP to Ohio EPA.

75. In correspondence dated April 4, 2008, Respondent's consultants reported to Respondent that they received a telephone call from the Schrenk residence, informing them that their explosive gas alarm had sounded.

76. On May 6, 2008, Ohio EPA again sent a Notice of Deficiency to Respondent informing Respondent that, due to the "extensive number of deficiencies contained in the EGMP, a thorough review of the document [could] not have been completed and additional comments may be forthcoming."

77. During the June 2008 explosive gas monitoring event, Respondent reported that probes MP-11, MP-12, and MP-13 had exceeded the LEL. Within this report, Respondent stated: "[T]he sustained gas levels recorded to date are remarkable in that they have remained elevated and have not responded to enhanced vacuum extraction. As a result, potential causes other than elevated groundwater are being evaluated at this time."

78. In correspondence dated July 2, 2008, Respondent stated: "[A]s MP-12 is essentially installed at or very near the presumed limit of waste, the full extent of migration is undefined beyond this specific area. *** As monitoring probes are currently located at the facility boundary, access to private property will be required to further define gas migration in the vicinity of MP-12."

79. In correspondence dated July 21, 2008, Respondent provided an update to Ohio EPA that a telephone call from adjacent landowners located at 437 Bank Avenue was received indicating that their explosive gas alarm had sounded. Respondent's consultant subsequently recalibrated the alarm.

80. During the October, November, and December 2008 explosive gas monitoring events, Respondent reported that probe MP-8 had exceeded the LEL in over twenty separate samples, ranging from 9% to 50% methane by volume in air.

81. On December 30, 2008, Respondent installed another probe MP-8 to replace the original probe MP-8 that was converted to an extraction well (see Finding 73).

82. During the January and February 2009 explosive gas monitoring events, Respondent reported that probe MP-8 had several high exceedances of the LEL, ranging from 31% to 86% methane by volume in air.

83. In correspondence dated February 5, 2009, Respondent stated: "Data gathered from probe MP-8 through the month of January 2009 indicate that

it is installed in a location more proximal to the source of gas generation than the previously installed MP-8 series probes. Gas concentrations of approximately 80% methane by volume have been recorded consistently throughout January 2009."

84. In February 2009, Ohio EPA met with Respondent on two separate occasions to discuss ongoing concerns with high explosive gas exceedances at the Facility Property Boundary and to request again the submittals of a new remediation plan and revised and complete EGMP for the Facility.

85. In March 2009, Respondent again converted explosive gas extraction well EW-8B back to an explosive gas monitoring probe, and converted the new probe MP-8 to an explosive gas extraction well by applying a vacuum to it in efforts to address high explosive gas levels. Even though OAC Rule 3745-27-12(D)(5)(c), as effective 2008, states replacement occurs if the permanent monitoring probe is damaged or inaccessible, Respondent replaced probe MP-8 which was not damaged or inaccessible by converting it to an extraction well without replacing it with another probe to monitor that explosive gas migration pathway.

86. By converting probe MP-8 into an active extraction well through the use of vacuum, Respondent is unable to report explosive gas levels that could be present in the explosive gas migration pathway. There are currently no other explosive gas monitoring probes located within this explosive gas migration pathway.

87. Extraction wells EW-8B and EW-8A which are located close to the Facility Property Boundary (newly-installed probe MP-8 is located farther behind EW-8B and farther away from the Facility Property Boundary) had explosive gas levels above the LEL. Respondent reported that between April 2 and May 1, 2009, EW-8A had several exceedances of the LEL, ranging from 3% to 20%, and EW-8B had several high exceedances of the LEL, ranging from 29% to 38% methane by volume in air. Ohio EPA views this as an indication that explosive gas levels likely exceed LEL at the Facility Property Boundary.

88. During the June 12, 2009 explosive gas monitoring event, Respondent reported that probe MP-8 had begun to exhibit exceedances of the LEL of 6% methane by volume in air. Extraction well EW-8B continues to exceed the LEL with 7% methane by volume in air.

89. To date, Respondent has failed to submit a complete EGMP revision to Ohio EPA.

90. Ohio EPA has concerns that exceedances of the LEL at the Facility Property Boundary continue to occur despite remedial efforts taken by Respondent, that explosive gas alarms within residences of adjacent landowners have sounded on at least five separate occasions, and that the full extent of waste placement likely has not been delineated at the Facility. Moreover, Respondent does not have any other explosive gas monitoring probes at the Facility Property Boundary to monitor the explosive gas migration pathway of concern.

91. ORC Section 3734.041(D) and OAC Rule 3745-27-12(I), as effective 2008, specify that upon the Director finding that explosive gas formation and migration threaten human health or safety or the environment, he may order the owner or operator of the closed landfill to perform such measures to abate or minimize the formation or migration of explosive gas.

92. Because explosive gas has been detected at or near the Facility Property Boundary at levels equaling or exceeding the LEL, the Director finds the formation and migration of explosive gas from the Facility constitutes a threat to human health or safety or the environment, and the immediate abatement or minimization of explosive gas formation or migration is necessary.

V. ORDERS

1. Pursuant to OAC Rule 3745-27-12(I), as effective 2008, Respondent shall abate or minimize the formation or migration of explosive gas at the Facility and from the Facility to adjacent properties such that the threat to human health, safety or the environment no longer exists. Respondent has abated or minimized the formation and migration of explosive gas at the Facility and from the Facility to adjacent properties for purposes of these Orders when Respondent has reported to Ohio EPA a minimum of eight (8) quarters of sequential monitoring events in which none of the Facility's explosive gas monitoring probes exceeds the EGTL.

2. Respondent shall comply with these Orders and the explosive gas requirements set forth in OAC Rule 3745-27-12, as effective 2008, with respect to the explosive gas concerns at the Facility and at the Facility Property Boundary. If there is a conflict between these Orders and OAC Rule 3745-27-12, as effective 2008, Respondent shall comply with these Orders.

3. Until these Orders terminate, Respondent shall conduct weekly contingency monitoring of all explosive gas monitoring probes and all extraction wells that exceed the LEL for methane at the Facility Property Boundary.

Explosive Gas Delineation

4. Not later than forty-five (45) days after the effective date of these Orders and upon consent of the landowner, Respondent shall install a total of 6 (six) monitoring probes on adjacent properties located at 429 and 433 Bank Avenue (three (3) to each parcel). Respondent shall install these monitoring probes in order to evaluate subsurface stratigraphy including presence of solid waste. These monitoring probes shall be at least fifteen (15) feet deep to facilitate such an evaluation.

5. Respondent shall notify Ohio EPA within seven (7) days prior to commencement of installation of each monitoring probe or probes. Respondent shall also submit a certification report, in accordance with OAC Rule 3745-27-12(F), effective 2008, within seven (7) days of such installation for each monitoring probe: record drawing showing the location with their associated identification designations; geologic logs from the installation; and depth and length of screened intervals.

6. Upon installation, Respondent shall immediately monitor these monitoring probes for explosive gas. Respondent shall submit to Ohio EPA the results of explosive gas sampling from all installed monitoring probes within fifteen (15) days of the date of sampling in accordance with OAC Rule 3745-27-12(E)(4), as effective 2008.

7. If explosive gas is detected at or above the LEL for methane (or 5% in air by volume) in any monitoring probe installed pursuant to Order 4, Respondent shall convert that monitoring probe to an extraction well and tie the extraction well into the existing active explosive gas extraction system at the Facility as soon as practicable and upon consent of the landowner. Respondent shall also notify Ohio EPA of each conversion within twenty-four (24) hours of conversion.

8. If Respondent converts a monitoring probe to an extraction well pursuant to Order 7, Respondent shall replace that monitoring probe with another monitoring probe within thirty (30) days of conversion and upon consent of the landowner that shall monitor the same pathway as the converted monitoring probe, shall be located in the same vicinity as the converted monitoring probe, and shall not be under the influence of any extraction well.

9. If waste is found during installation of any monitoring probe installed pursuant to Orders 4 or 8, not later than seven (7) days of discovering the waste, Respondent shall sample the probe for explosive gas.

10. If explosive gas is detected during sampling pursuant to Order 9, Respondent shall use its reasonable efforts to secure consent from adjacent landowners at properties located at 429 and 433 Bank Avenue, or

additional adjacent properties, to further delineate explosive gas through installation of additional monitoring probes. Respondent shall install these additional monitoring probes in locations and in numbers as appropriate to evaluate subsurface stratigraphy including presence of waste. These monitoring probes shall be at least fifteen (15) feet deep to facilitate such an evaluation and documented by following the procedure in Order 5. Installation of such monitoring probes shall occur within thirty (30) days of finding waste that contains explosive gas and upon consent of the landowner.

11. Not later than thirty (30) days after installation of monitoring probes required to determine explosive gas delineation pursuant to Orders 4 and 10, Respondent shall submit a written Delineation Report which includes at a minimum: a summary of the activities performed; a detailed plan drawing(s) delineating the limits of solid waste disposal at the Facility and any adjacent properties; and the locations of all investigatory borings, monitoring probes, and extraction wells to Ohio EPA for review and approval.

12. In the event the Delineation Report is not approvable by Ohio EPA because it is deficient, Ohio EPA may require Respondent to submit a Delineation Plan that performs additional delineation activities. Respondent shall submit to Ohio EPA within thirty (30) days a Delineation Plan upon Ohio EPA's request for further delineation of explosive gas and solid waste for Ohio EPA's review and approval, and shall implement the approved Delineation Plan within thirty (30) days of Ohio EPA's written approval.

Remediation Plan

13. Not later than thirty (45) days after the effective date of these Orders, Respondent shall submit to Ohio EPA for written approval a remediation plan detailing how Respondent will remedy explosive gas migration at the Facility Property Boundary. The remediation plan shall include detail plans that shall, at a minimum, provide for:

    a. Proposed remedial measures designed to abate or minimize explosive gas levels at the Facility Property Boundary such that levels are maintained below the LEL (5% methane in air by volume); and

    b. Conversion of the Facility's current active gas extraction system condensate collection to provide continuous automated removal of liquid from the system so as to prevent excessive condensate from impacting the effectiveness of the current active explosive gas extraction system.

14. Not later than sixty (60) days after Ohio EPA written approval, Respondent shall implement the approved remediation plan.

15. In the event the remediation plan is not approvable by Ohio EPA because it is deficient, Ohio EPA may approve the remediation plan with certain conditions and Respondent shall implement the approved remediation plan with conditions not later than sixty (60) days after Ohio EPA written approval.

16. Not later than thirty (30) days after commencement of implementation of the remediation plan, Respondent shall submit to Ohio EPA a report detailing the results of the plan. The report shall include documentation of remedial measures performed to abate or minimize explosive gas levels at the Facility Property Boundary, documentation of conversion of the active gas extraction system condensate collection to provide continuous automated removal of liquid from the system, all related plan drawings, and associated narratives for the conversion of the active gas extraction system condensate collection to provide continuous removal of liquid from the system and remedial measures.

17. Not later than one hundred fifty (150) days after commencement of implementation of the remediation plan, a second report shall be submitted to Ohio EPA, SWDO, which shall include four (4) consecutive months of weekly monitoring results from all explosive gas monitoring probes and extraction wells that exceed the LEL for methane at the Facility Property Boundary.

18. If the report submitted pursuant to Order 17 does not show Respondent has abated or minimized the formation and migration of explosive gas from the Facility such that exceedances of the LEL at the Facility Property Boundary continue to occur, then, not later than sixty (60) days after the report was submitted, Respondent shall submit to Ohio EPA for written approval a revised remediation plan for implementation of additional remedial measures.

19. Not later than sixty (60) days after Ohio EPA written approval, Respondent shall implement the revised remediation plan submitted pursuant to Order 18, as approved.

20. In the event the revised remediation plan is not approvable by Ohio EPA because it is deficient, Ohio EPA may approve the revised remediation plan with certain conditions and Respondent shall implement the approved revised remediation plan with conditions not later than sixty (60) days after Ohio EPA written approval.

Revised Explosive Gas Monitoring Plan

21. Not later than sixty (60) days after implementation of the remediation plan has commenced pursuant to Orders 13 or 18, in accordance with OAC Rules 3745-27-12(D) and (E), as effective 2008, Respondent shall submit a

revised EGMP to Ohio EPA, SWDO for approval, which shall include at a minimum:

a. A legal description for the Facility property owned or under the control of Respondent;
b. Discussion of the historical operations of the Facility and of any records or information regarding the types of wastes disposed at the Facility;
c. Geological information, including ground water table depth, discussion of site and surrounding area topography, and a geologic cross section of the perimeter of the Facility property showing potential natural pathways for gas migration;
d. A detailed plan drawing(s) showing locations of:
   i. All monitoring probes, permanent and temporary, in the current explosive gas monitoring system,
   ii. All passive vents, if any, and active explosive gas extraction wells (including narratives and/or descriptions indicating all extraction wells that are connected and any extraction wells that are under vacuum, if any); and
   iii. All potential manmade explosive gas migration pathways at the Facility, including sewer lines, water lines, and underground utilities.
e. A document outlining the monitoring frequency for each explosive gas monitoring probe, probe boring logs, as-built designs for each currently-monitored explosive gas monitoring probe, and parameters monitored for; and
f. An evaluation of the effectiveness of the existing explosive gas monitoring system.

22. In the event the revised EGMP is not approvable by Ohio EPA because it is deficient, Ohio EPA may approve the revised EGMP with certain conditions and Respondent shall implement the approved EGMP with conditions upon Ohio EPA written approval.

Installation and Replacement of Permanent Monitoring Probes

23. Upon the effective date of these Orders, Respondent shall comply with OAC Rule 3745-27-12(D)(5)(c), as effective 2008, for future installation and replacement of any permanent monitoring probes other than those installed pursuant to Order 4 and converted pursuant to Order 7, including:

a. Replacement of any permanent monitoring probe shall only occur if that monitoring probe is damaged or inaccessible;
b. Any replacement permanent monitoring probe shall be located to monitor the same pathway and shall be within the same vicinity as the damaged monitoring probe that is being replaced; and

c. Installation of any new or replacement permanent monitoring probe shall be certified in accordance with OAC Rule 3745-27-12(F), as effective 2008.

Recalibration and Installation of Explosive Gas Alarms

24. To ensure protection of human health and safety of adjacent landowners, not later than thirty (30) days after the effective date of these Orders, and upon consent by the owner, or if there is a tenant on the adjacent property, upon consent of both the landowner and the tenant of the occupied residence, Respondent shall provide the owner or the owner and the tenant a copy of these Orders, shall have a discussion with the owner or the owner and tenant, respectively, about the content of the Orders and any questions raised by the owner or the owner and the tenant, respectively, and shall evaluate the operational status of each explosive gas alarm installed by Respondent for correct operation, location, and calibration.

25. Not later than seven (7) days after completion of the evaluation required in Order 24, Respondent shall submit to Ohio EPA a report outlining the operational status of each residential explosive gas alarm inspected.

26. Not later than thirty (30) days after finding waste that contains explosive gas pursuant to Order 9, for occupied structures within 200 feet of emplaced waste in which explosive gas alarms are not already installed, upon consent of the owner, or if there is a tenant on the adjacent property, upon consent of both the landowner and the tenant of the occupied residence, Respondent shall provide the owner or the owner and the tenant, respectively, a copy of these Orders, shall have a discussion with the owner or the owner and tenant, respectively, about the content of the Orders and any questions raised by the owner or the owner and the tenant, respectively, and shall install explosive gas alarms in each occupied structure upon consent of the owner or the owner and the tenant, respectively, of the occupied structure.

27. Not later than seven (7) days after notification to the owner or the owner and the tenant, respectively, pursuant to Orders 24 and 26, Respondent shall submit to Ohio EPA documentation of the offer to recalibrate or install explosive gas alarms, including the names of the individuals provided the offer, a list of those individuals who responded to the offer, and their responses, either positive or negative.

28. To ensure all explosive gas alarms are operating properly, all explosive gas alarms either recalibrated pursuant to Order 24 or installed pursuant to Order 26 shall be recalibrated by Respondent annually upon consent of access by the owner or the tenant, respectively, of the occupied structure. Ohio EPA shall receive a copy of the operation and calibration results not later than seven (7) days after Respondent's receipt of these results.

VI. ACCESS

To the extent that the Facility or any other property to which access is required for the implementation of these Orders is owned or controlled by persons other than Respondent, Respondent shall use reasonable efforts to secure from such persons access for Respondent as necessary to effectuate these Orders. Copies of correspondence sent to the owners of properties adjacent to the Facility and all access agreements obtained by Respondent shall be provided to Ohio EPA not later than seven (7) days after sending the correspondence or obtaining the agreement. If any access required to implement these Orders is not obtained within thirty (30) days after the effective date of these Orders, or within thirty (30) days after the date Ohio EPA notifies Respondent in writing that additional access beyond that previously secured is necessary, Respondent shall promptly notify Ohio EPA and Ohio EPA may, as it deems appropriate, assist Respondent in obtaining access.

VII. TERMINATION

Respondent's obligations under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders and the Chief of Ohio EPA's Division of Solid and Infectious Waste Management acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete."

This certification shall be submitted to Ohio EPA by the City and shall be signed by a responsible official of the City. For purposes of these Orders, a responsible official is a representative from the City of St. Bernard.

VIII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation not a party to these Orders, for any liability arising from, or related to, Respondent's Facility.

IX. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. These Orders do not waive or compromise the applicability or enforcement of any other statutes or regulations applicable to Respondent or the Facility.

X. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

XI. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency
Southwest District Office
Division of Solid and Infectious Waste Management
401 East Fifth Street
Dayton, Ohio 45402-2911
Attn: Supervisor

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XII. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges, and causes of action, except as specifically waived in Section XIII. of these Orders. In particular, Ohio EPA reserves its rights to seek civil or administrative penalties against Respondent for violations.

XIII. WAIVER

Respondent consents to the issuance of these Orders and agrees to comply with these Orders arising from or related to the Facility.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated, or modified.

XIV. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

IT IS SO ORDERED AND AGREED:

Chris Korleski, Director

IT IS SO AGREED:

City of St. Bernard

William C. Burkhardt — 9-8-09

Signature — Date

Mayor

Title