

CHANGES TO LEACHATE MANAGEMENT/MONITORING CONDITIONS

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.  
\*\*\*DESCRIBE IF LEACHATE APPROVED\*\*\* 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 No. «LogNo».
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). Leachate removal as such shall be performed throughout the period that the leachate collection/management system must be operated in accordance with Permit Application Log No. «LogNo».
3. ~~In the event that the leachate monitoring program detects a constituent in the leachate that is not already in the parameter lists for the groundwater monitoring program, the operator shall, within 90 days of such detection, submit to the Illinois EPA a permit application which either:~~
  - a. ~~Proposes to add the constituent to the groundwater monitoring program; or~~
  - b. ~~Demonstrates why adding the constituent to the groundwater monitoring program is not necessary or appropriate.<sup>1</sup>~~
- 4.3. The following monitoring points are to be used in the Leachate Monitoring Program for this facility:<sup>2</sup>

Leachate Monitoring Points

<u>Applicant Designation</u>	<u>Illinois EPA Designation</u>
<b>LM101</b>	<b>L101</b>
<b>LM102</b>	<b>L102</b>
<b>LM103</b>	<b>L103</b>

- 5.4. Pursuant to 35 IAC, Sections 811.309(g), ~~811.319(a)(1)(C)(ii)~~, 810.103, 722.111 and 721, Subpart C, leachate monitoring (i.e., sampling, measurements and analysis) must be ~~implemented at each leachate~~

monitoring point when that device accumulates a measurable quantity of leachate for the first time conducted in accordance with the permit for this facility. The concentrations or values for the parameters contained in List L1 (below) shall must be determined on a quarterly semi-annual basis for each "producing" monitoring point and the results must be submitted with the quarterly groundwater reports. ~~The concentrations for the parameters contained in List L2 (also below) shall be determined annually.~~<sup>3</sup>

\*\*\*VARIABLE\*\*\* Each year, the permittee shall collect a representative leachate sample and have it tested for the parameters contained in List L3 ~~2~~.

Condition VII.64. 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 L1**

<u>Routine Leachate Monitoring Parameters</u>	<u>STORET</u>
Temp. of Leachate Sample (°F)	00011
Specific Conductance (umhos/cm)	00094
pH (S.U.)	00400
Elevation Leachate Surface (ft. AMSL)	71993
BTM of Well Elevation (ft. AMSL)	72020
Leachate Level from Measuring Point ft.	72109
Arsenic (total)	01002
Barium (total)	01007
Cadmium (total) mg/l	01027
Chromium (total)	01034
Copper (total)	01042
Cyanide (mg/L)	00720
Fluoride (mg/L)	00951
Iron (total)	01045
Lead (total)	01051
Manganese (total)	01055
Nickel (total)	01067
Oils (hexane soluble or equivalent) (mg/L)	00550
Phenols	32730
Silver (total)	01077
Zinc (total)	01092
Total Dissolved Solids (TDS) (mg/L)	70300
Total Suspended Solids (mg/L)	00530
Ammonia Nitrogen N (mg/L)	00610
Bacteria (Fecal Coliform) (mg/L)	31616
Biochemical Oxygen Demand(BOD <sub>5</sub> ) (mg/L)	00310

Mereury (total)	71900
Phosphorous	00665
Chemical Oxygen Demand (COD) (mg/L)	00335

LIST L2

Annual Leachate Monitoring Parameters — STORET

1,1,1,2 Tetrachloroethane	77562
1,1,1 Trichloroethane	34506
1,1,2,2 Tetrachloroethane	34516
1,1,2 Trichloroethane	34511
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
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	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
Carbofuran	81405
Carbon Disulfide	77041
Carbon Tetrachloride	32102
Chlordane	39350
Chloride mg/l	00940
Chlorobenzene	34301
Chloroethane	34311
Chloroform	32106
Chloromethane	34418
Chrysene	34320

Cis-1,2-Dichloroethylene	77093
Cobalt	01037
DDT	39370
Delta-BHC	46323
Di-N-Butyl Phthalate	39110
Di-N-Octyl Phthalate	34596
Dibenzo (a,h) Anthracene	34556
Dibromochloromethane	32105
Dibromomethane	77596
Dichlorodifluoromethane	34668
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
Ethylbenzene	78113
Ethylene Dibromide (EDB)	77651
Fluoranthene	34376
Fluorene	34381
Heptachlor Epoxide	39420
Heptachlor	39410
Hexachlorobenzene	39700
Hexachlorobutadiene	39702
Hexachlorocyclopentadiene	34386
Hexachloroethane	34396
Ideno (1,2,3-cd) Pyrene	34403
Iodomethane	77424
Isopropylbenzene	77223
Lindane	39782
Magnesium	00927
Methoxychlor	39480
Methyl Ethyl Ketone	81595
Methylene Chloride	34423
Naphthalene	34696
Nitrate-Nitrogen	00620
Nitrobenzene	34447
Parathion	39540
Pentachlorophenol	39032
Phenanthrene	34461
Polychlorinated Biphenyls	39516
Potassium	00937
Pyrene	34469

Selenium	01147
Sodium	00929
Styrene	77128
Sulfate	00945
Tert-Butylbenzene	77353
Tetrachlorodibenzo-p-Dioxins	34675
Tetrachloroethylene	34475
Tetrahydrofuran	81607
Thallium	01059
Tin	01102
Toluene	34010
Total Organic Carbon (TOC)	00680
Toxaphene	39400
Trans-1,2-Dichloroethylene	34546
Trans-1,3-Dichloropropene	34699
Trichloroethylene	39180
Trichlorofluoromethane	34488
Vinyl Acetate	77057
Vinyl Chloride	39175
Xylene	81551
m-Dichlorobenzene	34566
n-Butylbenzene	77342
n-Nitrosodimethylamine	34438
n-Nitrosodiphenylamine	34433
n-Nitrosodipropylamine	34428
n-Propylbenzene	77224
o-Chlorotoluene	77275
o-Dichlorobenzene	34536
o-Nitrophenol	34591
o-Xylene	77135
p-Chlorotoluene	77277
p-Cresol	77146
p-Dichlorobenzene	34571
p-Isopropyltoluene	77356
m+p-Xylene	85795
sec-Butylbenzene	77350

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>pH (S.U.)</u>	<u>00400</u>
<u>Elevation Leachate Surface (ft. AMSL)</u>	<u>71993</u>
<u>Bottom of Well Elevation (ft. AMSL)</u>	<u>72020</u>
<u>Leachate Level from Measuring Point (ft.)</u>	<u>72109</u>

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>Arsenic (total)</u>	<u>01002</u>
<u>Barium (total)</u>	<u>01007</u>
<u>Cadmium (total)</u>	<u>01027</u>
<u>Iron (total)</u>	<u>01045</u>
<u>Ammonia Nitrogen – N</u>	<u>00610</u>
<u>Bacteria (Fecal Coliform)</u>	<u>31616</u>
<u>Biochemical Oxygen Demand (BOD5) (mg/L)</u>	<u>00310</u>
<u>1,1,1,2-Tetrachloroethane</u>	<u>77562</u>
<u>1,1,1-Trichloroethane</u>	<u>34506</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>34516</u>
<u>1,1,2-Trichloroethane</u>	<u>34511</u>
<u>1,1-Dichloroethane</u>	<u>34496</u>
<u>1,1-Dichloroethylene</u>	<u>34501</u>
<u>1,1-Dichloropropene</u>	<u>77168</u>
<u>1,2,3-Trichlorobenzene</u>	<u>77613</u>
<u>1,2,3-Trichloropropane</u>	<u>77443</u>
<u>1,2,4-Trichlorobenzene</u>	<u>77351</u>
<u>1,2,4-Trimethylbenzene</u>	<u>77222</u>
<u>1,2-Dibromo-3-Chloropropane</u>	<u>38760</u>
<u>1,2-Dichloroethane</u>	<u>34531</u>
<u>1,2-Dichloropropane</u>	<u>34541</u>
<u>1,3,5-Trimethylbenzene</u>	<u>77226</u>
<u>1,3-Dichloropropane</u>	<u>77173</u>
<u>1,3-Dichloropropene</u>	<u>34716</u>
<u>1,4-Dichloro-2-Butene</u>	<u>73547</u>
<u>1-Propanol</u>	<u>77018</u>
<u>2,2-Dichloropropane</u>	<u>77170</u>
<u>2,4,5-tp (Silvex)</u>	<u>39730</u>
<u>2,4,6-Trichlorophenol</u>	<u>34621</u>
<u>2,4-Dichlorophenol</u>	<u>34601</u>
<u>2,4-Dichlorophenoxyacetic Acid (2,4-D)</u>	<u>39730</u>
<u>2,4-Dimethylphenol</u>	<u>34606</u>
<u>2,4-Dinitrotoluene</u>	<u>34611</u>
<u>2,4-Dinitrophenol</u>	<u>34616</u>
<u>2,6-Dinitrotoluene</u>	<u>34626</u>
<u>2-Chloroethyl Vinyl Ether</u>	<u>34576</u>
<u>2-Chloronaphthalene</u>	<u>34581</u>

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>2-Chlorophenol</u>	<u>34586</u>
<u>2-Hexanone</u>	<u>77103</u>
<u>2-Propanol (Isopropyl Alcohol)</u>	<u>81310</u>
<u>3,3-Dichlorobenzidine</u>	<u>34631</u>
<u>4,4-DDD</u>	<u>39310</u>
<u>4,4-DDE</u>	<u>39320</u>
<u>4,4-DDT</u>	<u>39300</u>
<u>4,6-Dinitro-O-Cresol</u>	<u>34657</u>
<u>4-Bromophenyl Phenyl Ether</u>	<u>34636</u>
<u>4-Chlorophenyl Phenyl Ether</u>	<u>34641</u>
<u>4-Methyl-2-Pentanone</u>	<u>78133</u>
<u>4-Nitrophenol</u>	<u>34646</u>
<u>Acenaphthene</u>	<u>34205</u>
<u>Acetone</u>	<u>81552</u>
<u>Alachlor</u>	<u>77825</u>
<u>Aldicarb</u>	<u>39053</u>
<u>Aldrin</u>	<u>39330</u>
<u>Alpha – BHC</u>	<u>49689</u>
<u>Aluminum</u>	<u>01105</u>
<u>Anthracene</u>	<u>34220</u>
<u>Antimony</u>	<u>01097</u>
<u>Atrazine</u>	<u>39033</u>
<u>Benzene</u>	<u>34030</u>
<u>Benzo (a) Anthracene</u>	<u>34526</u>
<u>Benzo (a) Pyrene</u>	<u>34247</u>
<u>Benzo (b) Fluoranthene</u>	<u>34230</u>
<u>Benzo (ghi) Perylene</u>	<u>34247</u>
<u>Benzo (k) Fluoranthene</u>	<u>34242</u>
<u>Beryllium (total)</u>	<u>01012</u>
<u>Beta – BHC</u>	<u>39338</u>
<u>Bicarbonate (mg/L as CaCO<sub>3</sub>)</u>	<u>00425</u>
<u>Bis (2-Chloro-1-Methylethyl) Ether</u>	<u>73522</u>
<u>Bis (2-Chloroethoxy) Methane</u>	<u>34278</u>
<u>Bis (2-Chloroethyl) Ether</u>	<u>34273</u>
<u>Bis (2-Ethylhexyl) Ether</u>	<u>77537</u>
<u>Bis (2-Ethylhexyl) Phthalate</u>	<u>39100</u>
<u>Bis(Chloromethyl) Ether</u>	<u>34268</u>



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<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>Boron</u>	<u>01022</u>
<u>Bromobenzene</u>	<u>34705</u>
<u>Bromochloromethane</u>	<u>34707</u>
<u>Bromodichloromethane</u>	<u>32101</u>
<u>Bromoform</u>	<u>32104</u>
<u>Bromomethane</u>	<u>34413</u>
<u>Butanol</u>	<u>45265</u>
<u>Butyl Benzyl Phthalate</u>	<u>34292</u>
<u>Calcium mg/l</u>	<u>00916</u>
<u>Carbofuran</u>	<u>81405</u>
<u>Carbon Disulfide</u>	<u>77041</u>
<u>Carbon Tetrachloride</u>	<u>32102</u>
<u>Chemical Oxygen Demand (COD) (mg/L)</u>	<u>00335</u>
<u>Chlordane</u>	<u>39350</u>
<u>Chloride mg/l</u>	<u>00940</u>
<u>Chlorobenzene</u>	<u>34301</u>
<u>Chloroethane</u>	<u>34311</u>
<u>Chloroform</u>	<u>32106</u>
<u>Chloromethane</u>	<u>34418</u>
<u>Chromium (hexavalent)</u>	<u>01220</u>
<u>Chromium (total)</u>	<u>01034</u>
<u>Chrysene</u>	<u>34320</u>
<u>Cis-1,2-Dichloroethylene</u>	<u>77093</u>
<u>Cobalt (total)</u>	<u>01037</u>
<u>Copper (total)</u>	<u>01042</u>
<u>Cyanide</u>	<u>00720</u>
<u>DDT</u>	<u>39370</u>
<u>Delta – BHC</u>	<u>46323</u>
<u>Di-N-Butyl Phthalate</u>	<u>39110</u>
<u>Di-N-Octyl Phthalate</u>	<u>34596</u>
<u>Dibenzo (a,h) Anthracene</u>	<u>34556</u>
<u>Dibromochloromethane</u>	<u>32105</u>
<u>Dibromomethane</u>	<u>77596</u>
<u>Dichlorodifluormethane</u>	<u>34546</u>
<u>Dieldrin</u>	<u>39380</u>
<u>Diethyl Phthalate</u>	<u>34336</u>
<u>Dimethyl Phthalate</u>	<u>34341</u>

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>Endosulfan I</u>	<u>34361</u>
<u>Endosulfan II</u>	<u>34356</u>
<u>Endosulfan Sulfate</u>	<u>34351</u>
<u>Endrin</u>	<u>39390</u>
<u>Endrin Aldehyde</u>	<u>34366</u>
<u>Ethyl Acetate</u>	<u>81585</u>
<u>Ethylbenzene</u>	<u>78113</u>
<u>Ethylene Dibromide (EDB)</u>	<u>77651</u>
<u>Fluoranthene</u>	<u>34376</u>
<u>Flourene</u>	<u>34381</u>
<u>Fluoride</u>	<u>00951</u>
<u>Heptachlor Epoxide</u>	<u>39420</u>
<u>Heptachlor</u>	<u>39410</u>
<u>Hexachlorobenzene</u>	<u>39700</u>
<u>Hexachlorobutadiene</u>	<u>39702</u>
<u>Hexachlorocyclopentadiene</u>	<u>34386</u>
<u>Hexachloroethane</u>	<u>34396</u>
<u>Ieno (1,2,3-cd) Pyrene</u>	<u>34403</u>
<u>Iodomethane</u>	<u>77424</u>
<u>Isopropylbenzene</u>	<u>77223</u>
<u>Lead (total)</u>	<u>01051</u>
<u>Lindane</u>	<u>39782</u>
<u>Magnesium (total)</u>	<u>00927</u>
<u>Manganese (total)</u>	<u>01055</u>
<u>Mercury (total)</u>	<u>71900</u>
<u>Methoxychlor</u>	<u>39480</u>
<u>Methyl Chloride</u>	<u>34418</u>
<u>Methyl Ethyl Ketone</u>	<u>81595</u>
<u>Methylene Bromide</u>	<u>77596</u>
<u>Methylene Chloride</u>	<u>34423</u>
<u>Naphthalene</u>	<u>34696</u>
<u>Nickel (total)</u>	<u>01067</u>
<u>Nitrate-Nitrogen</u>	<u>00620</u>
<u>Nitrobenzine</u>	<u>34447</u>
<u>Oil. Hexane Soluble (or Equivalent)</u>	<u>00550</u>
<u>Parathion</u>	<u>39540</u>
<u>Pentachlorophenol</u>	<u>39032</u>

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>Phenanthrene</u>	<u>34461</u>
<u>Phenols</u>	<u>32730</u>
<u>Phosphorous</u>	<u>00665</u>
<u>Polychlorinated Biphenyls</u>	<u>39516</u>
<u>Potassium</u>	<u>00937</u>
<u>Pyrene</u>	<u>34469</u>
<u>Selenium</u>	<u>01147</u>
<u>Silver (total)</u>	<u>01077</u>
<u>Specific Conductance (umhos/cm)</u>	<u>00094</u>
<u>Sodium</u>	<u>00929</u>
<u>Styrene</u>	<u>77128</u>
<u>Sulfate</u>	<u>00945</u>
<u>Temperature of Leachate Sample (°F)</u>	<u>00011</u>
<u>Tert-Butylbenzene</u>	<u>34729</u>
<u>Tetrachlorodibenzo-p-Dioxins</u>	<u>34675</u>
<u>Tetrachloroethylene</u>	<u>34475</u>
<u>Tetrahydrofuran</u>	<u>81607</u>
<u>Thallium</u>	<u>01059</u>
<u>Tin</u>	<u>01102</u>
<u>Toluene</u>	<u>34010</u>
<u>Total Organic Carbon (TOC)</u>	<u>00680</u>
<u>Total Dissolved Solids (TDS) mg/l</u>	<u>70300</u>
<u>Total Suspended Solids (TSS) mg/l</u>	<u>00530</u>
<u>Toxaphene</u>	<u>39400</u>
<u>Trans-1,2-Dichloroethylene</u>	<u>34546</u>
<u>Trans-1,3-Dichloropropene</u>	<u>34699</u>
<u>Trichloroethylene</u>	<u>39180</u>
<u>Trichlorofluoromethane</u>	<u>34488</u>
<u>Vinyl Acetate</u>	<u>77057</u>
<u>Vinyl Chloride</u>	<u>39175</u>
<u>Xylene</u>	<u>81551</u>
<u>Zinc (total)</u>	<u>01092</u>
<u>m-Dichlorobenzene</u>	<u>34581</u>
<u>m+p-Xylene</u>	<u>01092</u>
<u>n-Butylbenzene</u>	<u>77342</u>
<u>n-Nitrosodimethylamine</u>	<u>34438</u>
<u>n-Nitrosodiphenylamine</u>	<u>34433</u>

LIST LI

<u>Leachate Monitoring Parameters</u>	<u>STORET</u>
<u>n-Nitrosodipropylamine</u>	<u>34428</u>
<u>n-Propylbenzene</u>	<u>77224</u>
<u>o-Chlorotoluene</u>	<u>77910</u>
<u>o-Dichlorobenzene</u>	<u>34536</u>
<u>o-Nitrophenol</u>	<u>34591</u>
<u>o-Xylene</u>	<u>77135</u>
<u>p-Chlorotoluene</u>	<u>77911</u>
<u>p-Cresol</u>	<u>77152</u>
<u>p-Dichlorobenzene</u>	<u>34571</u>
<u>p-Isopropyltoluene</u>	<u>34723</u>
<u>p-Nitrophenol</u>	<u>34646</u>
<u>sec-Butylbenzene</u>	<u>77350</u>

\*\*\*VARIABLE\*\*\* LIST L32

RCRA Parameters for Leachate and Condensate

<u>Ignitability</u>	<u>STORET</u>
Flashpoint, Pensky-Martens Closed Cup (°F)	00497
<u>Corrosivity</u>	
pH (S.U.)	00400
<u>Reactivity</u>	
Reactive Cyanide	99040
Reactive Sulfide	99042
<u>Toxicity</u>	<u>STORET (TCLP/TOTAL)</u>
Arsenic	99012/01002
Barium	99014/01007
Cadmium	99016/01027
Chromium	99018/01034
Lead	99020/01051
Mercury	99022/71900
Selenium	99024/01147
Silver	99026/01077
Endrin	99028/39390
Lindane	99030/39782
Methoxychlor	99032/39480

Toxaphene	99034/39400
2,4-D	99036/39730
2,4,5-TP Silvex	99038/39760
Benzene	99128/34030
Carbon tetrachloride	99050/32102
Chlordane	99148/39350
Chlorobenzene	99096/34301
Chloroform	99149/32106
o-Cresol	99150/77152
m-Cresol	99151/77146
p-Cresol	99152/77146
Cresol	99153/79778
1,4-Dichlorobenzene	99154/34571
1,2-Dichloroethane	99155/34531
1,1-Dichloroethylene	99156/34501
2,4-Dinitrotoluene	99157/34611
Heptachlor (and its epoxide)	99158/39410 and 39420
Hexachlorobenzene	99159/39700
Hexachloro-1,3-Butadiene	99160/39702
Hexachloroethane	99161/34396
Methyl Ethyl Ketone	99060/81595
Nitrobenzene	99062/34447
Pentachlorophenol	99064/39032
Pyridine	99066/77045
Tetrachloroethylene	99068/34475
Trichloroethylene	99076/39180
2,4,5-Trichlorophenol	99078/77687
2,4,6-Trichlorophenol	99080/34621
Vinyl Chloride	99162/39175

Notes for all leachate monitoring parameters:

\*\*\*VARIABLE\*\*\* a. Flashpoint shall be reported in degrees Fahrenheit. The parameters for reactivity and toxicity shall be reported in parts per million.

\*\*\*VARIABLE\*\*\* b. The permittee shall obtain metals and organics analysis. Either procedure may be utilized (i.e., total or TCLP), but any constituent whose total concentration exceeds the TCLP limit specified in 35 IAC, Section 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.

c. 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.

- d. All parameters shall be determined from unfiltered samples.
  - e. The monitoring results should be reported in ug/l units unless otherwise indicated.
6. The schedule for leachate sample collection and submission of ~~quarterly~~ leachate monitoring results is as follows illustrated below:<sup>4</sup>

<u>Sampling Quarter</u>	<u>Sampling List</u>	<u>Report Due Date</u>
Jan-Feb (1st)	All leachate points List L1	April 15
April-May (2nd)	All leachate points List L1	July 15
	All leachate points List L2	July 15
<b>***VARIABLE***</b>		<b>LREP</b>
	List L3	July 15
July-Aug (3rd)	All leachate points List L1	October 15
Oct-Nov (4th)	All leachate points List L1	January 15

<u>Sampling Period</u>	<u>Sampling Points / Lists</u>	<u>Report Due Date</u>
April-May 2008	<b>L101</b> / L1, LREP / L2	July 15, 2008
Oct-Nov 2008	<b>L102</b> / L1	January 15, 2009
April-May 2009	<b>L103</b> / L1, LREP / L2	July 15, 2009
Oct-Nov 2009	<b>L101</b> / L1	January 15, 2010
April-May 2010	<b>L102</b> / L1, LREP / L2	July 15, 2010
Oct-Nov 2010	<b>L103</b> / L1	January 15, 2011
April-May 2011	<b>L101</b> / L1, LREP / L2	July 15, 2011
Oct-Nov 2011	<b>L102</b> / L1	January 15, 2012
April-May 2012	<b>L103</b> / L1, LREP / L2	July 15, 2012
Oct-Nov 2012	<b>L101</b> / L1	January 15, 2013

L1 - ~~Routine~~ Leachate Monitoring Parameters

~~L2 - Annual Leachate Parameters~~

**\*\*\*VARIABLE\*\*\*** L3 - Annual TCLP Leachate Parameters

LREP – Reporting Label for Representative Leachate Sample

7. 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](http://www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html).

7. ~~Leachate Monitoring Frequency~~

- a. ~~Pursuant to 35 IAC 811.309(g)(1), initially, representative samples of leachate shall be collected from each established leachate monitoring location and tested in accordance with sub Sections 811.309(g)(2)(G) and (g)(3)(D) at a frequency of once per quarter.~~
- b. ~~The permittee may submit an application for significant modification of permit after leachate samples have been obtained and tested for at least eight quarters requesting reduction of sampling frequency to semi-annual monitoring in accordance with 35 IAC 811.309(g)(1). If for any reason, insufficient leachate is obtained to yield a sample for testing during a given quarterly monitoring attempt, such attempt shall not count toward the eight quarters leachate monitoring requirement.<sup>5</sup>~~

## NOTES REGARDING CHANGES

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<sup>1</sup> Condition VII.3 is being deleted due to the changes in 811.319(a)(2)(A)(ii), shown below, and how GAU is implementing it.

2) Criteria for Choosing Constituents to be Monitored

A) The operator shall monitor each well for constituents that will provide a means for detecting groundwater contamination. Constituents shall be chosen for monitoring if they meet the following requirements:

i) The constituent appears in, or is expected to be in, the leachate; and

ii) Is contained within the following list of constituents:

Ammonia – Nitrogen (dissolved)

Arsenic (dissolved)

Boron (dissolved)

Cadmium (dissolved)

Chloride (dissolved)

Chromium (dissolved)

Cyanide (total)

Lead (dissolved)

Magnesium (dissolved)

Mercury (dissolved)

Nitrate (dissolved)

Sulfate (dissolved)

Total Dissolved Solids (TDS)

Zinc (dissolved)

~~ii) The Board has established for the constituent a public or food processing water supply standard, at 35 Ill. Adm. Code 302, the Board has established a groundwater quality standard under the Illinois Groundwater Protection Act [415 ILCS 55], or the constituent may otherwise cause or contribute to groundwater contamination.~~

<sup>2</sup> This condition is not being changed. However, note the addition of 811.309(g)(4), shown below. The purpose of 811.309(g)(4) is to ensure that leachate monitoring programs are capable of detecting the spatial variability of leachate quality within a landfill. As new landfills are permitted, applicants will be required to propose at least the number of leachate monitoring points prescribed by 811.309(g)(4) **or** demonstrate to the Illinois EPA's satisfaction that fewer leachate monitoring points are needed due to site specific circumstances. Also, applicants requesting to reduce the number of leachate monitoring points at existing landfill will be asked to address the requirements of 811.309(g)(4).

(The leachate monitoring designations, in boldface, are included for illustrative purposes.)

4) A network of leachate monitoring locations shall be established, capable of characterizing the leachate produced by the unit. Unless an alternate network has been approved by the Agency, the network of leachate monitoring locations shall include:

A) At least four leachate monitoring locations; and

B) At least one leachate monitoring location for every 25 acres within the unit's waste boundaries.



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NOTES (CONTINUED)

<sup>3</sup> The narrative of this condition has been changed to reflect the changes to 811.309(g)(1) and the addition of 811.309(g)(5), shown below. Also, the L1 list of leachate monitoring parameters has been modified to reflect the addition of Appendix C to Part 811. The L2 list has been deleted.

1) Representative samples of leachate shall be collected from each established leachate monitoring location and tested in accordance with subsection (g)(5) and tested for the parameters referenced in subsections (g)(2)(G) and (g)(3)(D) ~~at a frequency of once per quarter until such time as samples have been obtained and tested for at least eight quarters. If for any reason insufficient leachate is obtained to yield a sample for testing during a given quarterly monitoring attempt, such attempt shall not count toward the eight quarters' leachate monitoring requirement. Thereafter, the frequency of testing shall be changed to semi-annual for any monitored constituent while the leachate management system is in operation. However, the~~ The Agency may, by permit condition, require additional, or allow less, leachate sampling and testing as necessary to ensure compliance with this Section and Sections 811.312, 811.317, and 811.319.

5) Leachate monitoring shall be performed at least once every six months and each established leachate monitoring location shall be monitored at least once every two years.

<sup>4</sup> The narrative and table of this condition have been modified to reflect the changes to 811.309(g)(1) and the addition of 811.309(g)(5), shown in Note 3. The table illustrates the leachate monitoring schedule for a landfill with three (3) leachate monitoring points at which leachate is managed by discharge into a sewer to a POTW. The table in the attachment to these notes shows the frequency of leachate sampling required by 811.309(g)(5) for landfills with various numbers of leachate monitoring points.

The final paragraph of this condition has been converted into a stand-alone condition.

<sup>5</sup> Condition VII.3 is being deleted due to the changes in 811.319(g)(1), shown in Note 3.

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No. of Leachate Monitoring Points	Frequency @ which Each Point Is Sampled (year)	Number of Points Sampled during a Sampling Event
1	1/2	1
2	1	1
3	1 1/2	1
4	2	1
5	2	1,1,1,2
6	2	1,1,2,2
7	2	1,2,2,2
8	2	2
9	2	2,2,2,3
10	2	2,2,3,3
11	2	2,3,3,3
12	2	3
13	2	3,3,3,4
14	2	3,3,4,4
15	2	3,4,4,4
16	2	4
17	2	4,4,4,5
18	2	4,4,5,5
19	2	4,5,5,5
20	2	5