BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

ORIGINAL

IN THE MATTER OF:	)	
	)	
Adjusted Standard Petition of	)	**AS 14 - 03**
Brickyard Disposal & Recycling, Inc.	)	**(Adjusted Standard - Land)**
Pursuant to Title 35 of the	)	
Illinois Administrative Code	)	
Parts: 814.402(b)(3), 810.103, 811.318(b)(3)	)	
and 811.320(c)	)	

NOTICE

Illinois Pollution Control Board
Attn: Mr. John Therriault, Clerk
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

Brown Hay & Stephens, LLP
Attn: Ms. Claire Manning, Esq.
205 S. Fifth Street, Suite 700 – P. O. Box 2459
Springfield, Illinois 62705

PLEASE TAKE NOTICE that I have today filed with the office of the Clerk of the Pollution Control Board the **RECOMMENDATION OF THE ILLINOIS EPA**, copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent

Kyle Nash Davis, Esq.
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)

Dated: August 8, 2014

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OF THE STATE OF ILLINOIS

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ENTRY OF APPEARANCE

NOW COMES the undersigned, as counsel for and on the behalf of the Environmental Protection Agency of the State of Illinois, and hereby enters his Appearance in the above captioned matter.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent

By: _____

Kyle Nash Davis, Esquire
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
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Dated: August 8, 2014

CERTIFICATE OF SERVICE

I, the undersigned non-attorney, state that I served a copy of the above-described document to counsel of record via U.S. Mail at 1021 North Grand Ave. East, Springfield, IL 62794, at or before 5:00 p.m. on Agust 8, 2014.

Illinois Pollution Control Board
Attn: Mr. John Therriault, Clerk
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

Brown Hay & Stephens, LLP
Attn: Ms. Claire Manning, Esq.
205 S. Fifth Street, Suite 700 – P. O. Box 2459
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Meredith Kelley
Clerical signature

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RECOMMENDATION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The **ILLINOIS ENVIRONMENTAL PROTECTION AGENCY** ("Illinois EPA/Respondent"), through its attorney Kyle Nash Davis, hereby submits a **RECOMMENDATION** in the above captioned matter. This filing is submitted pursuant to Section 35 of the Illinois Environmental Protection Act ("EPAct") [415 ILCS 5/35 (2012)] and 35 Ill. Adm. Code 104 *et seq.* For the reasons outlined below, the Illinois EPA recommends that the petition be **DENIED**.

I. INTRODUCTION

1. On May 31, 2013, Brickyard Disposal & Recycling, Inc. ("Petitioner"), filed a Petition for Adjusted Standard ("Petition") which was docketed as AS 13 - 04. Illinois EPA filed its recommendation on July 17, 2013. On August 8, 2013, the Pollution Control Board ("Board") issued an Order identifying 25 issues that the Board requested be addressed by Petitioner. On September 5, 2013, the Hearing Officer issued on Order directing that an Amended Petition be filed by September 9, 2013.

2. Petitioner requested a 30 day extension from the ordered September 9, 2013,

deadline, which was granted, and filed an Amended Petition on October 9, 2013. Illinois EPA filed its Recommendation on November 26, 2013. Thereafter, Petitioner filed a Response to the Illinois EPA's Recommendation. The Board issued an Opinion and Order on January 23, 2014, denying the Amended Petition and closing the docket.

3. On June 27, 2014, Petitioner filed the initial pleading in this matter, a Third Petition for Adjusted Standard, as captioned above ("Third Petition" or for citation purposes herein "Pet."). Illinois EPA received a hard copy of this pleading on Monday, June 30, 2014.

4. Petitioner, once again, seeks relief from locating monitoring wells on the edge of the permitted waste disposal unit commonly referred to as Brickyard facility's Unit I ("Unit I").

II. INVESTIGATION

5. To date, Respondent has not received a citizen inquiry regarding AS 14 - 03.

6. Petitioner is the current holder of permit No. 1994-419-LFM, Modification No. 102, for Unit I. According to Section VIII.A.20, at page 44 of that permit, "[t]he final detection groundwater monitoring network has not been approved by the Illinois EPA. A temporary detection groundwater monitoring network is approved in Log No. 2009-089. If the waste in the overfill area is left in place (outside the current permitted waste boundary), a revised waste boundary shall be proposed and a

revised groundwater monitoring network shall be modeled and proposed through a significant modification permit application." (See: Attachment A)

7. The Illinois EPA cannot approve completion of closure unless an adequate groundwater detection monitoring program has been approved and the network of monitoring wells has been installed.

8. Those monitoring wells must be modeled and presented for inclusion within the Unit I permit.

9. Regulations applicable to this facility require that it must not contaminate a source of drinking water at the compliance boundary, defined as any point *on the edge of the unit* at or below the ground surface. So, in short, proposed well locations must be on the edge of the waste footprint for Unit I. (See generally: 35 Ill. Adm. Code Section 814.402(b)(3))

10. However, Section 814.402(b)(3) also states that the Board may provide for a zone of attenuation and adjust the compliance boundary upon a demonstration that the alternative compliance boundary will not result in contamination of groundwater and following a review of a list of factors that must be presented to the Board for consideration. (See: 35 Ill. Adm. Code Section 814.402(b)(3) subsections (A) through (I))

11. Certainly, where the Board has provided for such relief, in a case such as this, where site facts present an issue to placement of groundwater monitoring wells at

some points on the edge of part of Brickyard Unit I, a proposal could be presented in a manner so as to afford relief from the generally applicable provisions and still achieve environmental goals.

III. FACTS PRESENTED IN THE THIRD PETITION – PETITIONER'S RATIONALE

12. Petitioner provides within its pleading that it seeks an Adjusted Standard pursuant to Section 28.1 of the Illinois Environmental Protection Act (415 ILCS 5/28.1), Part 104 of the Board's Procedural Rules (35 Ill. Adm. Code 104) as well as Section 814.402(b)(3) of the Board's regulations (35 Ill. Adm. Code 814.402(b)(3)). (Pet. at 1)

13. Within Section I of the Third Petition, Petitioner states that Unit I of the Brickyard facility (Illinois EPA Permit #: 1981-24-DE) accepted its final volume of waste in 1997 and has initiated closure. (Pet. at 2)

14. Petitioner identifies the main issue relative to installing groundwater monitoring wells, claiming that 'extraneous materials' have been disposed within some areas, which areas would interfere with placement of wells at the edge of Unit I. (Pet. at 2) The Illinois EPA acknowledges this fact.

15. Petitioner designates as "extraneous materials" all of the disposed wastes that make up the three fill areas located beyond the waste footprint of Unit I. Footnote 2 of the Third Petition explains that "...the phrase 'extraneous materials' is used herein simply a method of generically referring to the historically disposed ..."

wastes that are outside of the waste footprint of the permitted area for Unit I. This clarification is indeed helpful[1] as the Illinois EPA had in prior pleading discussed the definition and the definitions of waste found within the EPAct.

16. Petitioner is correct in pointing out that what is important is the fact that a waste disposal fill areas exist at some points beyond the footprint of the waste disposal unit that is Brickyard Unit I, and that such may interfere with the placement of wells *on the edge of the unit.* (See: 35 Ill. Adm. Code 814.402(b)(3)). The Illinois EPA would agree that the Board likely did not consider the fact pattern presented at Unit I when enacting the regulations of general applicability at issue in this proceeding.

17. However, in its review of the Third Petition, the Illinois EPA did identify a number of deficiencies with the Third Petition and will discuss them below.

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[1] The Illinois EPA was mindful of footnote 2, and this clarification, when reading similar uses of that term such as the use of "*waste like* extraneous materials." (See: Pet. at 5) Based upon the clarification in footnote 2, adding the term '*waste-like*' to the coined phrase 'extraneous material' must not be intended to do anything to the method of generic reference. Likewise, no significance was assigned when the Third Petition provided that "... monitoring wells [would be inappropriately] placed directly into *waste* or *waste-like* materials such as the *extraneous materials* here." (Pet. at 9, emphasis added) Illinois EPA reads the terms '*waste*,' '*waste-like materials*,' and '*extraneous materials*' within these sentences as just '*waste*.' The Illinois EPA notes that when referencing to the many wastes found within the fill areas within the Third Petition Petitioner leaves out "municipal solid waste" which is expressly stated within Exhibit B. So, indeed some form of generic reference is understandable to insure that all the differing types of wastes that are within the fill areas are included. (See: Exhibit B at pages 1 and 4)

A) PROPOSED MONITORING WELL LOCATIONS.

18. The Board within its Opinion issued on August 8, 2013, PCB 13-04, stated that since the relief proposed by the Petitioner sought relief from 811.318(b)(3) and (b)(5), without proposing specific alternate requirements for those provisions, the Board, wanted Petitioner to:

> (5) "clarify the *proposed placement* of monitoring wells *in relation to* the proposed compliance boundary and the edge of the unit if an adjusted standard from [811.319(b)(3) is requested."
>
> (See: PCB 13-04, August 8, 2013 Opinion, denial point 5, emphasis added) and
>
> (6) "clarify if Brickyard is seeking relief from the monitoring well location requirements of [811.318(b)(5)] … *propose an alternative location*…."
>
> (See: PCB 13-04, August 8, 2013 Opinion, denial point 6, emphasis added)

19. Petitioner in this Third Petition seeks relief from 35 Ill. Adm. Code Section 811.318(b)(3), however, Petitioner does not address 35 Ill. Adm. Code Section 811.318(b)(5). (Pet. at 1 and Exhibit A)

20 The language used by the Board within these two denial points suggests that the Board was seeking information relative to the proposed *placement* and/or *location* of wells in relation to any proposed compliance boundary.

21. Petitioner does not mention well placement within the Third Petition, and provides only potential locations of some of the wells within Section 5.5 of Exhibit B.

However, the Exhibit B reference to the potential location of some wells states only that Petitioner expects that temporary wells shall become part of the groundwater monitoring network and additional wells shall be proposed as necessary based on evaluation of the well spacing requirements. (See: Exhibit B at 35) This, again, does not expressly identify well locations, as requested in denial points 5 and 6 of the Board's August 8, 2013 Opinion.

22. Regarding the requested relief, Section II of the Third Petition, characterizes the relief sought as "[s]imply stated, the Petitioner needs to move various groundwater monitoring locations for Brickyard I further outward from [the] (sic) edge of the permitted unit such that none are located within the area including or encompassed by the extraneous materials." (Pet. at 3)

23. Petitioner frames the discussion regarding the relief it seeks in terms of a desire to move 'various' groundwater monitoring locations for Unit I further outward from the edge of the permitted unit such that none are located within the area including or encompassed by the extraneous materials.

24. Petitioner then provides a discussion of the relief sought, at page 5, expressing that "...some of the wells at the edge of Brickyard I would then be directly in the waste-like extraneous materials." (See: Pet. at 5)

25. From the language at page 3 and page 5 it is suggested that only 'various' or 'some' locations are being proposed to be moved away from the edge of Unit I.

26. So, according to the language used within the Third Petition, Petitioner seeks the ability to move 'some' or 'various locations.' This might be consistent with the above noted points within the Board's August 8, 2013, Opinion. But, the pleading fails to identify what exactly are the 'some' or 'various' wells to be adjusted by the adjusted standard. And, the pleading does not include locations of wells that may be additionally proposed, as noted within Exhibit B.

27. If the Board does not intend to review placement/locations of monitoring wells within this process, the Illinois EPA would be willing review these locations within a permit review process.

B) LOCATION OF WELLS AS THEY RELATE TO COMPLIANCE BOUNDARY.

28. According to currently applicable regulation, "... [a]t any point on the compliance boundary, the concentration of constituents shall not exceed applicable regulatory standards." (See: 35. Ill. Adm. Code 814.402(b)(3)) Presumably, Petitioner is not seeking to amend this requirement, although the proposed language in Exhibit A does not address this matter.

29. Also, 35 Ill. Adm. Code Section 814.402(b)(3) currently states that the 'compliance boundary' for a unit, such as Brickyard I, is defined as any point 'on the edge of the unit.' Again, Petitioner only seeks relief, pursuant to the express terms of Section 814.402(b)(3), without truly considering that the language provides that the compliance boundary is also the point at the edge of the unit.

30. According to 35 Ill. Adm. Code Section 811.318(b)(3):

> "Monitoring wells shall be established *as close to the potential source* of discharge as possible without interfering with the waste disposal operations, and within half the distance from the edge of the potential source of discharge to the edge of the zone of attenuation downgradient, with respect to groundwater flow, from the source."
>
> (emphasis added)

31. If the compliance point is also the edge of the unit where sampling must occur, and sampling must occur as close to the unit as possible, it could be argued that by moving the compliance boundary out to 100 feet or greater (as discussed below) then *all* monitoring wells will be moved out, as opposed to just 'some' or 'various' wells.

32. The Illinois EPA reviewed the requested relief, as stated at pages 3 and 5 of the Third Petition, comparing it to the language of Exhibit A of the Third Petition dealing with monitoring points. The relief requested within Exhibit A provides that "[m]onitoring wells shall be established as close to the outer edge of either the waste management unit or the extraneous material, whichever is further out, and within the zone of attenuation downgradient, with respect to the groundwater flow, from the source."

33. The Illinois EPA is not exactly sure what is intended by "the outer edge" of either Brickyard I or the extraneous material. And, the Illinois EPA found no guidance in the pleading at this point in the discussion.

34. Also, the above language tends to suggest that the monitoring points will not be 'as close to the potential source of discharge as possible' as required by that Board's regulations, and also more importantly, it begs the question of whether there is an intention to locate the wells as far out as the compliance boundary, which could be 100 feet from the fill area or more (as explained more fully below).

35. This may be the intention since when the Petitioner again re-characterizes the issue of relief, the requested relief is a statement, at page 23 of the Third Petition, providing that "[t]he requested adjusted standard would move the *compliance boundary* outward to 100 feet outside of the boundary of the waste unit or 100 feet outside of any extraneous materials where those are present." (Pet. at 23, emphasis added)

36. If, as noted above, the compliance boundary is where compliance must be met and where monitoring wells to establish compliance would occur, if a compliance boundary was 'on the edge of the unit' and now is much further out, monitoring wells will almost certainly *all* be moved out. As noted above, to what extent the wells will be moved, the Illinois EPA was unable to determine.

37. And, again reading the simplified statement relating to the requested relief within Section II: Requested Relief, along with the statement at page 23, the Board and the Illinois EPA are not reviewing a request to move 'some' or 'various' locations, but actually likely '*all* ' locations.

38. The Illinois EPA is willing to do the review of these placements/locations within a permit review process. However, if the Board is requesting actual proposed locations, as expressed within denial points 5 and 6, the Illinois EPA was not able to identify such within the Petition or Exhibit B.

C) RELIEF REQUESTS TO 'INCORPORATE' FILL AREAS INTO FINAL CLOSURE AND POST CLOSURE CARE STRATEGY.

39. Petitioner at several points within the Third Petition states that it is required to "*incorporate*" or "*integrate*" the fill area into the technical strategy for final closure and post closure care. (See: Pet. at 6, 17 and 18) Use of these terms tends to suggest that the fill areas are proposed to be 'combined with' or 'made part of' or even 'united into one' unit. Relief such as this clearly is not within the regulations noted by Petitioner for which it seeks relief.

40. The Illinois EPA does note that the Third Petition does not provide much more insight into this statement regarding the topic when these suggestions are used. However, the Illinois EPA would offer that it does not believe the request is to expand Unit I nor a request to have the Board review whether inclusion of the fill areas are part of closure or post-closure care for that unit. Additionally, the Illinois EPA would not agree that by using these terms there is an attempt at a request for including the fill area into the closure or post-closure of Unit I. The Third Petition is simply only an Adjusted Standard to move monitoring wells for Brickyard Unit I.

41. The Illinois EPA would point out that in the event that the Third Petition was determined to be an attempt to include the fill areas as part of closure, surely the

Illinois EPA and Board would require further information. Additionally, by way of example, the cap proposed to be used to assist groundwater monitoring efforts is only similar to an 35 Ill. Adm. Code Part 807 cap as opposed to a cover similar to that used at Brickyard's Unit I, which would meet the requirements of 35 Ill. Adm. Coe Part 811.314.

D) GROUNDWATER MONITORING ZONE ("GMZ") EXTENDING THE ZONE OF ATTENUATION AND COMPLIANCE BOUNDARY.

42. The Third Petition itself does not include a discussion of inclusion of the GMZ relative to the relief requested. As a matter of fact, the Third Petition provides only that the compliance boundary will be moved outward to 100 feet outside of the boundary of the waste unit or 100 feet outside of any extraneous material where those are present. (Pet. at 23) However, this is not the actual requested relief.

43. Contrary to the above assurance, the Illinois EPA found that Petitioner requests that the compliance boundary actually exceed 100 feet from the Unit I where the GMZ is located and no extraneous material is present. When reviewing Exhibit A, Figure 1, and the note within that diagram provides specifically that the compliance boundary has been drawn so as to include the GMZ although as stated above, this appears only within the exhibit and not within the Third Petition narrative.

44. The GMZ is further than 100 feet from the unit's edge.

45. The Illinois EPA would contend that Petitioner cannot expand the compliance boundary beyond the 100 foot mark for convenience sake to accommodate the

GMZ. For that matter, from a technical standpoint, the Illinois EPA would suggest that it is appropriate to have detection monitoring wells of the finalized groundwater monitoring network within the GMZ.

E) LOCATION OF PROPOSED COMPLIANCE BOUNDARY AND ZONE OF ATTENUATION 'WITHIN' FACILITY PROPERTY LINE.

46. Within the Board's August 8, 2013, Opinion, at denial point 22, the Board provided that the compliance boundary has to be "*within*" the property line.

47. The Illinois EPA notes that the proposed compliance boundary is *the* property line, as represented by Exhibit A, Figure 1. The Illinois EPA is not sure whether the Board was directing Petitioner or interpreting Section 814.402(b)(3)(H) to provide that the new zone of compliance shall not extend 'beyond" the facility property line as also inclusive of 'upon' the property line since the Board appears to provide consistently on this point that such boundaries must be 'within' the property line.

48. Ideally, the map can be revised or a clarifying statement from Petitioner could confirm that the compliance boundary is just inside of the property line.

F) COMPLIANCE BOUNDARY EXTENDED FURTHER THAN BOARD COMMENT WITHOUT EXPLANATION.

49. The Third Petition proposes a compliance boundary that extends 100 feet from Unit I even where no 'fill area' is present.

50. Within the Board's August 8, 2013, Opinion, it is requested that Petitioner:

"24. Provide justification for the adjusted compliance boundary along sections of the unit's perimeter where the extraneous material is not present."

(See: PCB 13-04, August 8, 2013, Order at 5)

51. The Third Petition does not provide an explanation. In areas where no waste fill area is present, Petitioner still seeks to move the compliance boundary and establish a zone of attenuation.

52. Regarding a justification for any proposal of a new compliance boundary and zone of attenuation where fill area is not present along sections of the facility's perimeter, the Illinois EPA did not find any compelling reasoning specifically addressing this matter.

G) RELIEF REQUESTED APPEARS TO CONFLICT OR CONTRADICT THROUGHOUT PLEADING AND SUPPORT DOCUMENTATION.

53. The characterization of the location of the new compliance boundary may not accurately reflect the relief actually requested.

54. When reviewed against other information within the Third Petition and Exhibits, relief differs from what is stated within the Third Petition.

55. For example, at page 23, Petitioner claims that the compliance boundary will be moved outward "... to 100 feet outside of the boundary of the waste unit or 100 feet outside of any extraneous materials where those are present."

56. The Illinois EPA notes that this statement falls short of a truly accurate assessment of the requested relief in a number of ways.

57. Exhibit A, Figure 1, clearly establish that the distance from the fill area on the east site of Unit I will be restrained by the property line, not allowing for a 100 foot area for the new compliance boundary or the zone of attenuation as stated within the Third Petition.

58. Now, the Illinois EPA would agree with the representation within Exhibit A, Figure 1, which restrains a compliance boundary by a property line. As such, Exhibit A, Figure 1, is acceptable, as opposed to the statement at page 23 of the Third Petition which tends to be broader since it does not note the property line. Relief should not be characterized to extend beyond the property line since such would not be consistent with Section 814.402(b)(3)(H).

59. Moreover, Petitioner states at page 32 of the Third Petition that the horizontal extent of the compliance boundary and zone of attenuation is within the Petitioner's property line (Pet. at 32). Again, the new compliance boundary established by Exhibit A, Figure 1, dated June 2014, will be *the* property line, and thus, possibly not *within* the property line as discussed above.

60. The Illinois EPA finds it difficult to assess exactly where each line is, since we are dealing with a drawing and conflicting language. As stated by the Illinois EPA above, ultimately, the restraining of the new compliance boundary represented within the technical Figure would be consistent with many of the Board's regulations

which restrain the zone of compliance to the facility property line. (See example: 35 Ill. Adm. Code Section 814.402(b)(3)(H)). As such, the Illinois EPA would accept this placement, even though it is not expressed within the pleading as such.

61. Furthermore, the Illinois EPA found Exhibit A, Figure 1, critical in its review of Petitioner's claim that it requests only to establish a compliance boundary of 100 feet outside of Unit I or a fill area.

62. Regarding the portrayal of the requested relief, at page 23, the statement appears to fall short and may conflict with other statements since nowhere within this statement does the Petitioner take into account the fact that Exhibit A, Figure 1, incorporates the current groundwater management zone ("GMZ") for Unit I as a factor in placement of the new compliance boundary. As such, this may impact potential well locations. Again, the only reference to the GMZ as it relates to the new compliance boundary or new zone of attenuation that actually speaks to its inclusion is within the "note" on Exhibit A, Figure 1, and then much later within a declaration of this fact at Section 4.9, page 28, of Exhibit B. This does not appear to be included within the Third Petition. So, it appears from the technical document that the new compliance boundary will extend beyond 100 feet from Unit I. Generally, the Illinois EPA would not consider a GMZ as a factor in placement of this type of well, in and of itself.

63. The Illinois EPA further notes that on each of the East, South and West boundaries, in areas where no fill area exists at the edge of Brickyard Unit I, it appears that the compliance boundary will extend further than 100 feet. If you use the scale

provided and draw a line from the point on the edge of the landfill, from a 90 degree angle, the corresponding location directly from that point at the compliance boundary will exceed 100 feet.

64. Finally, as noted above, the GMZ appears to exceed the 100 feet from certain points where no fill area exists on the edge of Unit I and yet the new compliance boundary and also the zone of attenuation are both proposed to extend to include that location. These locations may cause a problem with their placement since they not only exceed 100 feet, but also since justification was deemed necessary under the Board's August 8, 2013, Opinion and it was not provided.

H) COMPLIANCE BOUNDARY AND ZONE OF ATTENUATION EXTEND BEYOND 150 METERS.

65. In the Board's August 8, 2013 Opinion, the Board expressly stated that based upon the scale of Figure 7 "... the line appears to extend beyond 150 meters in three places..." then identified those locations. The Board goes on to express that:

"... the Board requests that Brickyard...

> 22. Present a revised figure showing a proposed compliance boundary within 150 meters from the edge of the unit and within the facility property line. Please ensure that the thickness of the line used to depict the proposed compliance boundary is also within 150 meters from the edge of the unit and the facility property line."
>
> ...
>
> (See: PCB AS 13-4, August 8, 2013, Opinion at X)

66. It appears that Exhibit A, Figure 1, does propose a new compliance boundary that would be consistent with this request, except in the following instances set forth below.

67. In regard to the suggestion that Petitioner proposes a new compliance boundary within 150 meters from the edge of the Brickyard Unit I, there appear to be at least two points where the compliance boundary will extend beyond 150 meters (approximately 492 feet). Exhibit A, Figure 1, may have an area between Temporary well T120 and near T104 that will establish a new compliance boundary more than the regulatory mandate. Likewise, it would seem that points near T111 and T110 also exceed the limit. This assessment was made by taking the scale on the document and drawing a line on a 90 degree angle from the edge of Unit I directly to the compliance boundary across from that starting point.

68. As identified by the Board above, Section 814.402(b)(3)(I) expressly provides that "... *in no case* shall the zone of compliance at an existing MSWLF unit extend beyond 150 meters from the edge of the unit." (See: 35 Ill. Adm. Code Section 814.402(b)(3)(I), emphasis added)

69. Perhaps the distance is not as it appears within Exhibit A, Figure 1, as Petitioner claims such within Section III(C)(9) of the Third Petition. If so, clarification will be necessary since, again, the use of the scale at the bottom of Exhibit A, Figure 1 would tend to show that the fill area in at least one location exceeds or is approximately 500 feet and then Petitioner intends to add an additional 100 feet for the new compliance boundary on top of that distance from the edge of Unit I.

70. Also, regarding the Board's request for restraining the new compliance boundary within the facility property line, it appears from Exhibit A, Figure 1, that the new compliance boundary and zone of attenuation proposed will be exactly *the* property line. The Illinois EPA could not differentiate between the green line and the property line over which it appears to be imposed. (See: Eastern boundary proposed by Exhibit A, Figure1)

I) SUMMARY

71. In summation, the Illinois EPA found the Third Petition inadequate for the reasons provided above.

72. A short list of the issues identified would include:

a) First, the pleading did not address the Board's August 8, 2013, comments within PCB 13-04 asking for clarification of proposed placement/locations for monitoring wells;

b) Second, monitoring wells likely may be established as far out as possible as opposed to mandates that such be placed as close to the potential source as possible;

c) Third, the relief as expressed within the Third Petition suggested a need to incorporate or integrate the fill areas into closure of Unit I, which was not acceptable to the Illinois EPA;

d) Fourth, no justification is provided for the groundwater monitoring zone consideration to extend the proposed compliance boundary;

e) Fifth, the location of the compliance boundary and zone of attenuation are actually upon the property line instead of within the property line, as suggested by comments within the Board's August 8, 2013, Opinion in PCB 13-04;

f) Sixth, the compliance boundary proposed would extend to 100 feet where a fill area is not present within explanation as requested by the Board's August 8, 2013, comments within the Opinion in PCB 13-04;

g) Seventh, the relief expressed within the Third Petition appears to conflict with later expressions of the relief found within Exhibit A, Figure I as well as Exhibit B; and

h) Finally, the relief requested appears to extend beyond the 150 meter limit set within Section 814.402(b)(3)(I) and as expressed within comments contained in the Board's August 8, 2013, Opinion in PCB 13-04.

73. The Illinois EPA also will point out additional issues with the Third Petition below in the following review.

IV. SECTION 28.1 FACTORS AND REVIEW

74. Setting aside the rather significant issues identified above within Section III of this Recommendation, the Illinois EPA will attempt to review the statutory and regulatory provisions presented within the Third Petition.

75. The Illinois EPA generally agrees with Petitioner's assessments provided within Section III. A.

76. The Board found within its January 23, 2014, Opinion and Order that to obtain the full relief it sought; Brickyard must to request a zone of attenuation and adjusted compliance boundary." (See: PCB 13-04, January 23, 2014, Opinion and Order at 18)

77. Petitioner does seek to create an alternate compliance boundary and the creation of a zone of attenuation. Petitioner requests the ability to create these altematives to compliance with applicable regulations, moving the monitoring locations outward from the edge of the permitted unit "... such that none are located directly above the fill area." (Pet. at 6)

78. Petitioner offers that it intends to monitor "... outside the fill area, so that potential impacts from either the permitted landfill unit or the contiguous fill are considered, understood, and if necessary, remediated." (Pet. at 7)

79. The Illinois EPA believes that accurate and early detection of any potential

contamination from the Brickyard Unit I source is one of the goals of the regulation. The Illinois EPA agrees with a review of the Board's criteria established within its rulemaking R88-7 (August 17, 1990), *Operating and Reporting Requirements for Non-hazardous Waste Landfills*, within which the Board explained that the three dimensional region set in the definition of zone of attenuation is intended to accomplish several objectives:

1. Establish monitoring points as close to the unit as possible;
2. Keep the volume of geologic material that must be evaluated during a groundwater impact assessment to a minimum;
3. Keep any potential contaminated area to an absolute minimum; and
4. Establish an enforceable boundary at which an excursion (a significant increase in the concentration of any contaminant, attributable to the unit, and more than the allowable maximum concentration at that point) during the operating period is likely to be discovered before the end of the post closure care period. R88-7, Appendix A1 at page 75 (August 17, 1990).

This concept was discussed within the Board's January 23, 2014, Opinion and Order at page 17.

80. The Illinois EPA agrees with Petitioner that the Third Petition should not be read as to seek to expand Brickyard Unit I. (Pet. at 13) "The Petitioner does not seek to receive new waste or expand the boundaries of Brickyard I." (Pet. at 13) As such, any relief requested should be limited to achieving monitoring well locations given the circumstances that present an issue with placement of all of the monitoring wells consistent with the express mandates for placement of such on the edge of the unit. Yet, as noted above, the Petition does not offer specifics relative to placement and Exhibit B, when it provides for a discussion of potential locations; it

does not appear to propose a location of any wells as close to Unit I as possible.

V. STATUTORY CRITERIA

STANDARD FROM WHICH ADJUSTED STANDARD IS SOUGHT
[35 Ill. Adm. Code 104.406(a)]

81. Petitioner provides a thorough recitation of the provision which would allow for the relief requested (35 Ill. Adm. Code Section 814.402(b)(3)). (Pet. a 1)

STATEMENT OF IMPLEMENTATION OF FEDERAL REQUIREMENTS
[35 Ill. Adm. Code 104.406(b)]

82. The requirements within 35 Ill. Adm. Code Part 814, Subtitle D, were enacted consistent with federal regulations within the Resource Conservation and Recovery Act (P.L. 94-580; 42 USC 6901 *et seq.*). Petitioner's facility, which is the subject of this proceeding, is an existing facility under applicable Board regulations.

LEVEL OF JUSTIFICATION
[35 Ill. Adm. Code 104.406(c)]

83. Petitioner has provided justification for the requested relief within its pleading at Sections III.A and III.C. The Illinois EPA finds the Third Petition inadequate as noted above and additionally identifies concerns expressed below.

84. The Illinois EPA's review include the fact that in reviewing Table 5 from Exhibit B, Section 4.7.7, noted that Costs in Table 5 are not provided in a manner that allows for a straightforward comparison to currently approved closure costs at the site. In

order for the Illinois EPA to properly review the cost estimation for extraneous fill removal, a detailed breakdown of, or a narrative justification for, those costs would be necessary, including but not limited to:

- Item 3(b): Backfill and grading: The expected volume of soil on which this estimate is based, is not provided.
- Item 3(c): Earthen Low Permeability Placement (Load, Haul, Place and Compact): The expected volume of soil on which this estimate is based, is not provided.
- Item 3(c): Final Protective Layer (Load, Haul, Place and Grade): The expected volume of soil on which this estimate is based, is not provided.
- Item 3(c): Turf Reinforcement (Slopes Near Swale): The expected surface area on which this estimate is based, is not provided.

85. The Illinois EPA would suggest Petitioner show itemization for all cost estimate items cited above.

86. Additional comments on the cost estimate provided included issues with the Costs in Table 6 of Exhibit C are not provided in a manner that allows for a straightforward comparison to currently approved closure costs at the site. In order for the Illinois EPA to properly review the cost estimation for extraneous fill removal, a detailed breakdown of, or a narrative justification for, those costs would be necessary, including but not limited to:

- Item 4(c): Well/gas probe abandonments within the Extraneous Materials and Documentation: It is not clear how many wells and probes are considered for the cost amount proposed.
- Item 4(d): Abandonment of Gas Wells within the Slope Stabilization Areas: It is not clear how many wells are considered for the cost amount proposed.
- Item 4(e): Installation of New Gas Conveyance Line: The size and extent of the conveyance line replacement is not provided.

- Item 4(f): Re-Installation of the Leachate Conveyance Line: The size and extent of the conveyance line is not provided.

- Item 4(g):

    - Temporary Stormwater Diversion Berm Placement: The basis for this cost is not clear (size and extent).

    - Odor control measures for stockpile: Beyond the temporary cover already accounted for, it is not clear what is intended to occur under this cost item.

- Item 4(h):

    - Surface water Diversion Berm Placement: The basis for this cost is not clear (size and extent).

    - Removal and Stockpile Overburden from Extraneous Materials: The expected volume of overburden on which this estimate is based, is not provided.

    - Mass Excavation of Extraneous Materials: The expected volume of waste on which this estimate is based, is not provided.

    - Placement, Handling and Compaction of Extraneous Materials at working face in Unit II: The expected volume of waste on which this estimate is based, is not provided.

    - Lost Revenue due to Placement of Extraneous Materials in Unit II, including Related Daily Cover: The expected volume of waste on which this estimate is based, is not provided. Furthermore, it is not clear if this is a legitimate factor to consider in this cost estimate. At 30.5 million, this cost represents approximately 64% of the overall cost estimate for "excavation and backfill". The legitimacy of including this cost could be argued; since the extraneous fill outside of permitted waste boundaries was known at the time ownership was transferred in the early 1990's.

- Item 5(a): Haul, Place, Monitor and Document Backfill Material: The expected volume of soil on which this estimate is based, is not provided.

- Item 5(b): Acquisition and Placement of Vegetative Soil: The expected volume of soil on which this estimate is based, is not provided.

DESCRIPTION OF PETITIONER'S ACTIVITY
[35 Ill. Adm. Code 104.406(d)]

87. Brickyard Unit I is a permitted solid waste landfill, which has not accepted waste since 1997. This facility is located above and adjacent to other solid waste disposal units.

88. The Illinois EPA does note that the requested relief will account for the situation created by the fill areas, but will fall short of incorporating the fill areas into the closure and post-closure care of Brickyard Unit I. Additionally, added environmental benefit will be realized by the implementation of the Cover Plan (Exhibit C) and Petitioner's request for its inclusion within the conditions any resulting Board Order, if issued.

DESCRIPTION OF COMPLIANCE EFFORTS AND ALTERNATIVES
[35 Ill. Adm. Code 104.406(e)]

89. The Illinois EPA does not take issue, generally, with Petitioner's representations concerning a description of compliance efforts and alternatives.

90. The Illinois EPA acknowledges Petitioner's admission that the source of any impact would be the responsibility of the Petitioner as owner of the entire landfill area. (Pet. at 21)

91. Regarding the cost issue, the Illinois EPA considered the fact that the total cost is estimated at $47,285,326. However, as noted above, over 60% of that cost is attributed to "Lost revenue due to placement of extraneous materials in Unit II,

including related daily cover" ($30,477,300).

92. As such, the total cost could be approximately $17 million if these expenses are not considered. The Illinois EPA feels that the additional information noted above within paragraphs 84 to 86 above, will be helpful in assessing this issue.

PROPOSED ADJUSTED STANDARD
[35 Ill. Adm. Code 104.406(f)]

93. Petitioner offers proposed language for the Board's consideration within Exhibit A, and accompanying Figure 1. The Illinois EPA believes that the Board will consider the above noted inconsistencies and issues within the Third Petition and Figure 1 in considering the relief requested.

94. In addition, the Illinois EPA also notices that the suggested relief within Exhibit A proposes that the new compliance boundary and zone of attenuation will be within a range defined by "whichever is further out" as opposed to the manner in which the applicable regulations provide, which would require that the boundary and zone be restrained by "whichever is less."

95. The 'whichever is less' concept appears to mirror those factors considered within R88-7 within which the Board states that monitoring points shall be established "as close to the unit as possible."

IMPACT ON THE ENVIRONMENT
[35 Ill. Adm. Code 104.406(g)]

96. The Illinois EPA does not take significant issue with Petitioner representation of the environmental impact of issuing this adjusted standard.

JUSTIFICATION FOR PROPOSED ADJUSTED STANDARD
[35 Ill. Adm. Code 104.406(h)]

97. The Burden of Proof contained at 35 Ill. Adm. Code Section 104.426, provides the Board with those matters which should consider in rendering a decision regarding a petition for Adjusted Standard. (See: Section 27(a) of the EPAct (415 ILCS 5/27(a)))

98. However, the Illinois EPA has pointed out above that the issue that appears to arise if the Third Petition is read broadly to include the waste fill areas as somehow within the closure of Unit I.

99. An additional concern that arises from a statement that a comprehensive investigation will be conducted to include all potential sources is the fact that Petitioner has failed to adequately identify the environmental accountability and applicable groundwater regulations for future groundwater impacts caused by the fill areas. Petitioner must follow the permit and all applicable regulations (35 Ill. Adm. Code Section 811.319(b) and (d)) for any ground water impacts caused by either source, i.e. treat any future release from the extraneous materials as if it is coming from the landfill and extraneous materials as a whole and to fall under the 35 Ill. Adm. Code Part 811 regulations and that the "extraneous materials" to be considered as part of the facility.

100. If the proposal is to move the compliance boundary out, The Illinois EPA believes that the Board should provide that impacts should be subject to 35 Ill. Adm. Code Part 811 regulations, regardless of the source of such.

CONSISTENCY WITH FEDERAL LAW
[35 Ill. Adm. Code 104.406(i)]

101. The issuance of relief requested, since allowed for under both the terms of the EPAct as well as the applicable regulation would mean that the Board's action, would be consistent with State law, which was enacted to mirror federal rules as they relate to solid waste disposal units under Subtitle D.

WAIVER OF HEARING
[35 Ill. Adm. Code 104.406(j)]

102. The Illinois EPA does not request a hearing on this matter.

VI. ILLINOIS EPA RECOMMENDATION

A review of the Petition for relief was made by Illinois EPA's Bureau of Land technical staff. The Illinois EPA concludes that, based upon the forgoing and the inadequacy of information relating to certain issues reviewed, the Board should **DENY** Petitioner's Third Petition for Adjusted Standard in AS 14-03.

Respectfully submitted,

ENVIRONMENTAL PROTECTION AGENCY OF THE STATE OF ILLINOIS

By: _____
Kyle Nash Davis, Esquire

DATED: August 8, 2014

Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276
Phone: 217/782-5544
On-line: www.epa.state.il.us

Exhibit A

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829
PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

217/524-3301

July 8, 2014

Certified Mail
7012 0470 0001 2974 9834

Brickyard Disposal & Recycling, Inc.
Attn: Mr. Travis Simpson
P.O. Box 985
Danville, Illinois 61834-0985

Re: 1838040029 -- Vermilion County
Brickyard Disposal & Recycling
Permit No. 1994-419-LFM
Modification No. 103
Log Nos. 2014-132
Expiration Date: May 1, 2010
Permit Landfill 811File
Permit Approval

Dear Mr. Simpson:

Permit has been granted to Brickyard Disposal & Recycling, Inc. as owner and operator approving the development and operation of an existing municipal solid waste and non-hazardous special waste landfill all in accordance with the application and plans provided in Application Log No. 1994-419. Final plans, specifications, application and supporting documents as submitted and approved shall constitute part of this permit and are identified in the records of the Illinois Environmental Protection Agency, Bureau of Land Division of Land Pollution Control by the permit number designated in the heading above.

Permit No. 1994-419-LFM issued on May 4, 1995 approved:

a. The Significant Modification of the development and operation of this landfill so as to comply with the applicable requirements of 35 Ill. Adm. Code, Parts 811 through 813, pursuant to 35 Ill. Adm. Code 814.104, 814.401 and 814.402 for Unit I and pursuant to 35 Ill. Adm. Code 814.104, 814.301 and 814.302 for Unit II.

The landfill facility covered by Permit No. 1994-419-LFM consists of two units covering approximately 152 acres within a 293 acre site. Unit I consists of approximately 56 acres in which disposal operations began in 1981 and ceased in 1997. Unit II consists of approximately 96 acres of active landfill with approximately 14.2 million cubic yards of airspace capacity. The maximum final elevation of Unit II will be 716.00 MSL and all waste disposal in Unit II shall be above elevation 530.00 MSL.

b. Operation (i.e., waste disposal) in the area within the permitted boundaries and remaining disposal capacity.

c. Acceptance of special waste without individual special waste stream authorizations in accordance with the special waste conditions listed in Part III of this permit.

Permit Modification No. 103 is hereby granted to Brickyard Disposal and Recycling, Inc. as owner and operator, approving modification of an existing municipal solid waste and non-hazardous special waste landfill all in accordance with the applications prepared, signed and sealed by Douglas W. Mauntel, P.E., of Andrews Engineering, Inc., signature dated April 10, 2014.

Final plans, specifications, application, and supporting documents, as submitted and approved, shall constitute part of this permit and are identified in the records of the Bureau of Land, Division of Land Pollution Control by the permit number and log number in the heading above.

The permit application approved by Modification No. 103 consists of the following document:

DOCUMENT	DATED	DATE RECEIVED
Original Application Log No. 2014-132	April 15, 2014	April 15, 2014

Modification No. 103 to Permit No. 1994-419-LFM approves the 2013 Annual Evaluation of Remedial Activities required by Condition Nos. IX.5 and X.12.

Except for the differences described in the table below, the Special Conditions of the permit letter for Modification No. 103 to Permit No. 1994-419-LFM are identical to the Special Conditions of Modification No. 102, issued May 28, 2014.

Condition in Modification No. 102	Condition in Modification No. 103	Description of Change
VIII.A.23, VIII.A.24 and VIII.B.25	VIII.A.23, VIII.A.24 and VIII.B.25	Added language to acknowledge the receipt of Log No. 2014-215.

Pursuant to Section 39(a) of the Illinois Environmental Protection Act (Act) and 35 Ill. Adm. Code 813.104(b), this permit is issued subject to the development, operating and reporting requirements for non-hazardous waste landfills in 35 Ill. Adm. Code 811, 812, 813 and the standard conditions attached hereto and incorporated herein by reference, and further subject to the following special conditions. In case of conflict between the application and plans submitted and these special conditions, the special conditions of this permit shall govern.

I. CONSTRUCTION QUALITY ASSURANCE

1. All necessary surface drainage control facilities shall be constructed prior to other disturbance in any area.

2. No part of the unit shall be placed into service or accept waste until an acceptance report for all the activities listed below has been submitted to and approved by the Illinois EPA as a significant modification pursuant to 35 IAC, Sections 811.505(d) and 813.203.

   a. Preparation of the subgrade and foundation to design parameters;

   b. Installation of the compacted earth/synthetic liner;

   c. Installation of slurry trenches or cutoff walls;

   d. Installation of the leachate drainage, collection and management systems;

   e. Placement of final cover;

   f. Installation of gas control facilities; and

   g. Construction of ponds, ditches, lagoons and berms.

3. The permittee shall designate a third party contractor, a person other than the operator or an employee of the operator, as the construction quality assurance (CQA) officer. The CQA officer shall be an Illinois Certified Professional Engineer who is independent from and not under control or influence of the operator, any employee of the operator, or any other corporation, company or legal entity that is a subsidiary, affiliate, parent corporation or holding corporation associated with the operator.

4. If the CQA officer is unable to be present then the CQA officer shall provide in writing reasons for the absence, a designation of a person who shall exercise professional judgment in carrying out the duties of a CQA officer as the designated CQA officer-in-absentia, and a signed statement that the CQA officer assumes full personal responsibility for all inspections performed and reports prepared by the designated CQA officer-in-absentia during the absence of the CQA officer.

5. The clay liner shall be tested for density and moisture content a minimum of one test per every 1000 cubic yards of liner soil placed.

6. A minimum of one laboratory permeability test shall be performed for every 10,000 cubic yards soil placed in the liner and in the low permeability layer of the final cover system.

7. Wastes shall not be placed over an area liner that has been subjected to freezing conditions until the liner has been inspected, tested and reconstructed (if necessary) to meet the requirements of 35 Ill. Adm. Code 811.306.

8. Prior to placing into service any structure, as specified in Condition I.2, constructed at a landfill, pursuant to a construction quality assurance program in accordance with 35 Ill. Adm. Code Part 811, Subpart E; the operator shall submit an acceptance report prepared, submitted and approved as a Significant Modification application in accordance with the requirements of 35 Ill. Adm. Code 811.505(d) in order to obtain an operating authorization issued by the Illinois EPA as a permit condition.

9. Applications for operating authorization shall not be made for areas of less than 1.5 acre increments of constructed liner.

10. All stakes and monuments marking property boundaries and the permit area shall be maintained, inspected annually and surveyed no less frequently than once in 5 years by a professional land surveyor.

11. All standards for testing the characteristics and performance of materials, products, systems and services shall be those established by the American Society for Testing and Materials (ASTM) unless otherwise stated in the permit application.

12. Sixty-mil geomembranes used at this facility for bottom liner systems in compliance with 35 Ill. Adm. Code, Section 811.306(d)(5)(A) shall have a minimum thickness no less than 57 mil and an average thickness no less than 60 mil. The thickness of the geomembranes shall not be determined using ASTM D 1593.

13. Effective upon issuance of Modification No. 66 (Log No. 2009-037), all conformance testing for geomembranes shall meet Geosynthetic Research Institute's requirements with the following exceptions: For the geomembrane used in the bottom liner, the minimum thickness must be within 5% of nominal for all samples, i.e. 60 mil liner must be at least 57 mil; and UV resistance testing is not necessary unless the geomembrane is exposed for more than 30 days.

II. OPERATING CONDITIONS

1. Pursuant to 35 Ill. Adm. Code, 811.107(a) and 811.107(b), throughout the operating life of this landfill, waste shall not be placed in a manner or at a rate which results in unstable internal or external slopes or interference with construction, operation or monitoring activities.

2. The operator of this solid waste disposal facility shall not conduct the operation in a manner which results in any of the following:

   a. refuse in standing or flowing water;

   b. leachate flows entering waters of the State;

   c. leachate flows exiting the landfill confines (i.e., the facility boundaries established for the landfill in a permit or permits issued by the Illinois EPA);

   d. uncovered refuse remaining from any previous operating day or at the conclusion of any operating day, unless authorized by permit;

   e. failure to provide final cover within time limits established by Board regulations;

   f. acceptance of wastes without necessary permits;

   g. scavenging as defined by Board regulations;

   h. deposition of refuse in any unpermitted (i.e., without an Illinois EPA approved significant modification authorizing operation) portion of the landfill.

   i. failure to collect and contain litter from the site by the end of each operating day.

   j. failure to submit reports required by permits or Board regulations;

3. The operator shall patrol the facility daily during operation to check for litter accumulation. All litter shall be collected and placed in the fill or in a secure, covered container for later disposal. The facility shall not accept solid waste from vehicles that do not securely contain waste loads. Moveable, temporary fencing shall be used to prevent blowing litter when the refuse is above the natural ground line.

4. A uniform layer of six inches of clean soil material shall be placed on all exposed waste by the end of each day of operation. The following list of materials may be used as alternative daily cover materials provided their performance prevents blowing debris; minimizes access to the waste by vectors, minimizes the threat of fires and minimizes odors at the active face:

- Fabrisoil or equivalent geotextile fabric
- Recycled paper/polymer slurry
- Chemical Foam at least three inches thick (Sanifoam, or equivalent)
- Griffolyn TX-1200 composite geotextile/plastic membrane or equivalent
- Air Space Saver woven polyethylene fabric or equivalent
- Plastic film, scrim reinforced (Griffolyn T-55 or equivalent)
- Typar 3341 spun bond non-woven fabric or equivalent
- Plastic or Canvas tarps minimum 50 ft. x 50 ft. size
- Chipped or shredded tires placed six inches thick (if the tire pieces are greater than 2 inches in size, see Condition II.5.g. below)
- Chipped lumber or pallets placed six inches thick
- Beneficially Usable Waste Foundry sand or slag placed six inches thick
- Soil amended with end-product compost at <50% compost placed six inches thick
- Shredded railroad ties exhibiting nonhazardous characteristics, placed six inches thick.
- Petroleum contaminated soil placed six inches thick, subject to the restrictions proposed in Log 2001-385, approved in Modification No. 34.
- Digested wastewater treatment plant sludge placed six inches thick, subject to the restrictions proposed in Log 2001-385, approved in Modification No. 34.
- Non-hazardous contaminated soils placed six inches thick, subject to the restrictions proposed in Log 2001-385, approved in Modification No. 34.

5. The following restrictions shall be placed on use of alternative daily cover:

a. The maximum area allowed to be covered by any alternative daily cover is 20,000 sq. ft. All other waste areas shall receive daily cover soil.

b. Each load of contaminated soil to be used as daily cover shall be inspected to ensure that its use will not generate odors and will minimize the threat of fire. The operator shall maintain a log of these inspections including, but not limited to, the date, a description of the soil contaminant, the generator name, number, and the amount of soil in cubic yards. The logs shall be maintained in the operating record for the facility and shall be available for Illinois EPA inspection upon request.

c. Areas where alternative cover has been applied must be covered with either 6 in. of soil cover or additional waste within each 6 days.

d. The alternative daily cover material shall be anchored adequately to prevent wind damage to the integrity of the cover. If the material is torn during or after placement it must be repaired immediately or the damaged area covered with six inches of soil.

e. Tire materials used and/or processed for use as daily cover shall be managed in accordance with 35 IAC Part 848, Management of Used and Waste Tires.

f. Chipped or shredded tires used as alternate cover material shall be no larger than 4 inches in size.

g. Chipped or shredded tires that have pieces between 2 inches and 4 inches must be applied in a layer of at least 12 inches (minimum thickness).

h. Chipped or shredded tires may be stockpiled in an amount not to exceed a seven (7) day supply for use as daily cover.

i. All alternate daily cover materials that would otherwise be considered a waste material (e.g. chipped or shredded tires, chipped lumber or pallets, foundry sand, slag, shredded railroad ties, etc.) shall be stockpiled on the operating area of the landfill with a certified liner and leachate collection system.

j. If it appears that an approved alternative daily cover material is not meeting the performance requirements in Condition II.4 above or is causing problems, the field inspector from the Illinois EPA or the delegated county office has the authority to immediately stop the use of that alternate daily cover material.

6. All waste which is not to be covered within 60 days of placement by another lift of waste or final cover shall have a cover of at least one ft. of compacted clean soil material.

7. The final protective soil layer shall be placed as soon as possible after placement of the low permeability layer over Unit II to prevent damage to the low permeability layer. The final protective layer shall be a minimum of three feet thick.

8. The operator shall implement a load checking program that meets the requirements of 35 Ill. Adm. Code 811.323. The load checking program shall

consist of training appropriate facility personnel in the identification of potential sources of regulated hazardous wastes; random inspections of at least 3 loads of solid waste delivered to the landfill on a random day each week; handling of regulated hazardous waste in accordance with the requirements of 35 Ill. Adm. Code 811.323(d)(1) and recordkeeping of information and observations derived from each random inspection in accordance with 35 Ill. Adm. Code 811.323(c)(2). In addition to checking for hazardous waste in the load checking program a municipal solid waste landfill (MSWLF) unit shall include waste load inspection for detecting and discouraging attempts to dispose "polychlorinated biphenyl wastes" as defined in 40 CFR 761.3 (1992). If regulated hazardous waste or other unacceptable wastes are discovered, the Illinois EPA shall be notified no later than 5:00 p.m. the next business day after the day it is detected. The load checker shall prepare a report describing the results of each inspection. A summary of these reports shall be submitted to the Illinois EPA as part of this facility's annual report.

9. Asbestos debris from construction-demolition shall be managed in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAPS) regulations.

10. Management of Unauthorized Waste

    a. Landscape waste found to be mixed with municipal waste will be removed the same day and transported to a facility that is operating in accordance with the Act, Title V, Section 21.

    b. Lead-acid batteries will be removed the same day and transported either to a drop-off center handling such waste, or to a lead-acid battery retailer.

    c. Potentially infectious medical waste (PIMW) found to be mixed with municipal waste shall be managed in accordance with 35 IAC, Subtitle M.

    d. Tires found to be mixed with municipal waste shall be removed and managed in accordance with 35 IAC, Part 848.

    e. White good components mixed with municipal waste shall be removed and managed in accordance with Section 22.28 of the Act.

    f. This facility is prohibited from disposing any waste containing polychlorinated biphenyls (PCBs) in concentration greater than allowed, pursuant to the Toxic Substance Control Act (TSCA).

    g. No liquid waste (special or non-special) as determined by the Paint Filter Test shall be disposed unless the waste is from a household or is in a small

container similar in size to that normally found in household waste and the container was designed for use other than storage. The prohibition applies to on-site generated wastes except for leachate or gas condensate that is specifically approved by permit for recirculation into the landfill. However, minor amounts of liquid resulting from precipitation (rain, sleet, hail or snow) during transport and disposal operations shall not be construed as a violation of this condition.

h. In accordance with Section 21.6 of the Act, beginning July 1, 1996, no owner or operator of a sanitary landfill shall accept liquid used oil for final disposal that is discernable in the course of prudent business operation.

i. After the unauthorized waste has been removed, a thorough cleanup of the affected area will be made according to the type of unauthorized waste managed. Records shall be kept for three (3) years and will be made available to the Illinois EPA.

j. In accordance with Subsection 95(b) of the Electronics Products Recycling and Reuse Act (415 ILCS 150), *beginning January 1, 2012, no person may knowingly cause or allow the disposal of a CED* [covered electronic device] *or any other computer, computer monitor, printer, television, electronic keyboard, facsimile machine, videocassette recorder, portable digital music player, digital video disc player, video game console, electronic mouse, scanner, digital converter box, cable receiver, satellite receiver, digital video disc recorder, or small-scale server in a sanitary landfill*, except as may be allowed by a waiver obtained pursuant to Subsection 95(e) of the Electronics Products Recycling and Reuse Act.

k. In accordance with Section 22.54(a) of the Illinois Environmental Protection Act (415 ILCS 5/1 et seq.), beginning January 1, 2014: *No owner or operator of a sanitary landfill that is located within a 25-mile radius of a site where asphalt roofing shingles are recycled under a Beneficial Use Determination (BUD) issued by the Agency pursuant to Section 22.54 of this Act shall accept for disposal loads of whole or processed asphalt roofing shingles. Nothing in this Section [Section 22.54a] shall prohibit or restrict a sanitary landfill from accepting for disposal asphalt roofing shingles that are commingled with municipal waste, including, but not limited to, general construction or demolition debris.* A map showing the locations of the permitted, operating, non-hazardous waste landfills in Illinois with respect to the sites that have current BUD's from the Agency to recycle asphalt roofing shingles can be viewed at: http://www.arcgis.com/home/webmap/viewer.html?webmap=0647481cd5b24af4978df042ddb25b58&extent=-94.3475,36.6842,-83.7567,42.7614 .

11. The facility may receive waste at the site from 2:00 am to 10:00 pm, Monday through Saturday. If it becomes necessary to accept waste outside of the above schedule in response to an emergency situation, documentation of the nature of the emergency shall be made and verbal notice of the activity shall be provided to the appropriate Illinois EPA Field Operations Office on the same day or if not possible on the next business day and be documented in writing within 7 days. If the facility is operated past sunset, adequate lighting shall be provided.

12. Road building materials consisting of roofing shingles, roofing tile and clean construction and demolition debris as defined at Section 3.160(b) of the Act may be stockpiled on-site in three (3) designated areas approximately two acres each in Unit II designated in application Log No. 1996-169, in the amount estimated to be needed within the next construction season, provided they are managed in accordance with 35 Ill. Adm. Code 811.108(c)(1).

13. Equipment shall be maintained and available for use at the facility during all hours of operation to allow proper operation of the landfill. If breakdowns occur that would prevent proper facility operation, back-up equipment shall be brought into the site.

14. All utilities, including but not limited to heat, lights, power, communications equipment and sanitary facilities necessary for safe, efficient and proper operation of the landfill shall be available at the facility at all times.

15. Open burning at this facility is prohibited except in accordance with 35 Ill. Adm. Code, 200 through 245.

16. The operator shall implement methods for controlling dust so as to prevent wind dispersal of particulate matter off-site.

17 The facility shall be constructed and operated to minimize the level of equipment noise audible outside the facility. The facility shall not cause or contribute to a violation of 35 Ill. Adm. Code, 900 through 905.

18. The operator shall implement measures to control the population of disease and nuisance vectors.

19. The operator shall institute fire protection measures in accordance with the proposed fire safety plan.

20. The facility shall implement methods to prevent tracking of mud by hauling vehicles onto public roadways.

21. Access to the open face area and all other areas within the boundaries of the facility shall be controlled by use of fences, gates and natural barriers to prevent unauthorized entry at all times.

22. A permanent sign shall be maintained at the facility entrance containing the information required under 35 Ill. Adm. Code 811.109(b)(1-5).

23. Waste shall be deposited at the toe of the fill face and compacted upward into the fill face unless precluded by extreme weather conditions or for reasons of safety.

24. All areas with intermediate cover shall be graded so as to facilitate drainage of runoff and minimize infiltration and standing water. The grade and thickness of intermediate cover shall be maintained until the placement of additional waste or the final cover.

25. No later than 60 days after placement of the final lift of waste in any area, the area shall receive a final cover system meeting the design specifications approved in this permit application. The low permeability layer:

    a. for Unit I disposal areas not covered and vegetated by September 18, 1990, shall consist of a three foot thick soil layer exhibiting a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec, and shall be constructed in accordance with 35 Ill. Adm. Code 811.314(b)(3)(A). The low permeability layer shall be tied into the perimeter berm.

    b. for Unit II, shall consist of a low permeability soil layer overlain by a 40 mil linear low density polyethylene geomembrance, and shall be constructed in accordance with 35 Ill. Adm. Code 811.314(b)(3)(B) and 811.314(b)(4).

    The final protective layer shall consist of a three foot soil and vegetative layer at a minimum, the top six inches of the protective soil must be capable of supporting vegetation. The total thickness of the final protective layer shall not be less than three feet.

    Immediately after measures have been taken to establish vegetation on top of the protective layer in a given area, the final cover system in that area shall be inspected and maintained in accordance with 35 Ill. Adm. Code 811.111(c)(1)(A), (c)(2), (c)(3), (c)(4), and (c)(5).

26. The Unit II bottom liner shall consist of a three-foot thick composite liner consisting of a 60 mil HDPE geomembrane over a compacted clay soil layer with a maximum hydraulic conductivity of 1×10^{-7} cm/sec. A one foot thick granular

drainage blanket shall be placed above the composite liner. The composite base liner and drainage blanket shall be extended up the side walls.

27. This permit approves construction and operation of a revised weigh in scale, gate house and entrance layout at the landfill in accordance with the application and plans submitted in application Log No. 1996-169 dated May 10, 1996.

28. Municipal Solid Waste may be unloaded from small vehicles into courtesy boxes at the citizen drop-off area in accordance with the application and plans submitted in application Log No. 1996-169 dated May 10, 1996 provided: all waste loads are at a minimum visually inspected by the scale house attendant for acceptance; the waste is removed from all courtesy boxes at the end of each day or covered if stored overnight and removed the following day; and the area is inspected daily to ensure all litter has been contained.

29. The base grades in Unit II, Phase 2, cells 3 through 7 shall be constructed to meet the design grades of Unit II, Phase 1, cells 3 through 7, all in accordance with the plans and specifications submitted in application Log No. 1999-001, dated January 6, 1999 and April 8, 1999. Base grades in the redesign area shall be sloped at a minimum of 0.5% toward the north, connected with Unit II, Phase 1 cells at design grades and the leachate collection system tied into the Unit II, Phase 1 cell system. Waste disposal volume shall not be increased. Base grades shall be raised along the south side of Unit II and Unit II, Phase 2, cell 7 to counter the air space gained through removal of the soil berm between Unit II, Phase 1 and Phase 2. Leachate cleanout risers along the south side of Unit II, shall be extended above the final cover over the unit.

30. If blasting is used in construction of Unit II cells, peak particle velocities, ground vibration and air blast level shall be monitored during each blast using seismic monitoring equipment and noise level monitoring devices designed for blast monitoring. A report of the blast operation and monitoring data from construction of each area or cell shall be documented and included in any request for Operating Authorization of such area or cell. A blast monitoring report shall include a description of the area blasted, a description of the event(s), a summary of the ground vibrations particle velocities and air blast levels recorded during each blast event, an assessment of compliance with the proposed ground vibration and noise level limitations and any impact detected on landfill slopes or ground subsidence. For any measured ground acceleration greater than one inch per second at a nearby structure, the operator shall provide documentation that slope safety factors are acceptable under the blasting conditions imposed and recalculate the charge weight per delay to reduce impacts to within proposed limits. Blasting shall be limited to the approximate 41 acre area displayed in Figure 1 Blasting Location Plan of application Log No. 1999-159 and the 12.5 acre area displayed in Figure 1 Blasting Location Plan of application Log No. 2001-385.

31. Excavation of railroad ties located beneath and in the area surrounding Cell 4D shall proceed in accordance with Application Log No. 2004-029 and with the requirements listed below:

    a. Leachate monitoring point L-107 shall be installed as described in Application Log No. 2004-029 prior to excavation activities. The point shall be monitored prior to construction and on a daily basis during construction activities. If at any time leachate elevation exceeds 614 feet MSL, then construction shall cease immediately.

    b. If leachate level at monitoring point L-107 exceeds 614 feet MSL and use of the existing leachate collection system is unsuccessful in lowering the level, then a permit application proposing a new method for removing leachate in this area shall be submitted prior to any additional excavation.

III. SPECIAL WASTE

A. Disposal of Special Waste

1 This facility is authorized to accept non-hazardous special waste that meets the definition of industrial process waste or pollution control waste as found in Section 3.235 and 3.335, respectively, of the Illinois Environmental Protection Act.

    a. The special waste may only be delivered by an Illinois licensed special waste hauler or an exempt hauler as defined in 35 Ill. Adm. Code 809.211; and

    b. The special waste must be accompanied by a manifest as specified below.

    c. No new special waste may be disposed in Unit I.

2. The permittee shall obtain a completed Special Waste Preacceptance form and a preacceptance analysis from each generator. In addition, the annual generator recertification form, which certifies the waste has not changed since the last analysis, must be completed and included in the operating record. A complete lab analysis must be provided with the exceptions listed below. Analysis shall be conducted using SW-846 test methods. The waste shall be reanalyzed at least every five years and must identify the actual concentration of each chemical constituent and state of each physical parameter. In all cases a copy of the lab analysis (on lab

letterhead and signed by a responsible party such as the person conducting the analysis or his supervisor) must be included in the operating record with the generator's certification. The analysis may not be greater than one year old at the time. A new analysis is required if the composition of the waste changes (normal variations in waste composition are expected and are not included in this requirement). All waste must be analyzed as follows:

a. The waste generator shall conduct the following lab analyses to determine the concentrations of the following parameters:

Paint Filter Test
Phenol (total)
Toxicity Characteristic Constituents

b. For any waste streams containing a liquid phase(s) (fails paint filter), each phase must be analyzed for total organic halogen (TOX) using the test method specified in 35 Ill. Adm. Code 729. Any waste containing 10,000 PPM or greater of TOX must be analyzed to determine the specific constituents, and their concentrations, that make up TOX. These constituents and their concentration should be reported on the lab analysis report. Any liquid containing multiple phases must include individual analyses for each phase.

c. The generator shall provide a signed and dated statement that each waste is not corrosive. If generator knowledge is not adequate, then USEPA Method 9045 shall be used to test for pH.

d. The generator shall provide a signed and dated statement that each waste is not ignitable. If generator knowledge is not adequate, then SW-846 Method 1030 shall be used to determine ignitability.

e. Analysis for total sulfide and/or cyanide may be used to determine the characteristic of reactivity. If reactive concentrations are less than or equal to 10 ppm, then the waste can be considered non-hazardous. If the concentrations are greater than 10 ppm, or if the generator chooses not to perform the test, then the permittee shall not accept the waste unless the generator provides a signed and dated statement indicating that none of the following have occurred:

1. The waste has never caused injury to a worker because of H2S and/or HCN generation;

2. That the OSHA work place air concentration limits for H2S and/or HCN have not been exceeded in areas where the waste is generated stored or otherwise handled; or

3. That air concentrations of H2S and/or HCN, above 10 ppm, have not been encountered in areas where the waste is generated, storage or otherwise handled.

f. The generator shall conduct analysis for phenols. If the total phenol concentration is greater than 1000 ppm, the waste will be required to be drummed and labeled, unless justification that this precaution is not necessary is provided. The justification must demonstrate skin contact is unlikely during transport or disposal.

g. The generator shall conduct metals and organics analysis utilizing either total or TCLP procedures but any constituent, whose total concentration exceeds the TCLP limit specified in 35 Ill. Adm. Code 721.124 must be analyzed using the TCLP test and the results reported, unless an alternative test has been approved by the Illinois EPA. TCLP test methods must be in accordance with SW 846-1311.

h. EXCEPTIONS:

1. The generator may certify that the eight pesticides (D012, D013, D014, D015, D016, D017, D020 and D031) would not reasonably be expected to be present in their waste based on the nature of the generator's business, the certification statement is reasonable.

2. Petroleum contaminated media and debris from LUST sites are temporarily exempt from full TCLP analysis and the generator may limit analyses to flashpoint, paint filter test and TCLP lead.

i. CLARIFICATIONS:

Notwithstanding the exception for manufactured gas plant waste contained in 35 IAC 721.124(a), no manufactured gas plant waste shall be disposed in a non-hazardous waste landfill, unless: i) the waste has been tested in accordance with subsection (e) of this special condition, and ii) the analysis has demonstrated that the

waste does not exceed the regulatory levels for any contaminant given in the table contained in 35 IAC 721.124(b).

j. Pursuant to 35 IAC 722.111 the generator of a solid waste is required to determine if the waste is hazardous and comply with all applicable hazardous waste regulations. For any waste that has been determined to be hazardous, the results of quality assurance testing for the treatment program, taken at an appropriate frequency to demonstrate the waste is no longer hazardous, must be obtained. Verification that the waste meets the land disposal restrictions must also be documented. These requirements are in addition to the other standard special waste test requirements.

3. An individual waste stream permit is no longer required by the Illinois EPA for this facility. Therefore, a waste stream permit number will no longer be required on the manifest when shipping waste to this facility as authorized by this permit.

4. Special waste, generated due to an emergency situation, may be disposed without full TCLP analysis if:

   a. The disposal facility ensures that the generator has received an incident number from the Illinois Emergency Management Agency at 1/800/782-7860 within Illinois or 1/217/782-7860 outside of Illinois and,

   b. The disposal facility receives authorization from the Emergency Response Unit at 1/217/782-3637 and,

   c. The waste is analyzed for the chemical constituents required by the Illinois EPA.

5. The Permittee shall conduct the following review for waste received in labeled containers and lab packs including any commingled wastes:

   a. Compatibility review in accordance with the procedures identified in USEPA document EPA-600/2-80-076.

   b. MSDS review to determine the hazardous constituents present and appropriate USEPA hazardous waste class.

6. RCRA empty containers received as a special waste are subject to conditions which state:

a. Containers have a rated capacity of less than 110 gallons only.

b. Containers which formerly held 'P' listed hazardous waste or TSCA regulated quantities of PCBs or empty compressed gas cylinders are not included under this permit.

c. All containers must meet the definition of empty as described in 35 IAC, Section 721.107(b).

d. Additionally, where possible, a copy of the material safety data sheets for products last contained will be obtained and kept on file.

e. For drums, at least one end must be removed and the drums must be crushed flat.

7. The Special Waste Preacceptance Form shall be utilized for the special waste profile identification requirements of 35 IAC 811.404(a).

8. The Annual Generator Recertification Form for Disposal of Special Waste shall be utilized for the special waste recertification requirements of 35 IAC 811.404(b).

9. The operator shall retain all special waste records until the end of the post-closure period in accordance with 35 IAC 811.405.

10. Each special waste disposed of at the facility shall be accompanied by a special waste profile identification sheet from the waste generator meeting the requirements of 35 Ill. Adm. Code 811.404(a)(1-10). Each subsequent shipment of a special waste from the same generator must be accompanied by a copy of the original special waste profile identification sheet and certification where there have been changes: in the laboratory analysis, raw material in the waste generating process; the waste generating process, the physical or hazardous characteristics of the waste, and new information on the human health effects of exposure to the waste; or certification indicating that any change in the physical or hazardous characteristics of the waste is not sufficient to require a new special waste profile.

B. Solidification of Special Waste

1. Waste solidification shall take place in a mixing chamber equipped with secondary containment systems equivalent to the protection provided by a five (5) foot thick clay liner having a permeability no greater than 1×10^{-7} cm/sec or; leakproof, inspectable containers placed over the area of the

landfill that has both a certified liner and an operating leachate collection system.

2. All special waste generators which send liquid waste to this facility for treatment and disposal must have an Illinois EPA generator number.

3. Only non-hazardous wastes as defined in 35 IAC 722.111 may be received for treatment at this facility.

4. This permit approves the use of the following reagents and absorbents in the solidification process:

   a. Reagents

      1. Cement kiln dust

      2. Lime kiln dust

      3. Portland cement

      4. Lime

      5. Coal combustion bottom ash/fly ash

      6. Paper sludges

   b. Absorbents

      1. Soil

      2. Petroleum contaminated soil (to be used only if waste has a $5 \leq pH \leq 9$)

      3. Sand

      4. Foundry sand

      5. Oil dry

      6. Sawdust

      7. Kitty litter

      8. Corn cobs

9. Straw

10. Diapers (ground up-off specification)

11. Blasting sand grit

All reagents and absorbents used must not exhibit any characteristic which would classify it as a hazardous waste. Use of other materials other than the above list shall be subject to Illinois EPA approval by permit process.

5. The following conditions are applicable to any waste stream containing a liquid phase(s) (fails paint filter):

   i. Each phase must be analyzed for total organic halogen (TOX) using the test method specified in 35 IAC, Part 729. Any waste containing 10,000 ppm or greater of TOX must be analyzed to determine the specific constituents, and their concentrations, that make up TOX. These constituents and their concentration should be reported on the lab analysis report. Any liquid containing multiple phases must include individual analyses for each phase.

   ii. The preacceptance documentation must include a description of the solidification method used at the generating site (or off-site permitted treatment facility) with test results demonstrating that the solidified waste passes the paint filter test.

   iii. If a waste is used to solidify the liquid (i.e., two or more wastes are mixed) all required testing must be performed on the solidified product. Otherwise, all testing (except paint filter) may be performed on the waste before solidification and a statement from the generator may be accepted certifying that the additives used have been evaluated and there is no reason to believe they would cause the waste to become hazardous.

6. The permittee shall not perform solidification if the test of waste analysis plan determines incompatibility of the waste and reagent.

7. The following information shall be documented in the facility's operating record for each load of waste received for solidification:

   a. Date the load was received;

b. Manifest number associated with the waste load;

c. Waste name;

d. Volume of waste received;

e. Generator name, location and IEPA generator number or hauler number, if not a special waste;

f. Results of all analysis conducted on the load of waste;

g. Type of reagent and/or absorbent used to solidify the waste;

h. Documentation that the (treated/mixed) waste does not exhibit hazardous characteristics as defined in 35 IAC 721 Subpart C, e.g., result of the compatibility test done in accordance with the facility's waste analysis plan.

8. Each load of the solidified waste shall be sampled and tested by the paint filter test described in 35 IAC 729.320 prior to disposal. No waste that yields fluid may be disposed.

9. A complete TCLP analysis shall be performed on solidified waste resulting from a liquid waste with a pH $\leq$5 to demonstrate that no hazardous waste has been produced.

10. By the end of each day of the operation, all waste received for treatment shall be solidified, removed from the solidification unit and disposed of at the active face of the landfill.

11. This permit allows the storage of reagents and absorbents to be used in the solidification process for a period of up to 21 days. However, storage shall not contribute to a violation of the Illinois Environmental Protection Act.

12. Reagents and absorbent shall be stored covered and protected from precipitation events. If reagent or absorbent comes in contact with precipitation and performance is negatively impacted, the reagent or absorbent shall be disposed of on the active face of the landfill.

13. All wash water generated from the solidification unit shall be managed in the same manner as leachate.

14. The solidification unit may be operated from 2:00 a.m. to 10:00 p.m. Monday through Saturday.

15. In the event of a spill, such materials and equipment necessary must be available on site in order to prevent leachate migration from the contaminated area.

16. Uncontaminated soil and sand are not considered waste. Portland cement, lime, and unused oil dry purchased for solidification are also not considered waste. All other solidification reagents and absorbents listed in Condition No. III.B.4 are considered waste and must be managed as such, unless approved for their use as solidification agents has been obtained through one of the beneficial use determination (BUD) processes described in Sections 3.135 and 22.54.

IV. RECORDKEEPING

1. Information developed by the operator, but not yet forwarded to the Illinois EPA in a quarterly or annual report shall be kept at or near the facility for inspection by the Illinois EPA upon request during normal working hours.

2. Information and observations derived from load checking inspections shall be recorded in writing and retained at the facility for at least 3 years.

3. Every person who delivers special waste to a special waste hauler, every person who accepts special waste from a special waste hauler and every special waste hauler shall retain a copy of the special waste transportation record as a record of each special waste transaction. These copies shall be retained for 3 years and shall be made available at reasonable times for inspection and photocopying by the Illinois EPA pursuant to Section 4(d) of the Environmental Protection Act (Act).

4. The operator of the solid waste management facility shall retain copies of any special waste profile identification sheets, special waste recertifications, certifications of representative samples, special waste laboratory analyses, special waste analysis plans, and any waivers of requirements, at the facility until the end of the closure period and thereafter at the Site Office until the end of the post-closure care period.

5. Inspections of the closed landfill shall be conducted in accordance with the approved post-closure care plan. Records of field investigations, inspections, sampling and corrective action taken are to be maintained at the site and made

available to Illinois EPA personnel. During the post-closure care period, those records are to be maintained at the office of the site operator.

6. The owner or operator shall record and retain near the facility in an operating record or in some alternative location specified by the Illinois EPA, the information submitted to the Illinois EPA pursuant to 35 Ill. Adm. Code 812 and 813, as it becomes available. At a minimum, the operating record shall contain the following information, even if such information is not required by 35 Ill. Adm. Code 812 or 813:

   a. Any location restriction demonstration required by Section 811.302 and 35 Ill. Adm. Code 812.109, 812.110, 812.303 and 812.305;

   b. Inspection records, training procedures, and notification procedures required by Section 811.323;

   c. Gas monitoring results and any remediation plans required by Sections 811.310 and 811.311;

   d. Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit required by Section 811.107(m);

   e. Any demonstration, certification, monitoring results, testing, or analytical data relating to the groundwater monitoring program required by Sections 811.319, 811.324, 811.325, 811.326, 812.317, 813.501 and 813.502;

   f. Closure and post-closure care plans and any monitoring, testing, or analytical data required by Sections 811.110, 811.111, 812.114(h), 812.115 and 812.313; and

   g. Any cost estimates and financial assurance documentation required by Subpart G of 35 Ill. Adm. Code Part 811.

V. GENERAL CONDITIONS

1. This permit is issued with the expressed understanding that no process waste water discharge to the Waters of the State or to a sanitary sewer will occur from these facilities except as authorized by a permit issued by the Bureau of Water, Division of Water Pollution Control.

2. It should be noted that the issuance of this permit does not relieve the Permittee of the responsibility of complying with the provisions of the State of Illinois Rules and Regulations, 35 IAC, Subtitle B, Air Pollution Control, Chapter 1. The

Illinois EPA's - Bureau of Air - Division of Air Pollution Control has determined that this project requires both a Construction and Operating permit in accordance with 35 IAC Section 201. If you have any questions regarding this requirement, contact the Illinois EPA's - Bureau of Air - Division of Air Pollution Control Permit Section at 217/782-2113.

3. If changes occur which modify any of the information the Permittee has used in obtaining a permit for this facility, the Permittee shall notify the Illinois EPA. Such changes would include but not be limited to any changes in the names or addresses of both beneficial and legal titleholders to the herein-permitted site. The notification shall be submitted to the Illinois EPA within fifteen (15) days of the change and shall include the name or names of any parties in interest and the address of their place of abode; or, if a corporation, the name and address of its registered agent.

4. Pursuant to 35 Ill. Adm. Code, 813.201(a), any modifications to this permit shall be proposed in the form of a permit application and submitted to the Illinois EPA.

5. Any application for renewal of a permit shall be filed with the Illinois EPA at least 90 days prior to the expiration date of the existing permit.

   Application Log No. 2010-025 has been submitted in response to this requirement, was timely filed, and is currently due for final action on or before August 26, 2014.

6. This facility shall have on its operating staff a Class A Solid Waste Site Operator certified by the Illinois EPA pursuant to the Solid Waste Site Operator Certification Law (P.A. 86-1363, Art. 1, Section 1001, effective September 7, 1990). The chief operator shall maintain prior conduct certification pursuant to 35 Ill. Adm. Code 745.101(b).

7. The Illinois EPA shall revise any permit issued by it to make the permit compatible with any relevant new regulations adopted by the Board.

8. The Illinois EPA reserves the right to require installation of additional monitoring devices, to alter the selection of parameters to be analyzed, to modify the method of evaluating the monitoring results and to alter monitoring frequencies as may be necessary to fulfill the intent of the Act.

9. This permit is subject to review and modification by the Illinois EPA as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act, and all applicable environmental rules and regulations.

10. The owner or operator shall comply with any other applicable Federal rules, laws, regulations, or other requirements.

11. Effective upon issuance of Modification No. 60 (Log Nos. 2008-050 and 2008-099), the permittee(s) shall submit a certification and supporting documentation to demonstrate compliance with Section 39(i) of the Act within 30 days of any of the following events:

    a. The owner or officer of the owner, or operator, or any employee who has control over operating decisions regarding the facility has violated federal, State, or local laws, regulations, standards, or ordinances in the operation of waste management facilities or sites; or

    b. The owner or operator or officer of the owner, or operator, or any employee who has control over operating decisions regarding the facility has been convicted in this or another State of any crime which is a felony under the laws of this State, or conviction of a felony in a federal court; or

    c. The owner or operator or officer of the owner, or operator, or any employee who has control over operating decisions regarding this facility has committed an act of gross carelessness or incompetence in handling, storing, processing, transporting, or disposing of waste.

    d. A new person is associated with the owner or operator who can sign the application form(s) or who has control over operating decisions regarding the facility, such as corporate officer or a delegated employee.

VI. SURFACE WATER CONTROL

1. Runoff from disturbed areas to waters of the State shall be permitted by the Illinois EPA in accordance with 35 Ill. Adm. Code 309, and meet the requirements of 35 Ill. Adm. Code 304 unless permitted otherwise.

2. All surface water control structures other than temporary diversions for intermediate phases shall be operated until the final cover is placed and erosional stability is provided by the final protective layer of the final cover system.

3. Runoff from undisturbed areas resulting from precipitation events less than or equal to the 25 yr., 24-hour precipitation event shall be diverted around disturbed areas where possible and not commingled with runoff from disturbed areas.

4. Site surface drainage, during development, during operation and after the site is closed, shall be managed in accordance with the approved drainage control plan

detailed in Chapter 4 and Drawings D14-D16 of application Log No. 1994-419, and with modifications approved in Permit Application Log No. 2010-413. Stormwater management structures consisting of perimeter ditches and sediment basins shall be constructed prior to disturbing any portion of a drainage area identified on Drawing No. D14.

VII. LEACHATE MANAGEMENT/MONITORING

1. Pursuant to 35 IAC, Section 811.309(h)(3), leachate from this MSWLF landfill shall be collected and disposed beginning as soon as it is first produced and continuing for at least 30 years after closure except as otherwise provided by 811.309(h)(4) and (h)(5). Collection and disposal of leachate may cease only when the conditions described in 35 IAC, Section 811.309(h)(2) have been achieved. Leachate removed from this landfill shall be treated at an IEPA permitted facility in accordance with the leachate management plan proposed in Permit Application Log Nos.1994-419 and 1996-298.

2. Pursuant to 35 IAC, Sections 811.307(a) and (b), 811.308(a) and (h), and 811.309(a), leachate shall be pumped from the side slope riser sump(s) before the level of leachate rises above the invert of the collection pipe(s) at its lowest point(s). Additionally, Leachate levels in Unit II shall be maintained below one foot above the bottom composite liner. Leachate levels in Unit I shall be maintained to prevent buildup of three feet of head above the manhole invert. Leachate removal as such shall be performed throughout the period that the leachate collection/management system must be operated in accordance with 35 IAC, Section 811.309(h)(3).

3. The following monitoring points are to be used in the Leachate Monitoring Program for this facility:

Unit 1 Leachate Monitoring Points

Applicant Designation	Illinois EPA Designation
L101	L101
L102	L102
L103	L103
L104	L104

Unit 2 Leachate Monitoring Points

Applicant Designation	Illinois EPA Designation
L001	L001

Unit 2 Leachate Monitoring Points	
L002	L002
L003	L003
L004	L004
L005	L005
L006	L006
@L007	@L007

@ indicates leachate monitoring points not yet placed into service.

4. Pursuant to 35 IAC, Sections 811.309(g), 722.111 and 721, Subpart C, leachate monitoring (i.e., sampling, measurements and analysis) must be conducted in accordance with the permit for this facility. The concentrations or values for the parameters contained in List L1 (below) must be determined on a semi-annual basis and the results must be submitted with the groundwater reports.

   Condition VII.5 presents the sampling, testing and reporting schedules in tabular form. Leachate monitoring at each monitoring point shall continue as long as groundwater monitoring at this landfill is necessary pursuant to 35 IAC, Section 811.319(a)(1)(C).

LIST LI

Leachate Monitoring Parameters	STORET
pH (S.U.)	00400
Elevation Leachate Surface (ft. MSL)	71993
Bottom of Well Elevation (ft. MSL)	72020
Leachate Level from Measuring Point (ft.)	72109
Arsenic (total)	01002
Barium (total)	01007
Cadmium (total)	01027
Iron (total)	01045
Ammonia (as Nitrogen)(Dissolved)(mg/L)	00608
Bacteria (Fecal Coliform) (FCBR/100 mL)	31616
Biochemical Oxygen Demand (BOD5) (mg/L)	00310
1,1,1,2-Tetrachloroethane	77562
1,1,1-Trichloroethane	34506
1,1,2,2-Tetrachloroethane	34516
1,1,2-Trichloroethane	34511

LIST LI

Leachate Monitoring Parameters	STORET
1,1-Dichloroethane	34496
1,1-Dichloroethylene	34501
1,1-Dichloropropene	77168
1,2,3-Trichlorobenzene	77613
1,2,3-Trichloropropane	77443
1,2,4-Trichlorobenzene	34551
1,2,4-Trimethylbenzene	77222
1,2-Dibromo-3-Chloropropane	38760
1,2-Dichloroethane	34531
1,2-Dichloropropane	34541
1,3,5-Trimethylbenzene	77226
1,3-Dichloropropane	77173
1,3-Dichloropropene	34561
1,4-Dichloro-2-Butene	73547
1-Propanol	77018
2,2-Dichloropropane	77170
2,4,5-tp (Silvex)	39760
2,4,6-Trichlorophenol	34621
2,4-Dichlorophenol	34601
2,4-Dichlorophenoxyacetic Acid (2,4-D)	39730
2,4-Dimethylphenol	34606
2,4-Dinitrotoluene	34611
2,4-Dinitrophenol	34616
2,6-Dinitrotoluene	34626
2-Chloroethyl Vinyl Ether	34576
2-Chloronaphthalene	34581
2-Chlorophenol	34586
2-Hexanone	77103
2-Propanol (Isopropyl Alcohol)	81310
3,3-Dichlorobenzidine	34631
4,4-DDD	39310
4,4-DDE	39320
4,6-Dinitro-O-Cresol	34657
4-Bromophenyl Phenyl Ether	34636
4-Chlorophenyl Phenyl Ether	34641

LIST LI

Leachate Monitoring Parameters	STORET
4-Methyl-2-Pentanone	78133
4-Nitrophenol	34646
Acenaphthene	34205
Acetone	81552
Alachlor	77825
Aldicarb	39053
Aldrin	39330
Alpha – BHC	39337
Aluminum	01105
Anthracene	34220
Antimony	01097
Atrazine	39033
Benzene	34030
Benzo (a) Anthracene	34526
Benzo (a) Pyrene	34247
Benzo (b) Fluoranthene	34230
Benzo (ghi) Perylene	34521
Benzo (k) Fluoranthene	34242
Beryllium (total)	01012
Beta – BHC	39338
Bicarbonate (mg/L as CaCO3)	00425
Bis (2-Chloro-1-Methylethyl) Ether	73522
Bis (2-Chloroethoxy) Methane	34278
Bis (2-Chloroethyl) Ether	34273
Bis (2-Ethylhexyl) Phthalate	39100
Bis(Chloromethyl) Ether	34268
Boron	01022
Bromobenzene	81555
Bromochloromethane	77297
Bromodichloromethane	32101
Bromoform	32104
Bromomethane	34413
Butanol	45265
Butyl Benzyl Phthalate	34292
Calcium (mg/L)	00916

LIST LI

Leachate Monitoring Parameters	STORET
Carbofuran	81405
Carbon Disulfide	77041
Carbon Tetrachloride	32102
Chemical Oxygen Demand (COD) (mg/L)	00335
Chlordane	39350
Chloride (mg/L)	00940
Chlorobenzene	34301
Chloroethane	34311
Chloroform	32106
Chloromethane	34418
Chromium (total)	01034
Chrysene	34320
Cis-1,2-Dichloroethylene	77093
Cis-1,2-Dichloropropene	34704
Cobalt (total)	01037
Copper (total)	01042
Cyanide (mg/L)	00720
DDT	39370
Delta – BHC	46323
Di-N-Butyl Phthalate	39110
Di-N-Octyl Phthalate	34596
Dibenzo (a,h) Anthracene	34556
Dibromochloromethane (Chlorodibromomethane)	32105
Dibromomethane	77596
Dichlorodifluoromethane	34668
Dichloromethane	34423
Dieldrin	39380
Diethyl Phthalate	34336
Dimethyl Phthalate	34341
Endosulfan I	34361
Endosulfan II	34356
Endosulfan Sulfate	34351
Endrin	39390
Endrin Aldehyde	34366
Ethyl Acetate	81585

LIST LI

Leachate Monitoring Parameters	STORET
Ethylbenzene	78113
Ethylene Dibromide (EDB)	77651
Fluoranthene	34376
Flourene	34381
Fluoride (mg/L)	00951
Heptachlor Epoxide	39420
Heptachlor	39410
Hexachlorobenzene	39700
Hexachlorobutadiene	39702
Hexachlorocyclopentadiene	34386
Hexachloroethane	34396
Ideno (1,2,3-cd) Pyrene	34403
Iodomethane	77424
Isopropylbenzene	77223
Lead (total)	01051
Lindane	39782
Magnesium (total) (mg/L)	00927
Manganese (total)	01055
Mercury (total)	71900
Methoxychlor	39480
Methyl Ethyl Ketone (2-Butanone)	81595
Naphthalene	34696
Nickel (total)	01067
Nitrate-Nitrogen (mg/L)	00620
Nitrobenzene	34447
Oil. Hexane Soluble (or Equivalent) (mg/L)	00550
Parathion	39540
Pentachlorophenol	39032
Phenanthrene	34461
Phenols	32730
Phosphorous (mg/L)	00665
Polychlorinated Biphenyls	39516
Potassium (mg/L)	00937
Pyrene	34469
Selenium	01147

LIST LI

Leachate Monitoring Parameters	STORET
Silver (total)	01077
Specific Conductance (umhos/cm)	00094
Sodium (mg/L)	00929
Styrene	77128
Sulfate (mg/L)	00945
Temperature of Leachate Sample (°F)	00011
Tert-Butylbenzene	77353
Tetrachlorodibenzo-p-Dixoins	34675
Tetrachloroethylene	34475
Tetrahydrofuran	81607
Thallium	01059
Tin	01102
Toluene	34010
Total Organic Carbon (TOC) (mg/L)	00680
Total Dissolved Solids (TDS) (mg/L)	70300
Total Suspended Solids (TSS) (mg/L)	00530
Toxaphene	39400
Trans-1,2-Dichloroethylene	34546
Trans-1,3-Dichlorpropene	34699
Trans-1,4-Dichloro-2-Butene	49263
Trichloroethylene	39180
Trichlorofluoromethane	34488
Vinyl Acetate	77057
Vinyl Chloride	39175
Xylene	81551
Zinc (total)	01092
m-Dichlorobenzene	34566
m+p-Xylene	61283
n-Butylbenzene	77342
n-Nitrosodimethylamine	34438
n-Nitrosodiphenylamine	34433
n-Nitrosodipropylamine	34428
n-Propylbenzene	77224
o-Chlorotoluene	77275
o-Dichlorobenzene	34536

LIST LI

Leachate Monitoring Parameters	STORET
o-Nitrophenol	34591
o-Xylene	77135
p-Chlorotoluene	77277
p-Cresol	77146
p-Dichlorobenzene	34571
p-Isopropyltoluene	77356
sec-Butylbenzene	77350

Notes for all leachate monitoring parameters:

a. The test methods for leachate monitoring shall be those approved in the USEPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), Third Edition or the equivalent thereof.

b. All parameters shall be determined from unfiltered samples.

c. The monitoring results should be reported in ug/l units unless otherwise indicated.

5. The schedule for leachate sample collection and submission of monitoring data is illustrated below:

Unit 1 Leachate Monitoring Schedule

Sampling Period	Sampling Points	Lists	Report Due Date
April-May 2012	L101	L1	July 15, 2012
Oct-Nov 2012	L102	L1	January 15, 2013
April-May 2013	L103	L1	July 15, 2013
Oct-Nov 2013	L104	L1	January 15, 2014
April-May 2014	L101	L1	July 15, 2014
Oct-Nov 2014	L102	L1	January 15, 2015
April-May 2015	L103	L1	July 15, 2015
Oct-Nov 2015	L104	L1	January 15, 2016
April-May 2016	L101	L1	July 15, 2016
Oct-Nov 2016	L102	L1	January 15, 2017

Unit 2 Leachate Monitoring Schedule

Sampling Period	Sampling Points	Lists	Report Due Date
April-May 2012	L001 and L005	L1	July 15, 2012
Oct-Nov 2012	L002 and L006	L1	January 15, 2013
April-May 2013	L003	L1	July 15, 2013
Oct-Nov 2013	L004	L1	January 15, 2014
April-May 2014	L001 and L005	L1	July 15, 2014
Oct-Nov 2014	L002 and L006	L1	January 15, 2015
April-May 2015	L003	L1	July 15, 2015
Oct-Nov 2015	L004	L1	January 15, 2016
April-May 2016	L001 and L005	L1	July 15, 2016
Oct-Nov 2016	L002 and L006	L1	January 15, 2017

L1 - Leachate Monitoring Parameters

6. The leachate monitoring data must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted as found at www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html.

7. The leachate storage and disposal system consists of an aboveground storage tank (22,000 gal.) with gravity drain to an existing sanitary force main to convey leachate to the Danville Sanitary District sewage treatment plant via a tributary sewer. Construction and development was determined to be in accordance with design plans submitted in application Log No. 1996-298 by the issuance of Operating Authorization under Modification No. 12 (Log No. 1997-430). Operating Authorization was granted for the leachate storage and discharge system located east of Unit II, Phase 1, Cell 1 as described and documented in Application Log No. 1997-430 dated December 22, 1997 and February 10, 1998 and record drawings No.'s CQA-1 through CQA-4 dated November 26, 1997 showing the as-built design and the limits of construction.

8. Leachate shall be allowed to flow freely from the drainage and collection system. The operator is responsible for the operation of a leachate management system designed to handle all leachate as it drains from the collection system. Leachate clean outs shall be inspected annually to check for possible blockage or sediment buildup.

9. The leachate storage facility must be able to store a minimum of at least five days worth of accumulated leachate (estimated 16,000 gal.) during extreme precipitation conditions.

10. All leachate storage tanks shall be double-walled tanks or equipped with secondary containment systems equivalent to the protection provided by a clay liner two feet thick having a permeability no greater than 1×10^{-7} centimeters per second.

11. The leachate storage system shall not cause or contribute to a malodor.

12. The leachate drainage and collection system shall not be used for the purpose of storing leachate.

13. Leachate may be recirculated into Unit II at a rate that will not exceed the moisture holding capacity of the waste mass in accordance with 35 Ill. Adm. Code 811.309(f)(3). Introduction of leachate back into the waste may be conducted by application at the active face and by way of horizontal perforated pipes set in trenches back filled with previous material, that are placed between lifts of solid waste. Leachate may be recirculated by way of horizontal trenches when active landfill gas collection is being provided for the recirculation area. A series of leachate distribution trenches approximately every 40 vertical feet and with a horizontal spacing of approximately 200 feet will be constructed during waste filling in Unit II. The trench distribution system for leachate may be pressure or gravity flow. Pressure shall be limited to prevent seeps through the waste over the trench. A minimum of 50 feet of solid pipe shall be used in leachate distribution trenches at landfill sidewalls, extending for the first 50 feet into the waste, to prevent sidewall seeps. Recirculation may occur via a force main, a tank truck or a flexible hose connected between a side slope riser leachate sump pump and recirculation trench. Connections to each horizontal trench shall be capped when not connected to the leachate recirculation system to prevent any outside air intrusion. The flow of leachate recirculated into the landfill shall be monitored continuously and the summarized data reported in the annual report.

14. All monitoring points shall be maintained in accordance with the approved permit application such that the required samples and measurements may be obtained.

VIII. GROUNDWATER MONITORING

1. A separation berm shall be maintained between Unit I and Unit II which will allow independent groundwater monitoring. There are currently 16 groundwater monitoring wells, 8 piezometers, and 4 leachate monitoring points for Unit I. Three additional nested wells, G34S/D through G36S/D will be installed during Unit II development. Unit II will be monitored with 33 groundwater monitoring wells, 35 piezometers, and 7 leachate monitoring points. The monitoring program for Unit II includes phasing the installation and abandonment of monitoring wells and piezometers.

2. Piezometers shall be installed in the locations shown in Exhibit 1 dated June 6, 1994 of Log No. 1994-419, monitored and operated in accordance with the groundwater monitoring requirements in Section VIII of this permit and the plans submitted and approved.

A. UNIT I

1. The groundwater monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect, from all potential sources of discharge, any releases to groundwater within the facility. The Illinois EPA reserves the right to require installation of additional monitoring wells as may be necessary to satisfy the requirements of this permit.

2. All groundwater monitoring wells shall be constructed and maintained in accordance with the requirements of 35 Ill. Adm. Code, 811.318(d) and designs approved by the Illinois EPA. All wells added to the groundwater monitoring program pursuant to this permit shall be constructed of stainless steel within the saturated zone or similar inert material pre-approved by the Illinois EPA.

3. Within 60 days of installation of any groundwater monitoring well, boring logs compiled by a qualified geologist, well development data and as-built diagrams shall be submitted to the Illinois EPA utilizing the enclosed "Well Completion Report" form. For each well installed pursuant to this permit, one form must be completed.

4. Groundwater monitoring wells shall be easily visible, labeled with the Illinois EPA monitoring point designations and fitted with padlocked protective covers.

5. In the event that any well becomes consistently dry or unserviceable and therefore requires replacement, a replacement well shall be installed within ten (10) feet of the existing well. The Illinois EPA shall be notified in writing at least 15 days prior to the installation of all replacement wells. A replacement well that is more than ten feet from the existing well or which does not monitor the same geologic zone is considered to be a new well and must be approved via a significant modification permit.

6. All drill holes, including exploration borings that are not converted into monitoring wells and monitoring wells that are no longer necessary to the operation of the site, shall be abandoned in accordance with the standards in 35 Ill. Adm. Code, 811.316 and the decommissioning and reporting procedures contained in the Illinois Department of Public Health's Water Well Construction Code, 77 IAC, Part 920 (effective 1/1/92). In the event that specific guidance is not provided by IDPH procedures, the enclosed Illinois EPA monitoring well

plugging procedures shall be followed. This information shall be entered into the facility operating record.

7. Elevation of stick-up is to be surveyed and reported to the Illinois EPA:

   a. When the well is installed (with the as-built diagrams),

   b. Every two years thereafter, or

   c. Whenever there is reason to believe that the elevation has changed.

8. Groundwater sampling and analysis shall be performed in accordance with the requirements of 35 Ill. Adm. Code 811.318(e) and the specific procedures and methods approved by the Illinois EPA.

9. Background groundwater water quality has been determined using upgradient well(s) R103 (sand/till), G130 (coal), G133 (coal), and G134 (coal). Background shall be established over four (4) consecutive quarters for pH and all parameters in List G1 and G2.

   The background values for all constituents, listed in G1 and G2 have been calculated using a minimum of four (4) consecutive quarters of groundwater monitoring data and employing the statistical method described in Condition VIII.A.8 of this section.

LIST G (Groundwater)

GROUNDWATER MONITORING PARAMETER	STORETS
Elevation of Bottom of Well (ft. MSL) (Annually without dedicated pumps; every 5 years with dedicated pumps or whenever the pump is pulled)	72020

LIST G1 (Groundwater - Quarterly)

FIELD PARAMETERS	STORETS
pH	00400
Specific Conductance	00094
Temperature of Water Sample (°F)	00011
Depth to Water (ft. below land surface)	72019
Depth to Water (ft. below measuring point)	72109
Elevation of Measuring Point (Top of	

casing ft. MSL)	72110
Elevation of Groundwater Surface (ft. MSL)	71993
Ammonia (as Nitrogen; Dissolved) mg/L	00608
Arsenic (Dissolved) ug/L	01000
Boron (Dissolved) ug/L	01020
Cadmium (Dissolved) ug/L	01025
Chloride (Dissolved) mg/L	00941
Chromium (Dissolved) ug/L	01030
Cyanide (Total) mg/L	00720
Lead (Dissolved) ug/L	01049
Magnesium (Dissolved) mg/L	00925
Mercury (Dissolved) ug/L	71890
Nitrate (as Nitrogen, Dissolved) mg/L	00618
Sulfate (Dissolved) mg/L	00946
Total Dissolved Solids (TDS, 180°C; Dissolved) mg/L	70300
Zinc (Dissolved) ug/L	01090

NOTE:

i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.

ii. Monitoring results should be reported in ug/L units unless otherwise indicated.

iii. Intrawell values for Coal Unit monitoring are included in Attachment 3.

iv. List G1 and List G2 background values are included in Attachment 4

LIST G2 (Groundwater - Semiannual)

PARAMETERS (ug/L)	STORETS
Acetone	81552
Acrylonitrile	34215
Benzene	34030
Bromobenzene	81555
Bromochloromethane (chlorobromomethane)	77297
Bromodichloromethane	32101
Bromoform (Tribromomethane)	32104
n-Butylbenzene	77342
sec-Butylbenzene	77350
tert-Butylbenzene	77353

Carbon Disulfide	77041
Carbon Tetrachloride	32102
Chlorobenzene	34301
Chloroethane (Ethyl Chloride)	34311
Chloroform (Trichloromethane)	32106
o-Chlorotoluene	77275
p-Chlorotoluene	77277
Dibromochloromethane	32105
1,2-Dibromo-3-Chloropropane	38760
1,2-Dibromoethane	77651
1,2-Dichlorobenzene	34536
1,3-Dichlorobenzene	34566
1,4-Dichlorobenzene	34571
trans-1,4-Dichloro-2-Butene	49263
Dichlorodifluoromethane	34668
1,1-Dichloroethane	34496
1,2-Dichloroethane	34531
1,1-Dichloroethylene	34501
cis-1,2-Dichloroethylene	77093
trans-1,2-Dichloroethylene	34546
1,2-Dichloropropane	34541
1,3-Dichloropropane	77173
2,2-Dichloropropane	77170
1,1-Dichloropropene	77168
1,3-Dichloropropene	34561
cis-1,3-Dichloropropene	34704
trans-1,3-Dichloropropene	34699
Ethylbenzene	78113
Hexachlorobutadiene	39702
2-Hexanone (Methyl Butyl Ketone)	77103
Isopropylbenzene	77223
p-Isopropyltoluene	77356
Methyl Bromide (Bromomethane)	34413
Methyl Chloride (Chloromethane)	34418
Methylene Bromide (Dibromomethane)	77596
Dichloromethane	34423
Methyl Ethyl Ketone	81595
Methyl Iodide (Iodomethane)	77424
4-Methyl-2-Pentanone	78133
Naphthalene	34696
Oil (Hexane-Soluble) (mg/L)	00550
n-Propylbenzene	77224
Styrene	77128
1,1,1,2-Tetrachloroethane	77562

1,1,2,2-Tetrachloroethane	34516
Tetrachloroethylene	34475
Tetrahydrofuran	81607
Toluene	34010
Total Phenolics	32730
1,2,3-Trichlorobenzene	77613
1,2,4-Trichlorobenzene	34551
1,1,1-Trichloroethane	34506
1,1,2-Trichloroethane	34511
Trichloroethylene	39180
Trichlorofluoromethane	34488
1,2,3-Trichloropropane	77443
1,2,4-Trimethylbenzene	77222
1,3,5-Trimethylbenzene	77226
Vinyl Acetate	77057
Vinyl Chloride	39175
Xylenes	81551

NOTE:

i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.

ii. Monitoring results should be reported in ug/L units unless otherwise indicated.

iii. Intrawell values for Coal Unit monitoring are included in Attachment 3.

iv. List G1 and List G2 background values are included in Attachment 4.

10. The following monitoring points are to be installed according to the revised Phasing Plan listed in Table 1 of Permit Application Log No. 1998-067 included in this Permit as Attachment 1. The monitoring points are to be located as referenced by Figure 1 of the Addendum to Permit Application Log No. 1998-067, dated April 24, 1998.

Background Groundwater Quality Wells

Applicant Designation	Illinois EPA Designation
R103 (sand/till)	+R103
G130 (coal)	+G130

G133 (coal)	+G133
G134 (coal)	+G134

Detection Monitoring Wells

Applicant Designation	Illinois EPA Designation
G21S	G21S*
G21D	G21D*
G106	R106
G122	G122*
R123	R123
R124	R124
G125	G125
N/A	A126
R127	R127
G131	G131
G132	R132
G233(S)	G33S
G234(S)	G34S
G235(S)	G35S
G236(S)	G36S
T109	T109
T110	T110
T111	T111
T112	T112
T114	T114
T115	T115
T116	T116
T117	T117
T118	T118
T119	T119
T120	T120
T121	T121
T122	T122
T123	T123

Piezometers

Applicant Designation	Illinois EPA Designation
G120	P120
G128	P128
G202	P202

G205	P205
P-1	P100
P-4	P104
P-7*	P107*
P-9*	P109*

+Represents upgradient monitoring point(s)
#Represents monitor point(s) added to the monitoring program
*Represents monitor point(s) deleted from the monitoring program

11. The approved monitoring program shall continue for at least thirty (30) years after closure and shall not cease until the conditions described in 35 Ill. Adm. Code 811.319(a)(1)(C) have been achieved. The operator shall collect samples from all of the monitoring points listed in Condition VIII.A.10 for Lists G, G1, and G2 (the first four (4) parameters of List G1 for piezometers) and report analytical results to the Illinois EPA in accordance with the following schedule:

The schedule for sample collection and submission of quarterly monitoring results from monitoring points R123, R124, G125, R127, G33S, G34S, G35S, and G36S, T109, T110, T111, T112, T114, T115, T116, T117, T118, T119 T120, T121, T122, T123 is as follows:

Sampling Quarter	Sampling Due	Report Due Date
Jan-Feb (1st)	List G1	April 15
April-May (2nd)	List G, G1 and G2	July 15
July-Aug (3rd)	List G1	October 15
Oct-Nov (4th)	List G1 and G2	January 15

The schedule for sample collection and submission of semi-annual monitoring results from monitoring points R103, G130, G133, G134, R106, A126, G131, and R132 is as follows:

Sampling Quarter	Sampling Due	Report Due Date
April-May (2nd)	Lists G, G1 and G2	July 15
Oct-Nov (4th)	List G1 and G2	January 15

G1 - Routine Groundwater Parameters
G2 - Annual Groundwater Parameters

Groundwater elevations are to be measured on a quarterly basis.

In the event of a confirmed significant change in groundwater quality due to the facility has occurred, groundwater monitoring at the affected monitoring well(s) will immediately return to the quarterly monitoring schedule for sampling collection and submission of all groundwater monitoring results as provided in the Condition VIII.A.11 quarterly monitoring schedule, for all monitored constituents, until the Illinois EPA approves the return to semi-annual monitoring.

12. Annually, the operator shall evaluate the background data base using an appropriate statistical method listed in 35 Ill. Adm. Code 811.320(e) for determining a statistically significant change. The results of this evaluation shall be submitted with the annual report each year.

    Background concentrations which exhibit a statistically significant change shall be adjusted and updated in accordance with 35 Ill. Adm. Code 811.320(d)(2) and submitted to the Illinois EPA as a permit modification.

13. Pursuant to 35 Ill. Adm. Code, 811.319(a)(4)(A), any of the following events shall constitute an observed increase only if the concentration of the constituents monitored can be measured at or above the method detection limit (MDL):

    a. The concentration of any quarterly indicator parameter given in List G1 shows a progressive increase over eight (8) consecutive quarters.

    b. The concentration of any constituent given in List G1 or G2 exceeds a 35 Ill. Adm. Code 620.440 Class IV Standard at an established monitoring point (unless the background standard listed in Attachment 4 exceeds the 35 Ill. Adm. Code 620.440 standard).

    c. The concentration of any organic constituent in List G2 monitored in accordance with Condition VIII.A.11 exceeds the preceding measured concentration at any established point.

    d. The concentration of any constituent in List G1 or G2 exceeds its background concentration (for inorganic constituents both the interwell and intrawell background concentrations must be exceeded).

14. For each round of sampling described in Condition VIII.A.11 of this Section, the operator must determine if an observed increase has occurred within 90 days of the date the samples were collected. If an observed increase is identified, the operator must also notify the Illinois EPA in writing within 10 days and follow the confirmation procedures of 35 IAC, 811.319(a)(4)(B). Furthermore, the operator must complete the confirmation procedures within 180 days of the initial sampling event.

15. Upon confirmation of a monitored increase and within 180 days of the initial sampling date, the operator shall submit a permit application for a significant modification to demonstrate an alternate source per 35 Ill. Adm. Code 811.319(a)(4)(B)(ii) or begin an assessment monitoring program in order to determine whether the solid waste disposal facility is the source of the contamination.

16. In the event that an alternative source demonstration is denied, pursuant to 35 Ill. Adm. Code 813.105, the operator must commence sampling for the constituents listed in 35 Ill. Adm. Code 811.319(b)(5), and submit an assessment monitoring plan as a significant permit modification, both within 30 days after the dated notification of Agency denial. The operator must sample the well or wells that exhibited the confirmed increase.

17. The issuance of this permit does not constitute agreement or approval of the input parameters and assumptions utilized in the monitoring well-spacing model provided in Application Log No. 1994-419.

18. Information required by Condition VIII.A.11 must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found in http://www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html.

19. The operator shall install temporary monitoring wells T109, T110, T111, and T113 at locations described in the September 15, 2008 and September 24, 2008 addenda to Log Nos. 2006-013 and 2006-344. Temporary assessment wells T103, T104, T109, T110, T111, T112, and T113 shall be sampled for the currently approved modified Appendix II parameters (including dichlorodifluoromethane and 1,1-dichloroethane) 4th Quarter 2008 and 2nd Quarter 2009. In addition, temporary wells T103, T104, T109, T110, T111, T112, and T113 shall be monitored quarterly for total chloride, total manganese, total sulfate, and TOC. The operator shall submit the results of T103, T104, T109, T110, T111, T112, and T113 to the Illinois EPA in the form of a significant permit modification by August 1, 2009. The application shall include, at a minimum: boring logs and well completion reports for temporary well T109, T110, T111, and T113; all available pit excavation data; any additional revisions to the waste boundary based on additional investigation; an evaluation of results from the modified Appendix II list sampling from all new wells (i.e. T109, T110, T11, and T113) and existing GMZ wells; results of any additional analytical trends; and recommendations pertaining to sampling results and additional investigation.

    The Illinois EPA is in receipt of an application that purports to address this condition. Application Log No. 2009-393 is currently under review and the current decision date is August 26, 2014.

20. The final detection groundwater monitoring network has not been approved by the Agency. A temporary detection groundwater monitoring network is approved in Log No. 2009-089. If the waste in the overfill area is left in place (outside the current permitted waste boundary), a revised waste boundary shall be proposed and a revised groundwater monitoring network shall be modeled and proposed through a significant modification permit application.

21. The operator shall perform assessment monitoring for Total Phenols, Naphthalene and Tetrahydrofuran at G35S starting with the 2nd Quarter of 2011. Total Phenols, Naphthalene and Tetrahydrofuran shall be tested for on a quarterly basis. Semi-annual monitoring of the 40 CFR Appendix II and 35 IAC 620.410 parameters shall commence with the 2nd Quarter of 2011. Reduction of the monitoring frequency of the non-detect 40 CFR Appendix II and 35 IAC 620.410 parameters to an annual basis as detailed in 35 IAC 811.319(b)(5)(D) shall only be granted through the approval a Significant Modification Permit. Assessment monitoring shall continue until Agency approval of the Assessment Monitoring Report. The operator shall submit all findings, conclusions, trend analysis, all groundwater data presented in tabular form through 4th Quarter 2014, past four years of groundwater elevations in tabular form, proposed course of actions, identification of the source, nature and extent of the contamination to the Illinois EPA in the form of a significant modification permit application by January 30, 2015.

22. On October 4, 2012, revisions to the existing groundwater parameter lists were adopted by the Illinois Pollution Control Board Rule Making R08-18: Amendments to Groundwater Quality Standards 35 IAC 620 regulations; which can be found at http://www.ipcb.state.il.us/documents/dsweb/Get/Document-77625. All newly added parameters are underlined in this document. The facility shall establish interwell AGQS values for all 35 IAC 620.440 (b) parameters based upon a minimum of four (4) consecutive quarters of analytical data from 3rd Quarter 2013 through 2nd Quarter 2014, using the currently permitted statistical methodology; only parameters which do not currently have an approved AGQS value are required to be proposed as a result of this condition. This information shall be submitted as a significant modification permit application that includes, at a minimum, the analytical groundwater data sheets, statistical calculations used to calculate the new AGQS values, and the proposed values presented in tabular format. The proposed AGQS values shall be submitted to the Illinois EPA in the form of a significant modification permit application no later than July 15, 2014.

23. The operator shall develop intrawell AGQS values for dissolved magnesium at monitoring well R132 utilizing four consecutive quarters of data from 2nd Quarter 2013 through 1st Quarter 2014. Background values shall be calculated at

the 99% UCL. The proposed background values, all calculations and raw laboratory data sheets shall be submitted to the Illinois EPA in the form of a significant modification permit application by May 30, 2014.

The Illinois EPA is in receipt of an application that purports to address this condition. Application Log No. 2014-215 is currently under review and the current decision date is August 25, 2014.

24. The operator shall develop a revised interwell AGQS value for dissolved sulfate and pH utilizing four consecutive quarters of data from 2nd Quarter 2013 through 1st Quarter 2014 from monitoring wells G130, G133 and G134. The proposed background value, all calculations and raw laboratory data sheets shall be submitted to the Illinois EPA in the form of a significant modification permit application by May 30th, 2014.

The Illinois EPA is in receipt of an application that purports to address this condition. Application Log No. 2014-215 is currently under review and the current decision date is August 25, 2014.

B. UNIT II

1. The groundwater monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect, from all potential sources of discharge, any releases to groundwater within the facility. The Illinois EPA reserves the right to require installation of additional monitoring wells as may be necessary to satisfy the requirements of this permit.

2. The groundwater monitoring wells shall be constructed and maintained in accordance with the requirements of 35 Ill. Adm. Code, 811.318(d) and designs approved by the Illinois EPA.

3. Groundwater monitoring wells shall be installed in the locations shown in Figure 8-7 of the revised Chapter 8, dated January 27, 1995, of the permit application, Log No. 1994-419 and screened in the hydrogeologic unit(s) identified as potential contaminant pathway(s) within the zone of attenuation. All wells as listed in Condition VIII.B.9 must be installed and included in the sampling program in accordance with the phasing plan in Table E-1 of Attachment E to permit application Log No. 1997-020, included as Attachment 2 to this permit.

4. Within 60 days of installation of any groundwater monitoring well, boring logs compiled by a qualified geologist, well development data and as-built diagrams shall be submitted to the Illinois EPA utilizing the enclosed "Well Completion

Report" form. For each well installed pursuant to this permit, one form must be completed.

5. Groundwater monitoring wells shall be easily visible, labeled with the Illinois EPA monitoring point designations and fitted with padlocked protective covers.

6. In the event that any well becomes consistently dry or unserviceable and therefore requires replacement, a replacement well shall be installed within ten (10) feet of the existing well. The Illinois EPA shall be notified in writing at least 15 days prior to the installation of all replacement wells. A replacement well that is more than ten feet from the existing well or which does not monitor the same geologic zone is considered to be a new well and must be approved via a significant modification permit.

7. All borings, wells and piezometers not used as monitoring points shall be abandoned in accordance with the standards in 35 Ill. Adm. Code 811.316, and the decommissioning and reporting procedures contained in the Illinois Department of Public Health's (IDPH) Water Well Construction Code, 77 Ill. Adm. Code, Part 920 (effective 1/1/92). In the event specific guidance is not provided by IDPH procedures, the enclosed Illinois EPA monitoring well plugging procedures shall be followed.

8. Groundwater sampling and analysis shall be performed in accordance with the requirements of 35 Ill. Adm. Code 811.318(e) and the specific procedures and methods approved by the Illinois EPA.

9. The following monitoring points are to be used in the groundwater detection monitoring program for this facility and are to be installed and deleted according to the revised Phasing Plan, as referenced in Table 8-3 of Section 4 of Permit Application Log No. 1996-232, and included with the Attachment 1 to this Permit.

Upgradient Wells

Applicant Designation	Illinois EPA Designation
G207	G107
G239	G039
G240	G040
G241	G041

Wells Within Zone of Attenuation

Applicant Designation	Illinois EPA Designation
G214	G114
G215	G115
G216	G116
G218	G118
G219	G119
G220	G120
G221	G121
R022	R022
G123 (Illinois EPA designated R023)	R023
G231	G031
G232	G032
G233D	G33D
G234D	G34D
G235D	G35D
G236D	G36D
G237	G037
G238	G038
G242	G042
G243	G043
G244	G044
G245	G045
G246	*G046
R046	R046
G247	G047
G248	G048
G249	G049

Compliance Boundary Well(s)

Applicant Designation	Illinois EPA Designation
G217	G117

Piezometers

Applicant Designation	Illinois EPA Designation
PZ-1-LS	P1LS
PZ-1-SS	P1SS
PZ-2-LS	P2LS

PZ-3-LS	P3LS
PZ-4-LS	P4LS
PZ-6-LS	P6LS
PZ-6-SS	P6SS
PZ-6-CO	P6CO
PZ-6-US	P6US
PZ-8-SS	P8SS
PZ-8-CO	P8CO
PZ-8-GS	P8GS
G207	P107
G201	P101
G203	P103
G204	P104
G206	P106
G102	P102
P-2S	PO2S
P-2D	P02D
PZ-6-GT	P6GT
PZ-7-LS	P7LS
PZ-7-SS	P7SS
PZ-7-MS	P7MS
PZ-7-US	P7GS
PZ-8-LS	P8LS
P-3	P003
P-5	P005
P-6	P006
P-11	P011

Note:

LS = Lower Shale	SS = Sandy Siltstone
CO = Coal	US = Upper Shale
GS = Glacial Sand	GT = Glacial Till
MS = Middle Shale	S = Shallow
D = Deep	

Represents monitor point(s) <u>added</u> to the monitoring program
* Represents monitor point(s) <u>deleted</u> from the monitoring program

10. The monitoring program, approved by Permit No. 1994-419-LFM, shall continue for a minimum period of thirty (30) years after closure and shall not cease until the conditions described in 35 Ill. Adm. Code, 811.319(a)(1)(C) have been achieved. The operator shall collect samples from all of the monitoring points listed in Condition VIII.B.9, test the samples for the parameters listed in

Condition VIII.B.12 (Lists G, G1 and G2), and report the results to the Illinois EPA, all in accordance with the schedule in Condition VIII.B.19.

11. The applicable groundwater quality standards (AGQS) and the maximum allowable predicted concentrations (MAPC), as listed in Attachment 5, are subject to the following conditions:

    a. Temperature and the field parameters involving depth or elevation are not considered groundwater constituents and do not need AGQS.

    b. For constituents which have not been detected in the groundwater, either the practical quantitation limit (PQL) or the method detection limit (MDL) shall be used as the AGQS.

    c. MAPCs are only applicable to those wells within the zone of attenuation. MAPC values are not applicable to parameters in zone of attenuation wells having an established intrawell value.

    d. AGQS are only applicable to upgradient/background and compliance boundary wells.

12. AGQS and MAPC values must be determined for all of the parameters which appear in either Lists G1 or G2 (not including groundwater depth or elevations). AGQS and MAPC values must also be established for the dissolved constituents listed in G1. The AGQS values shall be calculated using four (4) consecutive quarters of groundwater monitoring data collected from upgradient wells G107, G039, G040 and G041 and employing the statistical method described in Figure 7-7 of Section 7 to the application, Log No. 1994-419.

LIST G (Groundwater)

GROUNDWATER MONITORING PARAMETER	STORETS
Elevation of Bottom of Well (ft. MSL) (Annually without dedicated pumps; every 5 years with dedicated pumps or whenever the pump is pulled)	72020

LIST G1 (Groundwater - Quarterly)

FIELD PARAMETERS	STORETS
pH	00400
Specific Conductance	00094
Temperature of Water Sample (° F)	00011

Depth to Water (ft. below land surface)	72019
Depth to Water (ft. below measuring point)	72109
Elevation of Measuring Point (Top of casing ft. MSL)	72110
Elevation of Groundwater Surface (ft. MSL)	71993

INDICATOR PARAMETERS	STORETS
Ammonia (as Nitrogen; Dissolved) mg/L	00608
Arsenic (Dissolved) ug/L	01000
Boron (Dissolved) ug/L	01020
Cadmium (Dissolved) ug/L	01025
Chloride (Dissolved) mg/L	00941
Chromium (Dissolved) ug/L	01030
Cyanide (Total) mg/L	00720
Lead (Dissolved) ug/L	01049
Magnesium (Dissolved) mg/L	00925
Mercury (Dissolved) ug/L	71890
Nitrate (as Nitrogen, Dissolved) mg/L	00618
Sulfate (Dissolved) mg/L	00946
Total Dissolved Solids (TDS, 180°C; Dissolved) mg/L	70300
Zinc (Dissolved) ug/L	01090

NOTE:

i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.

ii. Maximum allowable predicted concentrations (MAPCs) and applicable groundwater quality standards (AGQS) are given in ug/L except as otherwise noted. Also, the monitoring results should be reported in ug/L units unless otherwise indicated.

iii. List G1 and List G2 AGQS/MAPC values are included in Attachment 5.

LIST G2 (Groundwater - Semiannual)

PARAMETERS (ug/L)	STORETS
Acetone	81552
Acrylonitrile	34215
Benzene	34030
Bromobenzene	81555

Bromochloromethane (chlorobromomethane)	77297
Bromodichloromethane	32101
Bromoform (Tribromomethane)	32104
n-Butylbenzene	77342
sec-Butylbenzene	77350
tert-Butylbenzene	77353
Carbon Disulfide	77041
Carbon Tetrachloride	32102
Chlorobenzene	34301
Chloroethane (Ethyl Chloride)	34311
Chloroform (Trichloromethane)	32106
o-Chlorotoluene	77275
p-Chlorotoluene	77277
Dibromochloromethane	32105
1,2-Dibromo-3-Chloropropane	38760
1,2-Dibromoethane	77651
1,2-Dichlorobenzene	34536
1,3-Dichlorobenzene	34566
1,4-Dichlorobenzene	34571
trans-1,4-Dichloro-2-Butene	49263
Dichlorodifluoromethane	34668
1,1-Dichloroethane	34496
1,2-Dichloroethane	34531
1,1-Dichloroethylene	34501
cis-1,2-Dichloroethylene	77093
trans-1,2-Dichloroethylene	34546
1,2-Dichloropropane	34541
1,3-Dichloropropane	77173
2,2-Dichloropropane	77170
1,1-Dichloropropene	77168
1,3-Dichloropropene	34561
cis-1,3-Dichloropropene	34704
trans-1,3-Dichloropropene	34699
Ethylbenzene	78113
Hexachlorobutadiene	39702
2-Hexanone (Methyl Butyl Ketone)	77103
Isopropylbenzene	77223
p-Isopropyltoluene	77356
Methyl Bromide (Bromomethane)	34413
Methyl Chloride (Chloromethane)	34418
Methylene Bromide (Dibromomethane)	77596
Dichloromethane	34423
Methyl Ethyl Ketone	81595
Methyl Iodide (Iodomethane)	77424

4-Methyl-2-Pentanone	78133
Naphthalene	34696
Oil (Hexane-Soluble) (mg/L)	00550
n-Propylbenzene	77224
Styrene	77128
1,1,1,2-Tetrachloroethane	77562
1,1,2,2-Tetrachloroethane	34516
Tetrachloroethylene	34475
Tetrahydrofuran	81607
Toluene	34010
Total Phenolics	32730
1,2,3-Trichlorobenzene	77613
1,2,4-Trichlorobenzene	34551
1,1,1-Trichloroethane	34506
1,1,2-Trichloroethane	34511
Trichloroethylene	39180
Trichlorofluoromethane	34488
1,2,3-Trichloropropane	77443
1,2,4-Trimethylbenzene	77222
1,3,5-Trimethylbenzene	77226
Vinyl Acetate	77057
Vinyl Chloride	39175
Xylenes	81551

NOTE:

i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.

ii. Maximum allowable predicted concentrations (MAPCs) and applicable groundwater quality standards (AGQS) are given in ug/L except as otherwise noted. Also, the monitoring results should be reported in ug/L units unless otherwise indicated.

iii. List G1 and List G2 AGQS/MAPC values are included in Attachment 5.

13. Pursuant to 35 Ill. Adm. Code, 811.319(a)(4)(A), any of the following events shall constitute an observed increase only if the concentrations of the constituents monitored can be measured at or above the method detection limit (MDL):

    a. The concentration of any constituent in List G1 of Condition VIII.B.12 shows a progressive increase over eight (8) consecutive quarters.

b. The concentration of any constituent monitored in accordance with List G1 or List G2 of ConditionVIII.B.12 exceeds the MAPC at an established monitoring point within the zone of attenuation. MAPC values are not applicable to parameters in zone of attenuation wells having an established intrawell value.

c. The concentration of any organic constituent in List G2, monitored in accordance with Condition VIII.B.12 exceeds the preceding measured concentration at any established point.

d. The concentration of any constituent monitored at or beyond the edge of the zone of attenuation (compliance boundary) exceeds its AGQS, or pursuant to 811.320(d) any constituent monitored at an upgradient well, exceeds its AGQS.

e. The concentration of any constituent monitored in accordance with List G1 or List G2 of Condition VIII.B.12 exceeds the intrawell AGQS value at an established monitoring point. Intrawell AGQS values replace MAPC values.

14. For each round of sampling described in Condition VIII.B.10, the operator must determine if an observed increase has occurred within 90 days of the initial date the samples were collected. If an observed increase is identified, the operator must also notify the Illinois EPA in writing and follow the confirmation procedures of 35 Ill. Adm. Code, 811.319(a)(4)(B). Furthermore, the operator must complete the confirmation procedures within 180 days of the initial sampling event.

15. The owner or operator shall conduct any corrective action assessment and corrective action required pursuant to 35 Ill. Adm. Code 811.324(a) in accordance with 35 Ill. Adm. Code 811.324, 811.325 and 811.326.

16. Upon confirmation of a monitored increase and within 180 days of the initial sampling date, the operator shall submit a permit application for a significant modification to demonstrate an alternate source per 35 Ill. Adm. Code 811.318(a)(4)(B)(ii) or begin an assessment monitoring program in order to determine whether the solid waste disposal facility is the source of the contamination and to provide information needed to carry out a groundwater impact assessment in accordance with 35 Ill. Adm. Code 811.319(b).

17. In the event that an alternative source demonstration is denied, pursuant to 35 Ill. Adm. Code 813.105, the operator must commence sampling for the constituents listed in 35 Ill. Adm. Code 811.319(b)(5), and submit an assessment monitoring plan as a significant permit modification, both within 30 days after the dated

notification of Agency denial. The operator must sample the well or wells that exhibited the confirmed increase.

18. The first quarterly statistical evaluations shall be performed on groundwater samples taken during the months of July - August and the results submitted to the Illinois EPA by July 15, 1996.

19. The schedule for sample collection and submission of quarterly monitoring results from monitoring points G022, R023, G33D, G34D, G35D, G36D, G037, G038, G042, G043, G044, G045, G046, G047, G048, and G049 is as follows:

Sampling Quarter	Sampling Due	Report Due Date
Jan-Feb (1st)	List G1	April 15
April-May (2nd)	List G, G1 and G2	July 15
July-Aug (3rd)	List G1	October 15
Oct-Nov (4th)	List G1 and G2	January 15

The schedule for sample collection and submission of semi-annual monitoring results from monitoring points G107, G039, G040, G041, G114, G115, G116, G117, G118, G119, G120, G121, G031, and G032 is as follows:

Sampling Quarter	Sampling Due	Report Due Date
April-May (2nd)	Lists G, G1 and G2	July 15
Oct-Nov (4th)	List G1	January 15

G1 - Routine Groundwater Parameters
G2 - Annual Groundwater Parameters

Groundwater elevations are to be measured on a quarterly basis.

In the event of a confirmed significant change in groundwater quality due to the facility has occurred, groundwater monitoring at the affected monitoring well(s) will immediately return to the quarterly monitoring schedule for sampling collection and submission of all groundwater monitoring results as provided in the Condition VIII.B.17 quarterly monitoring schedule, for all monitored constituents, until the Illinois EPA approves the return to semi-annual monitoring.

Information required by this condition and Condition VIII.B.10 must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found at www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html.

20. Elevation of stick-up is to be surveyed and reported to the Illinois EPA:

    a. When the well is installed (with the as-built diagrams),

    b. Every two years thereafter, or

    c. Whenever there is reason to believe that the elevation has changed.

21. Annually, the operator shall prepare an evaluation of the groundwater flow direction and the hydraulic gradients at the facility using the groundwater surface elevations (STORET #71993) determined for each monitoring event. This assessment shall be submitted with the monitoring results due on July 15.

22. All monitoring points shall be maintained in accordance with the approved permit application such that the required samples and measurements may be obtained.

23. Annually, the operator shall evaluate the background data base using an appropriate statistical method listed in 35 Ill. Adm. Code 811.320(e) for determining a statistically significant change. The results of this evaluation shall be submitted with the annual report each year. Background concentrations which exhibit a statistically significant change shall be adjusted and updated in accordance with 35 Ill. Adm. Code 811.320(d)(2) and submitted to the Illinois EPA as a permit modification.

24. On October 4, 2012, revisions to the existing groundwater parameter lists were adopted by the Illinois Pollution Control Board Rule Making R08-18: Amendments to Groundwater Quality Standards 35 IAC 620 regulations; which can be found at http://www.ipcb.state.il.us/documents/dsweb/Get/Document-77625. All newly added parameters are underlined in this document. The facility shall establish interwell AGQS values for all 35 IAC 620.440 (b) parameters based upon a minimum of four (4) consecutive quarters of analytical data from 3rd Quarter 2013 through 2nd Quarter 2014, using the currently permitted statistical methodology; only parameters which do not currently have an approved AGQS value are required to be proposed as a result of this condition. This information shall be submitted as a significant modification permit application that includes, at a minimum, the analytical groundwater data sheets, statistical calculations used to calculate the new AGQS values, and the proposed values presented in tabular format. The proposed AGQS values shall be submitted to the Illinois EPA in the form of a significant modification permit application no later than July 15, 2014.

25. The operator shall develop a revised interwell AGQS value for dissolved zinc utilizing four consecutive quarters of groundwater quality data from 2nd Quarter 2013 through 1st Quarter 2014 from background wells: G039, G040, G041 and

G107. The proposed AGQS and MAPC values, all calculations and raw laboratory data sheets shall be submitted to the Illinois EPA in the form of a significant modification permit application by May 30, 2014.

The Illinois EPA is in receipt of an application that purports to address this condition. Application Log No. 2014-215 is currently under review and the current decision date is August 25, 2014.

IX. REMEDIAL ACTION

1. The purpose of the remedial action is to mitigate impairments in the groundwater quality caused by a release of contaminants from the landfill.

2. A Groundwater Management Zone has been established at the facility for the organic parameters dichlorodifluoromethane, cis-1,2-dichloroethylene and 1,1-dichloroethane. The limits of the Groundwater Management Zone are described on page 7 of Application Log No. 2000-403 dated October 20, 2000. The horizontal extent of the Groundwater Management Zone is depicted in Exhibit 1 of Application Log No. 2000-403. The vertical extent of the Groundwater Management Zone is depicted in Exhibit 2 of Application Log No. 2000-403. Monitoring wells R124, G125 and R127 are included within the limits of the Groundwater Management Zone. Monitoring wells R123, T101, T103, and T104 will monitor the edge of the Groundwater Management Zone.

3. The groundwater restoration standards are the background concentrations.

4. The parameters dichlorodifluoromethane and 1,1-dichloroethane shall be monitored for at monitoring points T101, T103, T104, R123, R124, G125, and R127 and for cis-1,2-dichloroethylene at A126 on a semi-annual basis (2^{nd} and 4^{th} quarters) in accordance with the schedule in Condition VIII.A.11 in the Permit. Groundwater monitoring shall also include the modified list of 40 CFR 258.Appendix II constituents as described in Table 3 (Assessment Monitoring Parameter List), page A15, of Application Log No. 2001-151, on a semi-annual basis at monitoring points R124, G125, and R127 during the assessment monitoring period in accordance with 35 IAC 811.319(b)(5)(D).

5. An Evaluation of Remedial Activities (ERA) shall be submitted to the Illinois EPA by April 15 of each year, commencing April 15, 2001, in the form of a significant modification application. The ERA shall include:

    a. The results of the semi-annual groundwater monitoring including trend analyses for the parameters listed in Condition IX.4 in the *Remedial Action* section of the Permit.

b. For the parameters listed in Condition IX.4 in the *Remedial Action* section of the Permit, a summary of the historical monitoring results and trend analyses. If the trend analyses show increasing trends for the parameters listed in Condition IX.4 in the *Remedial Action* section of the Permit, the operator shall include a proposal for additional corrective action.

c. A summary of the overall effectiveness of the active gas extraction system.

6. In accordance with 35 IAC 811.319(d)(5), the remedial action program shall continue in accordance with the plan until groundwater monitoring shows that the concentrations of all the constituents in Condition IX.4 in the *Remedial Action* section of the Permit are below the background concentrations over a period of four consecutive quarters.

X. LANDFILL GAS MANAGEMENT/MONITORING

1. Construction Authorization is granted for installation of a landfill gas management system consisting of extraction wells, an HDPE pipe collection system and blower/flare unit for on-site management and combustion of landfill gas all in accordance with the application and plans prepared by James J. Walsh, P.E. with SCS Engineers. The proposed design consists of 51 gas extraction wells, 2 condensate traps and 1 condensate sump for Unit I and 58 gas extraction wells and 1 condensate sump for Unit II. Gas condensate may not be recycled from condensate traps into Unit I. The proposed gas management system for Unit II shall be installed incrementally upon completion of cells to final grade in Unit II or in accordance with Special Conditions X.10 and X.11 of this permit. Construction is subject to a construction quality assurance program in accordance with 35 Ill. Adm. Code 811, Subpart F. Prior to placing into service these facilities, the operator shall submit as acceptance report to the Illinois EPA in the form of a permit application prepared in accordance with the requirements of 35 Ill. Adm. Code 811.505(d) in order to obtain operating authorization. Any changes to the approved gas extraction system shall be proposed in a significant modification permit application and must demonstrate compliance with 35 Ill. Adm. Code 811.311(d) and 812.310.

2. Modifications to the landfill gas management system in accordance with Application Log No. 1999-013, dated January 11, 1999, Application Log No. 2001-151 dated April 18, 2001 and Application Log No. 2008-152 dated April 24, 2008, have been approved subject to the Special Conditions of this Permit. Approval has been granted for construction and operation of a landfill gas combustion to electricity power plant consisting of up to four "Genset" or

equivalent gas combustion engine/generator units, a filter/separator unit, two blowers, two secondary filter units, gas compressors, an electric control panel and combustion engine ancillary facilities to produce an estimated 3 to 4 megawatts electric power (Log No. 1999-013). Approval is being granted for the addition of eight gas extraction wells to the Unit I gas management system in accordance with the location plan and specifications in Application Log No. 2001-151.

3. No gas may be discharged directly to the atmosphere unless treated or burned on-site prior to discharge in accordance with a permit issued by the Illinois EPA, Bureau of Air, pursuant to 35 Ill. Adm. Code 200 through 245. The gas processing facility shall be sized to handle the expected volume of gas.

4. At a minimum landfill gas shall be measured for flow rate, heat value and moisture content along with combustion parameters including, but not limited to oxygen and carbon dioxide in addition to any additional constituents and parameters that must be measured in accordance with a permit issued by the Illinois EPA pursuant to 35 Ill. Adm. Code 200 through 245. The frequency of monitoring landfill gas shall be in accordance with a permit issued by the Illinois EPA, Bureau of Air, pursuant to 35 Ill. Adm. Code 200 through 245.

5. Landfill gas monitoring devices shall be constructed and maintained to minimize gas leakage. Gas probes shall be inspected at least monthly for structural integrity and proper operation.

6. Within 60 days of installation of any gas monitoring probe, boring logs and as-built diagrams shall be submitted to the Illinois EPA.

7. All gas monitoring devices shown in Drawing No. D6 dated January 18, 1995 of the Gas Monitoring Plan once installed as detailed in Chapter 3 and Chapter 6 of application Log No. 1994-419 including the ambient air monitors shall be operated to obtain samples at a minimum on a monthly basis for the entire operating period. Monitoring shall be continued for a minimum period of 30 years after closure.

8. All below ground landfill gas monitoring devices shall be monitored for methane, pressure, nitrogen, oxygen and carbon dioxide at each sampling interval. Ambient air monitors shall be sampled for methane only when the average wind velocity is <5 mph, at a minimum of 3 downwind locations, within 100 ft. from the edge of the unit or the property boundary, whichever is closer to the unit.

9. All buildings within the facility shall be monitored for methane by utilizing continuous detection devices located at the most likely points for methane to enter during the closure period and a minimum of 30 years after closure.

10. If methane gas is detected at a concentration greater than 25% of the LEL in air in any building on or near the facility, or at a concentration greater than 50% of the LEL in air below the ground surface by a monitoring device or is detected by an ambient air monitor located at or beyond the property boundary or 100 ft. from the edge of the unit, whichever is less, the owner or operator shall notify the Illinois EPA in writing, within two business days, of an observed exceedance and implement any temporary mitigation venting or gas collection measures to ensure the protection of human health. Temporary gas venting systems shall be installed only outside the perimeter of the unit.

11. Pursuant to 35 IAC 811.311, in the event of any of the occurrences listed below, the operator must take the steps described in the last two paragraphs of this condition to ensure the protection of human health:

    a. A methane concentration greater than 50 percent of the lower explosive limit in air is detected in any of the below ground monitoring devices outside the waste boundary;

    b. A methane concentration greater than 50 percent of the lower explosive limit in air is detected during ambient air monitoring;

    c. A methane concentration greater than 25 percent of the lower explosive limit in air is detected in any building on or near the facility; or

    d. Malodors attributed to the unit are detected beyond the property boundary.

    First, within two business days of the occurrence, the operator must notify the Illinois EPA in writing using the form LPC-591, pursuant to 35 IAC 811.311(b)(1). The notification must identify the location of the occurrence and describe its nature (quantitatively if possible). If the gas exceedance is corrected within 30 days, a follow up LPC-591 form may be submitted to the Illinois EPA describing the correction and providing confirmation test results.

    Second, if a follow up LPC-591 is not submitted, then within 180 days of the occurrence, the operator must submit to the Illinois EPA an application for a significant modification that either: 1) proposes a gas collection/management system or modifications to the existing gas collection/management system, or 2) demonstrates that the facility is not the cause of the occurrence.

12. As part of the Evaluation of Remedial Activities required by Special Condition IX.5, the operator shall submit a summary of the operation of the Unit I gas extraction wells installed outside permitted waste boundaries (former locations of GP-1, GP-2, GP-3, GP-7, GP-8, GP-9 and GP-10). Results of gas composition

analyses performed for operating and adjusting this portion of the Unit I gas management system shall be included in the summary.

13. If a landfill gas collection and management system is required, pursuant to 35 Ill. Adm. Code 811.311(a)(1-3), it shall be operated until the waste has stabilized enough to no longer produce methane in quantities that exceed the minimum allowable concentrations in item 5 above.

14. The results from gas monitoring for each year, ending on March 31, shall be submitted to the Illinois EPA in the annual report required by 35 Ill. Adm. Code 813.504 as specified in Special Condition XII.3.

15. When used for the on-site combustion of landfill gas, flares shall meet the general control device requirements of new source performance standards adopted pursuant to Section 9.1(b) of the Act.

16. Construction of the approved landfill gas collection system shall be completed as quickly as possible to minimize the release of odors. Furthermore, no refuse uncovered during excavation shall be left exposed overnight.

17. When a landfill gas collection system is no longer required for gas control or collection, the pipes, collection devices or other appurtenances shall be cutoff at least 2.5 ft. below ground level, the pipes plugged and the low permeability layer, protective layer and vegetation repaired.

18. It should be noted that on March 12, 1996, USEPA adopted New Source Performance Standards (NSPS) for new Municipal Solid Waste Landfills (MSWLFs) -- [61 Fed. Reg. 9905 et seq.]. In addition, effective July 31, 1998, the Illinois Pollution Control Board implemented rules for existing MSWLFs. These rules establish requirements for control of non-methane organic compounds (NMOC) emissions generated at landfills. The Illinois EPA's Bureau of Air (BOA) will be implementing the NSPS, for landfills classified as a new MSWLF, pursuant to a delegation agreement between Illinois EPA and USEPA. Based upon the information provided in the application your facility may be subject to the Illinois regulations, i.e., 35 Ill. Adm. Code 220 - Nonmethane Organic Compounds. In addition, air pollution control construction and operating permits may be required for the construction and or operation of new landfills, the expansion of existing landfills, and associated gas management and control systems. Further this permit does not relieve the Permittee of the responsibility of complying with the provisions of the State of Illinois Rules and Regulations, 35 Ill. Adm. Code Subtitle B, Air Pollution Control, Chapter 1. The Permittee may be required to file reports and/or obtain applicable permits through the Illinois EPA - Bureau of Air (BOA) - Division of Air Pollution Control. If you have any

questions regarding these requirements, contact the Illinois EPA's BOA - Division of Air Pollution Control - Permit Section at 217/782-2113.

19. Replacement gas monitoring probes for GP13, GP15, GP16 and GP17 shall be installed within 90 days of issuance of Modification No. 70 to permit No. 1994-419-LFM. Boring logs and as-built diagrams shall be submitted to the Illinois EPA within 60 days of installation, in accordance with Condition X.6.

XI. CLOSURE/POST CLOSURE CARE AND FINANCIAL ASSURANCE

1. The closure and post-closure care plan and cost estimates dated September 9, 1994 which were received by the Illinois EPA on September 9, 1994 are hereby approved in accordance with 35 Ill. Adm. Code 811.110(d) through (g), 811.111, and 811.700(f) and (g).

2. The operator shall send to the Illinois EPA a notice of closure within 30 days after the date the final volume of waste is received. No refuse shall be accepted from off-site sources during closure.

3. The operator shall treat, remove from the site, or dispose of all wastes and waste residues within 30 days after receipt of the final volume of waste.

4. When closure of a unit is completed, the operator shall submit to the Illinois EPA utilizing the Illinois EPA's "Affidavit for Certification of Closure of Solid Waste Landfills permitted under 35 Ill. Adm. Code Parts 813 and 814."

    a. Documentation concerning closure of the closed unit including plans or diagrams of the unit as closed and the date closure was completed;

    b. An affidavit by the operator and the seal of a professional engineer that the unit has been closed in accordance with the closure plan and all requirements of 35 Ill. Adm. Code 811.

5. The owner or operator shall complete closure activities for each unit in accordance with the closure plan within 180 days of beginning closure. The Illinois EPA shall grant extension of the closure period if the owner or operator demonstrates that the closure will, of necessity, take longer than 180 days; and the owner or operator has taken and will continue to take all necessary steps to prevent threats to human health and the environment from the unclosed MSWLF unit.

6. Following closure of all units at the site, the owner or operator shall record a notation on the deed to the landfill facility property or some other instrument that

is normally examined during title search. The owner or operator shall place a copy of the instrument in the operating record, and shall notify the Illinois EPA that the notation has been recorded and a copy has been placed in the operating record. The notation on the deed or other instrument must be made in such a way that in perpetuity notify any potential purchaser of the property that:

a. The land has been used as a landfill facility; and

b. Its use is restricted pursuant to Section 811.111(d).

7. The operator shall maintain a copy of the closure plan at the site until closure has been completed and thereafter at the Site Office until completion of post-closure care.

8. The operator shall conduct a quarterly inspection of the entire site including all vegetated surfaces, final cover, monitoring points, drainage systems and security fencing for a minimum of 15 years after closure and shall maintain the closed facility for a minimum 30 year period. The operator shall collect and dispose of leachate from Unit II, for a minimum of 30 years after closure. After 5 years, the operator may reduce the frequency to annual inspections unless settling or erosion problems dictate a more frequent inspection and maintenance schedule.

9. All rills, gullies and crevices 6 inches or deeper identified in the post-closure inspection of the facility shall be filled. Areas identified as particularly susceptible to erosion shall be recontoured.

10. All eroded and scoured drainage channels shall be repaired.

11. All holes and depressions created by final cover settling shall be filled and recontoured so as to prevent standing water. The operator shall monitor final cover settling for a minimum of 15 years after closure.

12. All reworked surfaces and areas with failed or eroded vegetation in excess of 100 sq. ft. cumulatively, shall be revegetated in accordance with the approved closure plan.

13. The final protective layer shall be seeded with grasses as soon as weather permits. If necessary, the soil over the entire planting area shall be amended with lime, fertilizer and organic matter. On side slopes, mulch or some other form of stabilizing material is to be provided to hold seed in place and conserve moisture.

14. Financial assurance shall be maintained by the operator in accordance with 35 Ill. Adm. Code, Subtitle G, Part 811, Subpart G in an amount equal to the current cost estimate for closure and post-closure care.

The operator must increase the total amount of financial assurance so as to equal the current cost estimate within 90 days after an increase in the current cost estimate. The current cost estimate is $11,998,076 (Closure = $5,503,629; Post closure care = $6,494,447), approved by Modification No. 99 (Log No. 2013-287).

15. When the post-closure care period has been completed, the operator shall notify the Illinois EPA utilizing the Illinois EPA's "Affidavit for Certification of Post-Closure Care for Non-Hazardous Waste Facilities".

16. The operator shall revise the current cost estimates for closure and post-closure care in each new application for permit renewal or where a facility modification results in an increase of the cost estimate. The operator shall either certify that closure and post-closure care plans are consistent with current operations or shall file an application incorporating new plans pursuant to 35 Ill. Adm. Code, 813. The owner or operator shall adjust the cost estimates of closure and post-closure care on an annual basis during the design period. The owner or operator shall provide financial assurance to the Illinois EPA utilizing one or more of the mechanisms listed in 35 Ill. Adm. Code 811.706(a). The owner or operator shall provide continuous coverage until the owner or operator is released from the financial assurance requirements pursuant to 35 Ill. Adm. Code 813.403(b) or 35 Ill. Adm. Code 811.326.

17. The owner or operator shall adjust the cost estimates for closure, post-closure, and corrective action for inflation on an annual basis during the following time periods:

    a. The active life of the unit for the closure cost;

    b. The active life and post-closure care period for the post-closure cost; and

    c. Until any corrective action program is completed in accordance with 35 IAC, Section 811.326, for the cost of corrective action.

    Each year, no later than June 1 of that year, the owner or operator shall submit in the form of a permit application for significant modification. This application shall provide an update to the cost estimate or a certification that there are no changes to the current cost estimates.

18. A modification of the written closure plan shall constitute a significant modification of the permit for the purposes of 35 Ill. Adm. Code 813, Subpart B.

19. Modification No. 26 approves Unit I final cover certification for Areas B, C, and D shown on Drawing No. CQA-2A included in the addendum dated July 13, 2000 of Log No. 2000-108.

20. Prior to certification of closure for Unit I, the operator shall provide documentation that adequate final cover and vegetative layer are present in the deficient areas noted in Log No. 2003-199.

XII. REPORTING

1. The annual certification shall be submitted to the Illinois EPA during operation and for the entire post-closure monitoring period. The certification shall be signed by the operator or duly authorized agent, shall be filed each year by May 1 the following year, and shall state:

   a. All records required to be submitted to the Illinois EPA pursuant to 35 Ill. Adm. Code 858.207 and 858.308 have been timely and accurately submitted; and,

   b. All applicable fees required by the Act have been paid in full.

2. In addition to the annual report, the quarterly reports on groundwater and leachate monitoring shall be submitted to the Illinois EPA in accordance with the schedules described in Special Conditions VII.5, VIII.A.11 and VIII.B.19, pursuant to 35 Ill. Adm. Code 813.502.

3. The annual report for each calendar year shall be submitted to the Illinois EPA by May 1 of the following year pursuant to 35 Ill. Adm. Code, Section 813.504. The annual report shall include:

   a. Information relating to monitoring data from the leachate collection system, groundwater monitoring network, gas monitoring system and any other monitoring data specified in this permit, including:

      1) Summary of monitoring for the calendar year;

      2) Dates of submittal of comprehensive monitoring data to the Illinois EPA during the calendar year;

      3) Statistical summaries and analysis of trends;

      4) Changes to the monitoring program; and

5) Discussion of error analysis, detection limits and observed trends.

b. Proposed activities:

1) Amount of waste expected in the next year;

2) Structures to be built within the next year, and

3) New monitoring stations to be installed within the next year.

c. Any modification or significant modification affecting operation of the facility.

d. The signature of the operator or duly authorized agent as specified in 35 Ill. Adm. Code 815.102.

4. The permittee shall submit a completed "Solid Waste Landfill Groundwater, Leachate, Facility and Gas Reporting Form" (LPC 591) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. One copy of the

LPC 591 form must accompany each report; however, except for electronically formatted data, the permittee must submit one (1) original and a minimum of two (2) copies of each report you submit to the Illinois EPA. The form is not to be used for applications for supplemental permit or significant modification.

5. All certifications, logs, reports, plan sheets and groundwater and leachate monitoring data, required to be submitted to the Illinois EPA by the permittee shall be mailed to the following address:

Illinois Environmental Protection Agency
Permit Section
Bureau of Land -- #33
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Except for electronic groundwater and leachate monitoring data, the operator shall provide the Illinois EPA with the original and two (2) copies of all certifications, logs, reports and plan sheets required by this permit.

The site shall be operated in accordance with the terms and conditions of Permit No. 1994-419-LFM dated May 4, 1995, except as modified in the above document.
The applicant may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed 90 days by written notice from the applicant and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the request for an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
217/782-5544

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board, Clerk
State of Illinois Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
312/814-3620

Work required by this permit, your application or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This permit does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Sincerely,

Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

CJL BKR

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DCV IBM

Attachments: Standard Conditions
Attachment 1 - Unit I Groundwater Monitoring Wells, Piezometers and Leachate Monitoring Wells
Attachment 2 - Unit II Groundwater Monitoring Wells Piezometers and Leachate Monitoring Wells
Attachment 3 - Intrawell Background Values for Coal Unit Monitoring Wells
Attachment 4 – Unit I Background Values
Attachment 5 – Unit II Background Values
Attachment 6 – Unit II Intrawell Background Values

cc: Douglas W. Mauntel, P.E., Andrews Engineering, Inc. (by e-mail)
Jenny Trimmell, Vermilion County Health Department (by e-mail)

bcc: Bureau File
Champaign Region
Bur Filson
Ellen Robinson, Bob Mathis & Nancy Moore
Brett Bersche
Doug VanNattan

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY BUREAU OF LAND

August 22, 2001

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Bureau of Land. Special conditions may also be imposed in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire two years after date of issuance unless construction or development on this project has started on or prior to that date.

2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:

    a. to enter at reasonable times the permittee's premises where actual or potential effluent, emissions or noise sources are located or where any activity is to be conducted pursuant to this permit.

    b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit.

    c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.

    d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants.

e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;

   b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;

   c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;

   d. does not take into consideration or attest to the structural stability of any units or parts of the project;

   e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the Agency before the facility or equipment covered by this permit is placed into operation.

7. These standard conditions shall prevail unless modified by special conditions.

8. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:

   a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed; or

   b. upon finding that any standard or special conditions have been violated; or

   c. upon any violation of the Environmental Protection Act or any Rule or Regulation effective thereunder as a result of the construction or development authorized by this permit.

Attachment 1

Site No. 1838040029
Brickyard Disposal & Recycling
IEPA Permit No. 1994-419-LFM
Log No. 2014-132

UNIT 1 GROUNDWATER WELLS, PIEZOMETER AND LEACHATE MONITORING WELLS					
Well #	**Monitoring Unit**	**Status**	**Well #**	**Monitoring Unit**	**Status**
Groundwater Monitoring Wells					
R103[2]	Sand/Till	Existing, background	G130[2]	Coal	Existing background
R106	Middle Shale	Existing	G131	Coal	Existing
G21S	Sand	Abandoned	R132	Middle Shale	Existing
G21D	Coal	Abandoned	G133[2]	Coal	Existing, background
G122	Coal	Abandoned	G134[2]	Coal	Existing, background
R123	Middle Shale	Existing	G33S (G233(S))	Middle Shale	Existing
R124	Coal	Existing	T101	Middle Shale	Temporary Assessment Monitoring Well
G125	Coal	Existing	G34S (G234(S))	Coal	Existing
A126 (R126)	Coal	Existing	G35S (G235S)	Coal	Install during Unit 2, Phase 2, Cell 5 separation berm construction
R127	Coal	Existing	G36S (G236(S))	Coal	Install during Unit 2, Phase 2, Cell 5 separation berm construction
Temporary Monitoring Wells					
T101	Middle Shale	Temporary Assessment Monitoring Well	T114		Temporary Monitoring Well
T103	Middle Shale	Temporary Assessment Monitoring Well	T115		Temporary Monitoring Well
T104	Middle Shale	Temporary Assessment Monitoring Well	T116		Temporary Monitoring Well
T106		Temporary Assessment Monitoring Well	T117		Temporary Monitoring Well
T107		Temporary Assessment Monitoring Well	T118		Temporary Monitoring Well
T108		Temporary Assessment Monitoring Well	T119		Temporary Monitoring Well
T109		Temporary Assessment Monitoring Well	T120		Temporary Monitoring Well
T110		Temporary Assessment Monitoring Well	T121		Temporary Monitoring Well
T111		Temporary Assessment Monitoring Well	T122		Temporary Monitoring Well
T112		Temporary Assessment Monitoring Well	T123		Temporary Monitoring Well
T113		Temporary Assessment Monitoring Well			

Piezometers					
P100 (P-1)	Coal	Existing	P120 (G120)	Sand	Existing
P104 (P-4)	Sand Siltstone	Existing	P12S (G12S)	Sand	Existing
P107 (P-7)	Coal	Abandoned	P202 (G202)	Sand	Existing
P109 (P-9)	Basal Sand	Abandoned	P203 (G203)	Sand	Existing

Leachate Monitoring Point					
L101	Leachate Manhole	Existing	L103	Leachate Manhole	Existing
L102	Monitoring Well	Existing	L104	Leachate Manhole	Existing

Notes
1 Agency well = designations shown as primary applicant designations in parenthesis if different.
2 Designates well used to establish background statistical data.

Attachment 2

Site No. 1838040029
Brickyard Disposal & Recycling
IEPA Permit No. 1994-419-LFM
Log No. 2014-132

Unit 2 Groundwater Monitoring Wells, Piezometers and Leachate Monitoring Wells					
Well #	**Monitoring Unit**	**Status**	**Well #**	**Monitoring Unit**	**Status**
G112 (G212)	Sandy Siltstone	Abandoned, removed during Cell 3 development	G35D (G235D)	Sandy Siltstone	Install during Phase 2, Cell 5 separation berm construction
G113 (G213)	Sandy Siltstone	Abandoned, removed during Cell 3 development	G36D (G236D)	Sandy Siltstone	Install during Phase 2, Cell 7 separation berm construction
G114 (G214)	Sandy Siltstone	Existing	G037 (G237)	Sandy Siltstone	Existing
G115 (G215)	Sandy Siltstone	Existing	G038 (G238)	Sandy Siltstone	Install during Cell 7 development
G116 (G216)	Sandy Siltstone	Existing	G039[2] (G239)	Sandy Siltstone	Existing, will use as an upgradient monitoring well
G117[1] (G217)	Sandy Siltstone	Existing	G040[2] (G240)	Sandy Siltstone	Existing will use as an upgradient monitoring well
G118 (G218)	Sandy Siltstone	Existing	G041[2] (G241)	Sandy Siltstone	Existing, will use as an upgradient monitoring well
G119 (G219)	Sandy Siltstone	Existing	G042 (G242)	Sandy Siltstone	Install during Cell 7 development
G120 (G220)	Sandy Siltstone	Existing	G043 (G243)	Sandy Siltstone	Install during Cell 7 development
G121 (G221)	Sandy Siltstone	Existing	G044 (G244)	Sandy Siltstone	Existing
G122 (G222)	Sandy Siltstone	Existing, begin sampling prior to Cell 3 operation	G045 (G245)	Sandy Siltstone	Existing
G123 (G223)	Sandy Siltstone	Existing, begin sampling prior to Cell 3 operation	R046 (G246)	Sandy Siltstone	Existing
G031 (G231)	Sandy Siltstone	Existing	G047 (G247)	Sandy Siltstone	Install during Cell 4 development
G032 (G232)	Sandy Siltstone	Existing	G048 G248	Sandy Siltstone	Install during Cell 4 development
G33D (G233D)	Sandy Siltstone	Existing	G049 (G249)	Sandy Siltstone	Install during Cell 4 development
G34D (G234D)	Sandy siltstone	Existing	G107[2] (G207)	Sandy Siltstone	Existing, will use as an upgradient monitoring well
R023 (G123)		Added/Existing	R022 (G122)		Existing
Piezometers					
PILS (PZ-1-LS)	Lower Shale	Existing	P8CO (PZ-8-CO)	Coal	Existing

PISS (PZ-1-SS)	Sandy Siltstone	Existing	P8GS (PZ-8-GS)	Glacial Sand	Existing
P2LS (PZ-2-LS)	Lower Shale	Existing	P107[2] (G207)	Sandy Siltstone	Existing, will use as routine monitoring well prior to Cell 4 operation
P3L3 (PZ-3-LS)	Lower Shale	Existing	P104[3] (G204)	Sandy Siltstone	Existing
P7LS (PZ-7-LS)	Lower Shale	Existing	P106[3] (G206)	Sandy Siltstone	Existing
P7SS (PZ-7-MS)	Sandy Siltstone	Existing	P102 (G102)	Drift	Existing
P7MS (PZ-7-MS)	Middle Shale	Existing	P02S (P-2S)	Basal Sand	Existing, remove during Cell 7 development
P7US (PZ-7-US)	Upper Shale	Existing	P02D (P-2D)	Coal through Lower Shale	Existing, remove during Cell 7 development
P7GS (PZ-7-GS)	Glacial Sand	Existing	P006 (P-6)	Sandy Siltstone through Lower Shale	Existing
P8LS (PZ-8-LS)	Lower Shale	Existing	P08S (P-85)	Glacial Sand	Removed during Cell 6 development
P8SS (PZ-8-SS)	Sandy Siltstone	Existing	P08D (P-8D)	Basal Sand	Removed during Cell 6 development
P8CO (PZ-8-CO)	Coal	Existing	P011 (P-11)	Sand	Existing, remove during Cell 7 development
Leachate Monitoring Point					
L001	Leacate Collection Sump	Existing	L005	Leachate Collection Sump	Existing
L002	Leachate Collection Sump	Existing	L006	Leachate Collection Sump	Existing
L003	Leachate Collection Sump	Existing	L007	Leachate Collection Sump	Install during Cell 7 development
L004	Leachate Collection Sump	Existing			

Notes:

(1) Designates point of compliance well at the edge of the ZOA.

(2) Designates wells used initially to establish initial groundwater quality data and then used as a monitoring well as designated with landfill cell development.

(3) Designates well used to establish initial groundwater quality data and background statistical data and then used as a piezometer.

(4) Agency well # designations shown as primary, applicant designations in parenthesis if different.

Site Name: Brickyard Disposal & Recycling - Unit 1
IEPA Permit No. 1994-419-LFM

Attachment 3

Site Number : 1838040029
Log No. 2014-132

List G1 (Quarterly Groundwater Monitoring List - Indicator Parameters)
Intrawell Background values For Coal Unit and Sand Unit Monitoring Wells (99% UCL)
All units in ug/L unless otherwise specified

											SAND							
Parameter	R106	R123	R124	G125	A126	R127	G131	G33S	R132	G34S	G35S	G130	G133	G134	R103	T114	T115	T118
Ammonia as N, dissolved (mg/L)	1.01	1.28	64.04	5.04	0.13	0.84	0.82	2.79	0.81	2.02						25.42	6.76	
Arsenic, dissolved	18.00	2.00	5.00	48.00	7.00	2.00	3.00	2.00	5.00	2.00								
Boron dissolved	244.70	984.30	2125.00	546.30	40.00	606.70	60.00	2268.00	640.00	3651.00	2641.0	136.6	2417.0	2056.0	179.1			
Cadmium, dissolved	1.00	1.00	3.00	62.82	1.00	1.00	1.00	1.00	1.00	1.00								
Chloride, dissolved (mg/L)	69.00	274.64	379.20	416.03	24.36	329.52	171.94	17.00	68.00	40.16								
Chromium dissolved	1.00	3.00	2.00	1.00	5.00	1.00	1.00	1.00	1.00	1	1	1	3	1	2			
Iron, dissolved	399.00	1009.20	441529.07	175000.00	3123.49	2578.84	5966.46	900.00	110.00	47,600.00								
Lead, dissolved	2.00	2.00	2.00	34.98	2.00	2.00	2.00	2.00	2.00	2.00								
Nitrate (asN) dissolved (mg/L)	0.10	0.10	0.10	0.10	0.15	0.10	0.10	0.11	1.003	0.1	0.54	1.37	0.1	0.1	0.1			
Manganese, dissolved	5459.00	7036.29	581.75	4029.18	569.16	2118.45	490.75	164.81	246.00	7,596.00								
Magnesium dissolved (mg/L)	199.60	616.90	204.90	145.70	189.70	148.80	138.50	19.24	113.80	259.33	147.4	32.92	28.69	39.61	185.9	176.61	126.66	
Mercury, dissolved	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20								
Zinc dissolved	9.00	25.51	13.00	36.46	5.00	21.44	26.00	8.00	39.62	5.00	5.00	17.99	9.00	5.00	25.00			
Sulfate, dissolved (mg/L)	3289	1076.03	420.89	3416.62	503.60	15.00	996.83	553.80	299.3	2,041.00					943.2		1394.52	
Total Dissolved Solid (TDS) (mg/L)	2989.00	3327.07	1904.15	3720.00	1606.56	1399.28	2505.16	1081.00	941.00	3,364.00					1,870.00	1736.63	2708.41	5107.68
Cyanide, total (mg/L)	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.005	0.005								
Phenols (Total Recoverable)	10.00		10.00	10.00	10.00	10.00	10.00	110.00	37.57	10.00								
Total Organic Carbon (TOC) (mg/L)	21.00	45.65	128.33	36.60	14.20	21.55	36.82	25.00	19.00	37.10								
Specific Conductance (umhos/cm)										6,160.00						3161.94		

List G2 (Annual Groundwater Monitoring List)
All units in ug/L unless otherwise specified

Parameter	R106	R123	R124	G125	A126	R127	G131	G33S	R132	G34S	T114	T115
Aluminum, Total	22,302.00	38,543.86	16,134.75	27,406.20	157,334.50	6,850.71	127,914.35	20,982	7,661.00	10,415.00		
Ammonia, as N (mg/L)		1.39	53.50	3.92	0.25	0.97	1.06			2.90		
Antimony, total	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00		
Arsenic, total	25.00	2.00	57.82	135.10	198.32	2.00	55.13	3.00	4.00	19.60		
Barium, total	157.00	507.36	876.43	391.54	1,013.31	1,298.79	531.94	284.00	1,057.00	1,140.00		
Beryllium, total	1.00	2.00	1.00	2.00	4.00	1.00	15.55	2.00	1.00	5.00		
BOD (mg/L)		58.34	70.12	61.23	16.59	50.18	47.50			24.30		
Boron, total	650.00	621.32	1,230.00	758.76	174.42	724.36	214.21	1,820.00	1,059.00	2,219.00		
Cadmium, total	1.00	4.00	10.05	36.39	11.00	1.00	19.44	1.00	1.00	1.00		
Calcium, total (mg/L)	412.00	461.62	279.16	897.24	700.17	178.50	787.14	84.70	316.40	298.60		
COD (mg/L)		49.75	116.00	50.54	14.00	51.44	29.73			228.00		
Chloride, total (mg/L)		290.65	354.64	364.96	27.44	326.60	192.39			37.00		
Chromium, total	54.00	57.00	33.20	59.08	610.73	481.20	267.44	15.00	95.00	8.00		
Cobalt, total	29.00	47.60	33.24	41.41	233.28	1.00	115.73	65.00	115.00	71.20		
Copper, total	108.00	90.46	58.72	175.10	359.00	92.99	237.37	197.00	306.00	7.00		
Fluoride, total	500.00	500.00	540.00	1,060.00	540.00	500.00	500.00	5.00		4.40		
Iron, total	76,722.00	68,608.93	86,866.43	400,682.01	310,397.38	13,335.37	191,535.89	20,527.00	114,649.00	117,321.00		
Lead, total	39.00	161.43	880.75	118.25	489.32	8.00	88.16	33.00	69.00	5.00		
Magnesium, total (mg/L)	138.00	195.75	136.98	226.99	188.24	122.44	243.72	35.20	34.50	155.10		
Manganese, total	5,923.00	6,432.17	849.99	3,941.26	5,350.82	2,514.41	5,496.51	1,166.00	5,286.00	2,983.00	28,391.30	18451.52
Mercury, total	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		
Nickel, total	100.00	162.00	92.76	126.41	645.92	217.76	356.87	99.00	3,193.00	141.60		
Nitrate as N (mg/L)		0.27	0.51	0.46	0.28	0.44	1.22			0.78		
Oil (Hexane-Soluble) (mg/L)	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
pH	5.87-9.58	6.43-7.39	6.13-7.34	4.40-8.37	6.39-7.07	6.00-8.11	6.16-7.80	5.87-9.58	5.87-9.58	3.97-13.19	6.16-7.31	5.18-8.86
Phenols	10.00		10.00	10.00	10.00	10.00	10.00	110.00	110.00	10.00	90.99	
Potassium, total (mg/L)	12.30	20.70	66.99	108.59	35.92	6.09	20.00	15.20	13.10	33.96		
Selenium, total	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00		
Silver, total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Sodium, total (mg/L)	182.90	387.11	510.95	280.96	29.23	271.69	105.98	861.50	214.90	907.00		
Sulfate, total (mg/L)		1,402.93	430.26	2,932.55	469.36	15.00	937.24			2,861.00		1594.3
Thallium, total	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00		
Vanadium, total	10.00	40.00	10.00	102.86	357.81	10.00	219.81	20.00	20.00	10.00		
Zinc, total	150.00	305.09	283.85	422.82	1,500.61	46.00	629.41	279.00	5,354.00	132.00		

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Attachment 4 Unit I Background Values

Site No. 1838040029
Brickyard Disposal & Recycling
IEPA Permit No. 1994-419-LFM
Log No. 2014-132

FIELD PARAMETERS	STORET	BACKGROUND		
		Coal	Sand	G21S
*Bottom of Well Elevation (ft. ref MSL)	72020	---	---	---
Depth to Water (ft. below land Surface)	72019	---	---	---
Depth to Water (ft. from measuring point)	72109	---	---	---
Elevation of Groundwater Surface (ft. ref MSL)	71993	---	---	---
pH (units, unfiltered)	00400		6.17/7.21	
Specific Conductance (umhos/cm, unfiltered)	00094	2578		
Temperature of Water Sample (deg. F)	00011			

(* = Reported Annually)

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Filtered		Coal	Sand	G21S
Ammonia as (N) (mg/L)	00608	1.82	1.25	0.59
Arsenic	01000	19.0	4.0	4.0
Boron	01020	1901.0	179.1	---
Cadmium	01025	68.0	1.0	1.10
Chloride (mg/L)	00941	276.0	19.0	52.0
Chromium	01030	3.0	2.0	---
Iron	01046	7920	8858	7410
Lead	01049	16.0	2000	4.0
Manganese	01056	429.0	615600	573
Magnesium (mg/L)	00925	30.9	185.9	---
Mercury	71890	0.2	200	0.2
Nitrate (as Nitrogen) mg/L	00618	1.37	0.1	---
Sulfate (mg/L)	00946	79	293.0	340
Total Dissolved Solids (TDS, mg/L)	70300	1421	1470	780
Zinc	01090	9.0	25.0	---

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Unfiltered		Coal	Sand	G21S
Cyanide (Total, mg/L)	00720	0.005	5.0	5.0
Phenols (Total Recoverable)	32730	10.0	10.0	10.0
Total Organic Carbon (TOC) (mg/L)	00680	11.9	3.1	21.2
Acetone	81552	10.0	10.0	10.0
Alachlor	77825	0.5	0.5	0.5

Attachment 4 (cont.)

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Unfiltered		Coal	Sand	G21S
Acrylonitrile	34215	100.0	100.0	100.0
Aldicarb	39053	4.0	4.0	4.0
Aldrin	39330	0.004	0.004	0.004
Aluminum	01105	162000	3400000	59570
Ammonia (as N) (mg/L)	00610	1.75	6.0	1.07
Antimony	01097	10.0	10.0	10.0
Arsenic	01002	27.0	6300	110
Atrazine	39033	0.5	0.5	0.5
Barium	01007	1920	364100	420
Benzene	34030	5.0	5.0	5.0
Benzo(a)Pyrene	34247	10.0	10.0	10.0
Beryllium	01012	9.7	1700	2.0
BOD (mg/L)	00310	34.3	12.0	42.07
Boron	01022	1200	21300	320
Bromobenzene	81555	5.0	5.0	5.0
Bromochloromethane (chlorobromomethane)	77297	5.0	5.0	5.0
Bromodichloromethane	32101	5.0	5.0	5.0
Bromoform	32104	5.0	5.0	5.0
Bromomethane	34413	5.0	5.0	5.0
n-Butylbenzene	77342	5.0	5.0	5.0
sec-Butylbenzene	77350	5.0	5.0	5.0
tert-Butylbenzene	77353	5.0	5.0	5.0
Cadmium	01027	11.0	100	8.0
Calcium (mg/L)	00916	228	156.0	286.0
Carbofuran	81405	4.0	4.0	4.0
Carbon Disulfide	77041	5.0	5.0	5.0
Carbon Tetrachloride	32102	5.0	5.0	5.0
Chemical Oxygen Demand (COD) mg/L	00335	97.0	10.0	15.0
Chlordane	39350	0.01	0.1	0.01
Chloride (mg/L)	00940	292.0	21.0	50.0
Chlorobenzene	34301	5.0	5.0	5.0
Chloroethane	34311	10.0	10.0	10.0
Chloroform	32106	5.0	5.0	5.0
Chloromethane	34418	10.0	10.	10.0
o-Chlorotoluene	77275	5.0	5.0	5.0
p-Chlorotoluene	77277	5.0	5.0	5.0
Chromium	01034	390	700	81.0
Chlorodibromomethane (Dibromochloromethane)	32105	5.0	5.0	5.0
Cobalt	01037	45.0	11200	53.0
Copper	01042	140	40.0	97.0

Attachment 4 (cont.)

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Unfiltered		Coal	Sand	G21S
p-Cresol	77146	10.0	10.0	10.0
Cyanide (mg/L)	00720	5.0	5.0	5.0
Dalapon	38432	1.5	1.5	1.5
DDT	39370	0.01	0.01	0.01
Dibromomethane	77596	5.0	5.0	5.0
m-Dichlorobenzene	34566	10.0	10.0	10.0
o-Dichlorobenzene	34536	10.0	10.0	10.0
p-Dichlorobenzene	34571	10.0	10.0	10.0
Dichlorodifluoromethane	34668	5.0	5.0	5.0
Dichloromethane (Methylene Chloride)	34423	5.0	5.0	5.0
Dieldrin	39380	0.02	0.02	0.02
Di-N-Butyl Phthlate	39110	10.0	10.0	10.0
Dinoseb (DNBP)	81287	1.5	1.5	1.5
Endothall	38926	40.0	40.0	40.0
Endrin	39390	0.006	0.006	0.006
Ethylbenzene	78113	5.0	5.0	5.0
Ethylene Dibromide (EDB)(1,2-Dibromo ethane)	77651	10.0	10.0	10.0
Fluoride	00951	2578	1000	270
Heptachlor	39410	0.003	0.003	0.003
Heptachlor Epoxide	39420	0.24	0.24	0.24
Hexachlorobutadiene	39702	10.0	10.0	10.0
Iron	01045	20654000	123276	155600
Isophorone	34408	10.0	10.0	10.0
Isopropylbenzene	77223	5.0	5.0	5.0
p-Isopropyltoluene	77356	5.0	5.0	5.0
Lead	01051	105	7.0	110
Lindane	39782	0.009	0.009	0.009
Magnesium (mg/L)	00927	43.52	105.0	110.2
Manganese	01055	2150	779500	3360
Mercury	71900	960	500	0.2
Methoxychlor	39480	0.24	0.24	0.24
Naphthalene	34696	10.0	10.0	10.0
Nickel	01067	1410	10000	130
Nitrate-Nitrogen (mg/L)	00620	0.88	1.0	0.36
Oil(Hexane-Soluble or Equivalent) mg/L	00550	13.0	3.0	4.0
Parathion	39540	5.0	5.0	5.0
Pentachlorophenol	39032	50.0	50.0	50.0
pH	00400	7.56/8.21	7.38/7.61	6.63/8.1

Attachment 4 (cont.)

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Unfiltered		Coal	Sand	G21S
Phenols	32730	10.0	10.0	10.0
Picloram	39720	0.8	0.8	0.8
Polychlorinated Biphenyls	39516	1.0	1.0	1.0
Potassium (mg/L)	00937	36.0	4.0	22.6
n-Propylbenzene	77224	5.0	5.0	5.0
Selenium	01147	9.0	2000	2.0
Silver	01077	1.0	2.0	1.0
Simazine	39055	5.0	5.0	5.0
Sodium (mg/L)	00929	479.8	65.1	32.3
Styrene	77128	5.0	5.0	5.0
Sulfate (mg/L)	00945	79.0	195.0	340
TOC mg/L	00680	11.9	3.1	21.2
Tetrachloroethylene	34475	5.0	5.0	5.0
Tetrahydrofuran	81607	5:0	5.0	5.0
Thallium	01059	10.0	5.0	5.0
Toluene	34010	5.0	5.0	5.0
Toxaphene	39400	0.24	0.24	0.24
Trichloroethylene (or ethene)	39180	5.0	5.0	5.0
Trichlorofluoromethane	34488	5.0	5.0	5.0
Vanadium	01087	140	10000	26660
Vinyl Chloride	39175	10.0	10.0	10.0
Vinyl Acetate	77057	10.0	10.0	10.0
Xylenes	81551	5.0	5.0	5.0
m-Xylene	77134	5.0	5.0	5.0
o-Xylene	77135	5.0	5.0	5.0
p-Xylene	77133	5.0	5.0	5.0
Zinc	01092	760	75200	362
1,1,1,2-Tetrachloroethane	77562	5.0	5.0	5.0
1,1,1-Trichloroethane (methylchloroform)	34506	5.0	5.0	5.0
1,1,2,2-Tetrachloroethane	34516	5.0	5.0	5.0
1,1,2-Trichloroethane	34511	5.0	5.0	5.0
1,1-Dichloroethane	34496	5.0	5.0	5.0
1,1-Dichloroethylene	34501	5.0	5.0	5.0
1,1-Dichloropropene	77168	5.0	5.0	5.0
1,2,3-Trichlorobenzene	77613	5.0	5.0	5.0
1,2,3-Trichloropropane	77443	5.0	5.0	5.0
1,2,4-Trichlorobenzene	34551	5.0	5.0	5.0
1,2,4-Trimethylbenzene	77222	5.0	5.0	5.0

Attachment 4 (cont.)

INDICATOR PARAMETERS (ug/L)	STORET	BACKGROUND		
Unfiltered		Coal	Sand	G21S
1,2-Dibromo-3-Chloropropane (DBCP)	38760	10.0	10.0	10.0
cis-1,2-Dichloroethylene	77093	5.0	5.0	5.0
1,2-Dichloroethylene (Dichloroacetylene)	77090	5.0	5.0	5.0
trans-1,2-Dichloroethylene	34546	5.0	5.0	5.0
1,2-Dichloroethane	34531	5.0	5.0	5.0
1,2-Dichloropropane	34541	5.0	5.0	5.0
1,3,5-Trimethylbenzene	77226	5.0	5.0	5.0
1,3-Dichloropropane	77173	5.0	5.0	5.0
1,3-Dichloropropene	34561	5.0	5.0	5.0
2,2-Dichloropropane	77170	5.0	5.0	5.0
2,4,5-TP (Silvex)	39760	0.3	0.3	0.3
2,4-Dichlorophenoxyacetic Acid (2,4-D)	39730	0.3	0.3	0.3
2-Butanone (Methyl Ethyl Ketone)	81595	10.0	10.0	10.0
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	78133	5.0	5.0	5.0

Note:

a Monitoring results are reported in ug/l units unless otherwise indicated.

Attachment 5 Unit II Background Values

Site No. 1838040029
Brickyard Disposal & Recycling
IEPA Permit No. 1994-419-LFM
Log No. 2014-132

FIELD PARAMETERS		STORETS	MAPC	AGQS
pH		00400	5.31-10.17	5.31-10.17
Specific Conductance		00094	19,676.8	4560.0
Temperature of Water Sample (°F)		00011	----	----
Depth to Water (ft. below land surface)		72019	----	----
Depth to Water (ft. below measuring point)		72109	----	----
Elevation of Measuring Point (Top of casing ft. MSL)		72110	----	----
Elevation of Groundwater Surface (ft. MSL)		71993	----	----
Elevation of Bottom of Well (ft. MSL)		72020	----	----

INDICATOR PARAMETERS		STORETS	MAPC	AGQS
Ammonia (as Nitrogen) (Dissolved mg/L)		00608	16.2	1.9
Arsenic (Dissolved ug/L)		01000	43.2	10.0
Boron (Dissolved) ug/L	01020	9126.44	2115.04	
Cadmium (Dissolved) ug/L		01025	4.3	1.0
Chloride (Dissolved, mg/L)		00941	7941	1840.3
Chromium (Dissolved ug/L)		01030	21.6	5.0
Cyanide (mg/L) (Total)		00720	21.6	5.0
Lead (Dissolved) ug/L		01049	8.6	2.0
Iron (Dissolved) ug/L		01046	33452.8	7752.5
Manganese (Dissolved) ug/L		01056	3997.2	926.3
Magnesium (Dissolved) mg/L		00925	161.35	37.35
Nitrate (as N) (Dissolved) mg/L		00618	13.2	3.1
Phenol (Total) ug/L		32730	148.5	17.0
Sulfate (Dissolved, mg/L)		00946	72016.2	16689.4
Total Dissolved Solids (TDS, Dried at 180°C) (Dissolved) mg/L		70300	35490.0	8224.8
Zinc (Dissolved) ug/L		01090	228.7	53.0

PARAMETERS (ug/L)	STORETS	MAPC	AGQS
UNFILTERED (totals)			
Acetone	81552	9,924.7	2,300
Acrylonitrile	34215	431.5	100.0
Alachlor	77825	9.1	2.1
Aldicarb	39053	17.3	4.0

Attachment 5 (cont.)

PARAMETERS (ug/L)	STORETS	MAPC	AGQS
UNFILTERED (totals)			
Aldrin	39330	0.017	0.004
Aluminum	01105	526441.1	122000.0
Ammonia (as N) (mg/L)	00610	8.6	2.0
Antimony	01097	43.2	10.0
Arsenic	01002	544.1	126.1
Atrazine	39033	2.2	0.5
Barium	01007	15107.3	3501.0
Benzene	34030	21.6	5.0
Benzo(a)Pyrene	34247	43.2	10.0
Beryllium	01012	207.4	48.1
BOD (mg/L)	00310	112.2	26.0
Boron	01022	6237.1	1445.4
Bromobenzene	81555	21.6	5.0
Bromochloromethane (chlorobromomethane)	77297	21.6	5.0
Bromodichloromethane	32101	21.6	5.0
Bromoform (Tribromomethane)	32104	21.6	5.0
Bromomethane (Methyl Bromide)	34413	21.6	5.0
n-Butylbenzene	77342	21.6	5.0
sec-Butylbenzene	77350	21.6	5.0
tert-Butylbenzene	77353	21.6	5.0
Cadmium	01027	86.3	20.0
Calcium (mg/L)	00916	922.3	213.7
Carbofuran	81405	17.3	4.0
Carbon Disulfide	77041	21.6	5.0
Carbon Tetrachloride	32102	21.6	5.0
Chemical Oxygen Demand (COD) (mg/L)	00335	1527.5	354.0
Chlordane	39350	0.04	0.01
Chloride (mg/L)	00940	6747	1563.6
Chlorobenzene	34301	21.6	5.0
Chloroethane (Ethyl Chloride)	34311	43.2	10.0
Chloroform (Trichloromethane)	32106	21.6	5.0
Chloromethane (Methyl Chloride)	34418	43.6	10.0
o-Chlorotoluene	77275	21.6	5.0
p-Chlorotoluene	77277	21.6	5.0
Chromium	01034	3431.3	795.2
Chlorodibromomethane (Dibromochloromethane)	32105	21.6	5.0
Cobalt	01037	970.7	225.0
Copper	01042	711.3	164.8
p-Cresol	77146	43.2	10.0
Cyanide (mg/L)	00720	21.6	5.0
Dalapon	38432	6.5	1.5

Attachment 5 (cont.)

PARAMETERS (ug/L)	STORETS	MAPC	AGQS
UNFILTERED (totals)			
DDT	39370	0.04	0.01
Dibromomethane (Methylene Bromide)	77596	21.6	5.0
m-Dichlorobenzene (1,3 Dichlorobenzene)	34566	43.2	10.0
o-Dichlorobenzene (1,2 Dichlorobenzene)	34536	43.2	10.0
p-Dichlorobenzene (1,4 Dichlorobenzene)	34571	43.2	10.0
Dichlorodifluoromethane	34668	21.6	5.0
Dichloromethane (Methylene Chloride)	34423	21.6	5.0
Dieldrin	39380	0.2	0.1
Diethyl Phthalate	34336	43.2	10.0
Dinoseb (DNBP)	81287	6.5	1.5
Endothall	38926	172.6	40.0
Endrin	39390	0.026	0.006
Ethylbenzene	78113	21.6	5.0
Ethylene Dibromide (EDB)(1,2-Dibromo ethane)	77651	43.2	10.0
Fluoride (mg/L)	00951	138.1	32.0
Heptachlor	39410	0.003	0.01
Heptachlor Epoxide	39420	1.04	0.24
Hexachlorobutadiene	39702	43.2	10.0
Iron (mg/L)	01045	1635.9	379.1
Isophrone	34408	43.2	10.0
Isopropylbenzene	77223	21.6	5.0
p-Isopropyltoluene	77356	21.6	5.0
Lead	01051	2009.1	465.6
Lindane	39782	0.039	0.009
Magnesium (mg/L)	00927	524.7	121.6
Manganese	01055	27097.2	6279.6
Mercury	71900	7.4	1.7
Methoxyclor	39480	1.04	0.24
Naphthalene	34696	43.2	10.0
Nickel	01067	2560.0	593.3
Nitrate-Nitrogen (mg/L)	00620	13.2	3.1
Oil(Hexane-Soluble or Equivalent) (mg/L) 00550	00556 00560	97.0	22.5
Parathion	39540	21.6	5.0
Pentachlorophenol	39032	215.8	50.0
pH	00400	5.31-10.17	5.31-10.17
Phenols	32730	73.4	17.0
Picloram	39720	3.5	0.8
Polychlorinated Biphenyls	39516	4.3	1.0

Attachment 5 (cont.)

PARAMETERS (ug/L)	STORETS	MAPC	AGQS
UNFILTERED (totals)			
Potassium (mg/L)	00937	129.1	29.9
n-Propylbenzene	77224	21.6	5.0
Selenium	01147	12.9	3.0
Silver	01077	21.6	5.0
Simazine	39055	21.6	5.0
Sodium (mg/L)	00929	3732.9	865.1
Styrene	77128	21.6	5.0
Sulfate (mg/L)	00945	72016.2	16689.4
TDS (Dried at 180°)	70300	35490.0	8224.8
TOC (mg/L)	00680	73.4	17.0
Tetrachloroethylene (Perchloroethylene)	34475	21.6	5.0
Tetrahydrofuran	81607	21.6	5.0
Thallium	01059	8.6	2.0
Toluene	34010	21.6	5.0
Toxaphene	39400	1.04	0.24
Trichloroethylene (Trichloroethene)	39180	21.6	5.0
Trichlorofluoromethane	34488	21.6	5.0
Vanadium	01087	1928.1	446.8
Vinyl Chloride	39175	43.2	10.0
Vinyl Acetate	77057	43.2	10.0
Xylenes	81551	21.6	5.0
m-Xylene	77134	21.6	5.0
o-Xylene	77135	21.6	5.0
p-Xylene	77133	21.6	5.0
Zinc	01092	3871.3	897.2
1,1,1,2-Tetrachloroethane	77562	21.6	5.0
1,1,1-Trichloroethane	34506	21.6	5.0
1,1,2,2-Tetrachloroethane	34516	21.6	5.0
1,1,2-Trichloroethane (Methylchloroform)	34511	21.6	5.0
1,1-Dichloroethane	34496	21.6	5.0
1,1-Dichloroethylene	34501	21.6	5.0
1,1-Dichloropropene	77168	21.6	5.0
1,2,3-Trichlorobenzene	77613	21.6	5.0
1,2,3-Trichloropropane	77443	21.6	5.0
1,2,4-Trichlorobenzene	34551	21.6	5.0
1,2,4-Trimethylbenzene	77222	21.6	5.0
1,2-Dibromo-3-Chloropropane (DBCP)	38760	43.2	10.0
cis-1,2-Dichloroethylene	77093	21.6	5.0

Attachment 5 (cont.)

PARAMETERS (ug/L)	STORETS	MAPC	AGQS
UNFILTERED (totals)			
trans-1,2-Dichloroethylene	34546	21.6	5.0
1,2-Dichloroethane	34531	21.6	5.0
1,2-Dichloropropane (Propylene Dichloride)	34541	21.6	5.0
1,3,5-Trimethylbenzene	77226	21.6	5.0
1,3-Dichloropropane	77173	21.6	5.0
1,3-Dichloropropene	34561	21.6	5.0
2,2-Dichloropropane	77170	21.6	5.0
2,4,5-TP (Silver)	39760	1.3	0.3
2,4-Dichlorophenoxyacetic Acid (2,4-D)	39730	43.2	10.0
2-Butanone(Methyl Ethyl Ketone)	81595	180.1	13.4
2-Hexanone (Methyl Butyl Ketone)	77103	21.6	5.0
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	78133	21.6	5.0

Site Name: Brickyard Disposal & Recycling - Unit II | Attachment 6 | Site Number : 1838040029
IEPA Permit No. 1994-419-LFM | Log No. 2014-132

List G1 (Quarterly Groundwater Mointoring List - Indicator Parameters)
INTRAWELL Background values Unit II Monitoring Wells
All units in ug/L unless otherwise specified

Parameter	G107	G040	G041	R022	R023	G33D	G34D	G35D	R046	G047	G048	G049
Chromium, dissolved	5.0	1.0	1.0	1.0	1.0	5.0	1.0	1.0		1.0	1.0	1.0
Manganese, dissolved												
Magnesium, dissolved (mg/L)	1.21	42.90	13.96	360.50	136.20	6.97	39.80	7.28	146.90	348.40	249.20	60.22
Zinc, dissolved												

Parameter	G117	G114	G115	G116	G118	G119	G120	G121	G031	G032
Chromium, dissolved	20.0	4.0	1.0	111.7	1.0	1.0	1.0	1.0	2.0	23.6
Manganese, dissolved					4187.0					
Magnesium, dissolved (mg/L)	45.71	35.86	230.20	13.48	118.70	152.90	273.80	283.80	31.80	7.22
Zinc, dissolved			1108.0							

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