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JAN 21 2005

STATE OF ILLINOIS
Pollution Control Board

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

BP PRODUCTS NORTH AMERICA, INC.,)

Petitioner,)

v.)

ILLINOIS ENVIRONMENTAL)

PROTECTION AGENCY,)

Respondent.)

PCB No. 05- 138
(RCRA - Ninety Day Extension)

NOTICE

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

John Dennison
URS Corporation
122 South Michigan Avenue
Suite 1920
Chicago, IL 60603

PLEASE TAKE NOTICE that I have today filed with the office of the Clerk of the Pollution Control Board a REQUEST FOR NINETY DAY EXTENSION OF APPEAL PERIOD, copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



John J. Kim
Assistant Counsel
Special Assistant Attorney General
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)
Dated: January 19, 2005

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OF THE STATE OF ILLINOIS

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STATE OF ILLINOIS
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REQUEST FOR NINETY DAY EXTENSION
OF APPEAL PERIOD

NOW COMES the Respondent, the Illinois Environmental Protection Agency ("Illinois EPA"), by one of its attorneys, John J. Kim, Assistant Counsel and Special Assistant Attorney General, and, pursuant to Section 40(a)(1) of the Illinois Environmental Protection Act (415 ILCS 5/40(a)(1)) and 35 Ill. Adm. Code 105.208, hereby requests that the Illinois Pollution Control Board ("Board") grant an extension of the thirty-five (35) day period for petitioning for a hearing to April 25, 2005, or any other date not more than a total of one hundred twenty-five (125) days from the date of service of the Illinois EPA's final decision. The 125th day from the date of service is April 24, 2005, a Sunday. In support thereof, the Illinois EPA respectfully states as follows:

1. On December 15, 2004, the Illinois EPA issued a final decision to the Petitioner. (Exhibit A)
2. On January 18, 2005, the Petitioner made a written request to the Illinois EPA for an extension of time by which to file a petition for review, asking the Illinois EPA join in requesting that the Board extend the thirty-five day period for filing a petition to ninety days. The earliest date that service could be complete was December 16, 2004. (Exhibit B)

3. The additional time requested by the parties may eliminate the need for a hearing in this matter or, in the alternative, allow the parties to identify issues and limit the scope of any hearing that may be necessary to resolve this matter.

WHEREFORE, for the reasons stated above, the parties request that the Board, in the interest of administrative and judicial economy, grant this request for a ninety-day extension of the thirty-five day period for petitioning for a hearing.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



John J. Kim
Assistant Counsel
Special Assistant Attorney General
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
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Dated: January 19, 2005

This filing submitted on recycled paper.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
 JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/524-3300

December 15, 2004

Certified Mail
7002 3150 0000 1220 5761

Mr. Gregory S. Jevyak
 Environmental Business Manager
 BP Products North America Inc.
 301 Evans Avenue
 P.O. Box 167
 Wood River, Illinois 62095

Re: 1191155009 -- Madison County
 Amoco, Riverfront Property
 BP Products North America Inc./Riverfront Property
 ILD980503106
 Log No. B-145; 2001-075
 Received: April 6, 2004 & October 8, 2004
 RCRA Permit/State Permit File

Dear Mr. Jevyak:

This is in response to two documents submitted to the Illinois EPA regarding investigative activities being carried out in a portion of the above referenced facility referred to as the Permitted Non-Hazardous Waste Landfill (PNWL). The subject submittals were prepared and submitted on your behalf by Mr. Ryan P. Hartley, P.E., and Frederick W. Johnson, P.E., of URS. As you know, the Illinois EPA issued a permit for this unit on April 26, 1986 (Permit 1986-03-DE). Several supplemental permits for the PNWL have been issued by the Illinois EPA since 1986. In addition, on November 4, 1993, the Illinois EPA issued a RCRA permit to Amoco Oil Company (now known as BP Products North America Inc. (BP)), which required evaluation of several solid waste management units (SWMUs) in the vicinity of the landfill.

The documents being responded to in this letter are as follows:

1. A submittal entitled, Compliance Commitment Agreement Additional Information Requested, dated April 6, 2004, which addresses deficiency comments for the Compliance Commitment Agreement related to the Violation Notice L-2000-01288. All deficiency comments are related to exceedances of Class I Groundwater Quality Standards detected during a May 3-4, 2000 split sampling event with the facility.
2. A submittal entitled, Compliance Commitment Agreement Additional Information Requested, dated October, 2004, in which the facility responds to recommendations made by the Illinois EPA regarding statistical analyses for the PNWL and associated

EXHIBIT

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A

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groundwater, also related to a deficiency comment for the Compliance Commitment Agreement related to the Violation Notice L-2000-01288.

The above subject submittals were reviewed as requests to modify the approved RCRA corrective action program for the BP Riverfront property and are hereby approved subject to the following conditions and modifications:

1. The Illinois EPA has determined that the post-closure care period for the PNWL started June 15, 1995. Post-closure care for the PNWL must continue for at least fifteen (15) years following that date.
2. BP has a RCRA permit and is required to conduct corrective action, as necessary, on the SWMUs at the facility. As such, post-closure care of the PNWL shall be carried out under the provisions of BP's RCRA permit. BP shall not submit any additional applications for supplemental permits to address required modifications to the approved post-closure care program; rather, such modifications must be submitted as requests to modify the approved RCRA corrective action program for the landfill.
3. The Illinois EPA has determined that the PNWL post-closure groundwater monitoring program will remain subject to the requirements established under 35 Ill. Adm. Code, Part 807, and as specified in Attachments A, B, and C of this Illinois EPA response. A supplemental solid waste permit will no longer be issued for groundwater activities. All future groundwater activities at the PNWL will be carried out under the corrective action provisions (Section V) of the facility's RCRA permit.
4. Based on information submitted by the facility, the Illinois EPA has determined that chromium, mercury, silver, and phenols were all detected within the leachate. Therefore, the facility must continue to monitor these parameters within the sampling program.
5. In the Illinois EPA deficiency Comment 4 faxed July 25, 2001, well G109 was one of the wells listed as having exceedances. However, it has been determined that well G109 is an upgradient well that is not within the PNWL monitoring network, and should not be addressed within the deficiency comments. BP discussed well G119, rather than well G109, which has no exceedance issue. Therefore, monitoring wells G109 and G119 do not require any further investigation at this time.
6. Based on information submitted by the facility, it has been determined that iron and manganese exceedances in monitoring well G126 do not require any further investigation at this time.
7. The Illinois EPA concurs with the facility that the current detection monitoring program may need to be adjusted to consider the variable groundwater flow conditions now known to be present at the PNWL. However, due to the recent installation of the sheet pile wall

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along the Mississippi River Seep Area (Parcel G), the facility must continue groundwater monitoring and the collection of groundwater elevation levels to determine the effects of the sheet pile wall on groundwater flow direction in the PNWL area for an additional four (4) consecutive quarters after the receipt of this Illinois EPA response.

- a. After the collection of groundwater data from the four (4) consecutive quarters following the date of the Illinois EPA letter, the facility must present the findings in a report to the Illinois EPA with any recommendations for the PNWL area, which must include;
 - i. Background values for the PNWL area established in accordance with Attachment A of this Illinois EPA response based on the four (4) consecutive quarterly sampling events collected after the receipt of this letter;
 - ii. An assessment that more adequately defines the position of each monitoring well within the monitoring network in relation to groundwater flow direction. Based on these findings, a new proposal for monitoring wells designated as upgradient may be submitted;
 - iii. At least four (4) consecutive quarterly potentiometric maps that correspond to the investigation of current groundwater flow direction;
 - iv. A proposal to designate an existing or new monitoring well(s) as representative of upgradient conditions screened within the uppermost aquifer due to the fact that all wells currently designated as upgradient to the PNWL are screened within the perched zone.
8. The groundwater monitoring well G121 shows exceedances of sulfate and TDS, and well G123 shows exceedances of nickel and TDS. These exceedances must be investigated after background values for the PNWL area have been established in accordance with Attachment A of this Illinois EPA response.
9. The Illinois EPA has determined at this time that it cannot approve the facility's request to designate the perched groundwater zone at the PNWL as a 35 Ill. Adm. Code 620.220, Class II Groundwater due to the following:
 - a. During the October 3, 2001 meeting between representatives of the Illinois EPA and the facility, the Illinois EPA directed the facility to conduct yield tests at all of the PNWL perched zone monitoring wells. While the facility acknowledged this directive in its e-mail attachment entitled, "PNWL Meeting Notes BP-Amoco - Wood River, October 3, 2001" summarizing the October 3, 2001 meeting, the facility did not present any such data with the subject submittals, and apparently has not conducted yield tests at the wells in question.

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- b. Several measures of the central tendency (mean, median, and geometric mean) of the hydraulic conductivity values (K) for the eight monitoring wells used in the Class II demonstration are very close to the Class I criteria of 1×10^{-4} cm/sec. The Illinois EPA has determined that the yield tests data discussed in Comment 9.a. above is essential to make an appropriate groundwater classification determination.
10. If the facility wishes to pursue a 35 Ill. Adm. Code 620.220, Class II Groundwater determination for the PNWL area, it must submit a revised demonstration that includes the information discussed in Condition 9 above. This revised determination must be submitted within 90 days of the date of the Illinois EPA response.
11. While the facility may pursue the establishment of an Environmental Land Use Control (ELUC) to restrict groundwater use at the PNWL, an ELUC is not appropriate to address the groundwater quality exceedances associated with the unit. The exceedances must be addressed by way of background establishment required in Attachment A of this letter, or by way of an adjusted standard approved by the Illinois Pollution Control Board.
12. The Attachments A, B, and C to this Illinois EPA response provides an updated version of the groundwater monitoring requirements for the PNWL based on the current monitoring requirements for 35 Ill. Adm. Code, Part 807 Landfills. The requirements are effective upon the date of the Illinois EPA response.
13. The facility shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the PNWL groundwater monitoring program for identification purposes. Only one copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) copies of each notice or report you submit to the Illinois EPA. The form is not to be used for permit modification requests.
14. The facility may contact the Illinois EPA to schedule a meeting regarding this Illinois EPA response.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.


Work required by this letter, your submittal or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the

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Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This letter 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.

Should you have any questions concerning groundwater-related aspects of this letter, please contact Amy Boley at 217/558-4716. Questions about any other aspects of this letter should be directed to Munib Ahmad, P.E., at 217/524-3263.

Sincerely,



Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MA:bjh\04172s.doc
JKM BMM KWB

Attachments: Attachment A – PNWL Monitoring Requirements
Attachment B – Method for Calculation of Confidence Limits
Attachment C – Formatting Requirements for Electronic Reporting of
Groundwater Monitoring Data

cc: Ryan Hartley, URS Corporation
Frederick Johnson, URS Corporation
Madison County Planning and Development

ATTACHMENT A

PNWL Monitoring Program

To identify any releases from the facility and demonstrate compliance with the applicable groundwater quality standards, the groundwater monitoring program is approved as follows:

1. The monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect any discharge of contaminants from any part of a potential source of discharge from the units. 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 program shall include consistent sampling and analysis procedures to assure that monitoring results will provide a reliable indication of groundwater quality in the zone being monitored.
3. The permittee shall sample all groundwater monitoring points for all potential sources of contamination on a quarterly basis in accordance with Condition No. 23 including a minimum of fifteen (15) years after certification of closure.
4. The permittee shall use the methods in Attachment B or propose for Illinois EPA approval, a more appropriate method to statistically evaluate the groundwater monitoring data. The selected method must provide for statistical comparisons between upgradient and downgradient groundwater quality data and a reasonable balance between the probability of obtaining Type I (false positive) and Type II (false negative) errors. The Type I error rate must be no less than 1% percent. The proposal must consider the gathering of a background data set (from upgradient wells), sufficient to provide an accurate representation of the variability in the quality of groundwater that is unaffected by operations at the facility, and to assure that the selected test has a reasonable chance of detecting releases should they occur.
5. For each sampling event, using the methods in Condition No. 4 above, the permittee must determine if a significant change in groundwater quality has occurred by:
 - a. Comparing sample results from each downgradient well to the pooled background data. The background for each hydrogeologic zone shall be established by pooling all upgradient well data taken from that zone during the first year. This comparison must be performed for each parameter for each well;
6. The permittee shall conclude that a significant change in groundwater quality has occurred if the results of the evaluation in Condition No. 5 above indicate that the value for any parameter exceeds:
 - a. The background value established for that parameter at the 99% confidence level;
or

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- b. The Class I groundwater quality standards listed in Subpart D of 35 Ill. Adm. Code 620 Standards (this class applies until an adequate demonstration has been made by the Permittee that another class applies pursuant to Subpart B of 35 Ill. Adm. Code 620 Standards); or
 - c. For organic parameters two (2) times the Practical Quantitation Limit (PQL) for a single parameter or any two (2) or more parameters exceed the PQL in the same well.
7. Within forty-five (45) days of the original sample date, the permittee may resample and test the determination made in Condition No. 6 above. If the evaluation of the resample result confirms the determination made in Condition No. 6 above, the permittee must conclude that a significant change in groundwater quality has occurred.
8. In the event a significant change in groundwater quality has occurred or has been confirmed, the permittee shall:
 - a. Notify the Illinois EPA, Division of Land Pollution Control, Permit Section, in writing, within ten (10) days of the change in groundwater quality, identifying each well and each parameter;
 - b. Submit an assessment monitoring plan within thirty (30) days of the significant change as determined in Condition No. 6 or Condition No. 7 above in the form of a supplemental permit application. The assessment monitoring plan shall include appropriate methods for determining the source of the increase, the potential threat to human health and the environment and the concentration and extent of the contaminants if any. The assessment monitoring plan shall, at a minimum, include expanded sampling requirements for the affected well(s) and shall be implemented within thirty (30) days of approval from the Illinois EPA.
 - c. Submit assessment report, based on and including the data and information generated from the completion of Condition No. 8b above to the Illinois EPA within ninety (90) days of approval of the assessment monitoring plan.
 - d. Propose a corrective action plan if assessment monitoring indicates that the facility has impacted groundwater. The corrective action plan shall be submitted within thirty (30) days of approval of the assessment report required by Condition 8c above in the form of a supplemental permit application and include appropriate response action to address any impact of the facility. The plan shall be implemented within thirty (30) days of Illinois EPA approval.

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9. All monitoring wells shall be constructed in a manner that maintains the integrity of the bore hole and prevents contamination of the samples and groundwater. The casing material shall be inert so as not to affect the water sample.
10. A padlocked protective cover must be installed over the portion of the well casing extending above the ground surface to protect against damage.
11. Wells shall be easily visible and identified with the Illinois EPA monitoring point designation.
12. Should any well become consistently dry or unserviceable, a replacement well shall be provided within ten (10) feet of the existing well. This well shall monitor the same zone as the existing well and constructed in accordance with the current Illinois EPA groundwater monitor well construction standards at the time that the wells are replaced. A replacement well which is more than ten (10) feet from the existing well or which does not monitor the same geologic zone must be approved via a Supplemental Permit and designated as a new well.
13. Within sixty (60) days of installation of any groundwater and/or leachate 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. As-built diagrams, for each monitoring point installed, shall include the horizontal location to the nearest 0.1 foot (grid coordinates), the type and inner diameter of casing material used, type and length of screen packing material used, type and length of seals used, type of backfill used, finishing details, groundwater levels, elevation of stick-up (top of casing), ground surface elevation, bottom elevation, interval screened and screen slot size and depth. All elevations or levels are to be measured and reported to the nearest 0.01 foot MSL.
14. All borings/wells not used as monitoring points shall be backfilled in accordance with the attached Illinois EPA monitor well plugging procedures.
15. The Illinois EPA shall be notified in writing at least fifteen (15) days prior to the installation of all new and replacement monitoring wells. All newly required monitoring wells should be installed within sixty (60) days of the issuance of this permit.
16. Surveyed elevation of stick-up is to be reported when the well is installed (with as-built diagrams) and every two (2) years, or whenever the elevation changes.
17. The following monitoring points are to be used in the groundwater monitoring program for this facility. These monitoring points supersede all previously required monitoring points and represent the entire list of monitoring points now required for this facility.

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Applicant DesignationIllinois EPA Designation

RL-10	G119
SA-1	G121+
SA-2	G122+
SA-3	G123
SA-4	G124
SA-5	G125
SA-6	G126
RL-11S	G11S
RL-12S	G12S
RL-13S	G13S+
SA-7S	G07S

+ represents upgradient monitoring point(s)

represents monitor point(s) added to the monitoring program* represents monitor point(s) deleted from the monitoring program

18. The concentration or values for the parameters contained in Lists 1, 2, and 3 shall be determined for samples collected from the groundwater monitoring points and reported according to the schedule in Condition No. 23 and evaluated in accordance with Condition No. 5.

LIST 1

FIELD PARAMETERSSTORET NUMBER

*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
Specific Conductance (umhos/cm, unfiltered)	00094
Temperature of Water Sample (deg F)	00011

(* = Reported Annually)

LIST 2

ROUTINE INDICATOR PARAMETERSSTORET NUMBER PQL (ug/L unless otherwise noted)FILTERED

Ammonia as (N) Diss (mg/L)	00608	— (mg/L)
Arsenic As, Diss (ug/L)	01000	5.0
Cadmium Cd, Diss (ug/L)	01025	2.0

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Chloride Cl, Diss (mg/L)	00941	1.0 (mg/L)
Iron Fe, Diss (ug/L)	01046	40.0
Lead Pb, Diss (ug/L)	01049	5.0
Manganese Mn, Diss (ug/L)	01056	15.0
Mercury Hg, Diss (ug/L)	71890	0.2
Sulfate SO ₄ , Diss (mg/L)	00946	1.0 (mg/L)
Total Dissolved Solids (TDS, mg/L)	70300	10.0 (mg/L)

UNFILTERED

Cyanide CN, Total (mg/L)	00720	0.1 (mg/L)
Phenols (Total Recoverable) (ug/L)	32730	15.0
Total Organic Carbon (TOC) (mg/L)	00680	-----
Total Organic Halogens (TOX) (ug/L)	78115	-----

LIST 3 -- INORGANIC AND ORGANIC ANNUAL PARAMETERS [SOURCE: 35 Ill. Adm. Code 620.410]

INORGANIC PARAMETERS

<u>Constituent</u> <u>(Unfiltered, ug/L</u> <u>unless otherwise noted)</u>	<u>STORET</u>	<u>PQL (ug/L unless</u> <u>otherwise noted)</u>
Antimony	01097	3.0
Arsenic	01002	5.0
Barium	01007	20.0
Beryllium	01012	2.0
Boron	01022	40
Cadmium	01027	2.0
Chloride (mg/L)	00940	1.0 (mg/L)
Chromium	01034	7.0
Cobalt	01037	50.0
Copper	01042	20.0
Cyanide (mg/L)	00720	0.1 (mg/L)
Fluoride (mg/L)	00951	0.1 (mg/L)
Iron	01045	40.0
Lead	01051	5.0
Manganese	01055	15.0
Mercury	71900	0.2
Nickel	01067	40.0
Nitrate as N (mg/L)	00620	1.0 (mg/L)
Selenium	01147	5.0
Silver	01077	10.0
Sulfate (mg/L)	00945	1.0 (mg/L)

Page 6

Thallium	01059	1.0
Total Dissolved Solids	70300	10.0 (mg/L)
Zinc	01092	20.0

ORGANIC PARAMETERS

<u>Parameters</u> <u>(unfiltered, ug/L)</u>	<u>STORET</u>	<u>PQL (ug/L)</u>
Alachlor*	77825	2.0
Aldicarb	39053	2.0
Atrazine	39033	0.05
Benzene*	34030	0.6
Benzo(a)pyrene	34247	0.2
Carbofuran	81405	10.0
Carbon Tetrachloride*	32102	1.0
Chlordane*	39350	0.14
Dalapon	38432	1.3
Dichloromethane	34423	0.2
Di(2-ethylhexyl)phthalate	39100	6.0
1,2-Dibromo-3-chloropropane	38760	0.2
Dinoseb (DNBP)	81287	0.7
Endothall	38926 10.0	
Endrin	39390	0.06
Ethylene Dibromide (EDB)	77651	0.05
Heptachlor*	39410	0.04
Heptachlor Epoxide*	39420	0.2
Hexachlorocyclopentadiene	34386	4.0
Lindane (Gamma-Hexachlor cyclohexane)	39782	0.04
2,4-D	39730	12.0
ortho-Dichlorobenzene	34536	5.0
para-Dichlorobenzene	34571	5.0
1,2-Dichloroethane*	34531	5.0
1,1-Dichloroethylene	34501	5.0
cis-1,2-Dichloroethylene	77093	5.0
trans-1,2-Dichloroethylene	34546	5.0
1,2-Dichloropropane*	34541	5.0
Ethylbenzene	78113	5.0
Methoxychlor	39480	0.5
Monochlorobenzene (Chlorobenzene)	34301	5.0
Pentachlorophenol*	39032	0.1
Phenols	32730	15.0
Picloram	39720	0.2

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Polychlorinated Biphenyls (PCBs) (as decachloro-biphenyl)*	39516	0.5
Simazine	39055	4.0
Styrene	77128	5.0
2,4,5-TP (Silvex)	39760	5.0
Tetrachloroethylene*	34475	0.7
Toluene	34010	5.0
Toxaphene*	39400	2.4
1,2,4-Trichlorobenzene	34551	10.0
1,1,1-Trichloroethane	34506	5.0
1,1,2-Trichloroethane	34511	0.5
Trichloroethylene*	39180	1.0
Vinyl Chloride*	39175	1.0
Xylenes	81551	5.0

*Denotes a carcinogen

+Practical Quantitation Limits (PQLs) as based on GC/MS Methods listed in 35 IAC Subtitle G Part 724 Appendix I

19. The following points are to be used in the leachate monitoring program for this facility.

LEACHATE MONITORING POINTS

Applicant Designation

Illinois EPA Designation

Sump 1	L301
Sump 2	L302
Sump 3	L303
Sump 4	L304
Sump 5	L305
Sump 6	L306
Sump 7	L307
Sump 8	L308
Sump 9	L309
Sump 10	L310
Sump 11	L311
Sump 12	L312
Sump 13	L313
West Discharge	L314
East Discharge	L315

Page 8

- # represents monitor point(s) added to the monitoring program
 * represents monitoring point(s) deleted from the monitoring program

20. The concentrations or values for the parameters contained in List 4A, 4B, and 4C shall be determined for samples collected from the leachate monitoring points and reported according to the schedule in Condition No. 23.

LIST 4A

<u>Constituent</u>	<u>STORET Number</u>
Temp. of Leachate Sample DEG F (field measured)	00011
Specific Conductance (SC) UMHOS (field measured)	00094
pH STD. UNITS (field measured)	00400
Leachate Surface Elevation, FT. REF MSL	71993
BTM of Well Elev FT. REF MSL	72020
Depth to Leachate Level from Measuring Point FT.	72109

LIST 4B

Inorganic Chemical Constituents
 (Unfiltered ug/L unless
otherwise noted)

	<u>STORET</u>
Antimony	01097
Arsenic (mg/L)	01002
Barium	01007
Beryllium	01012
Boron	01022
Cadmium	01027
Chloride (mg/L)	00940
Chromium	01034
Cobalt	01037
Copper	01042
Cyanide (mg/L)	00720
Fluoride	00951
Iron	01045
Lead	01051
Manganese	01055
Mercury	71900

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Nickel	01067
Nitrate as N (mg/L)	00620
Selenium	01147
Silver	01077
Sulfate (mg/L)	00945
Thallium	01059
Total Dissolved Solids (TDS) (mg/L)	70300
Zinc	01092

LIST 4C

Organic Chemical Constituents

Constituent (Unfiltered, ug/L)	STORET
Alachlor*	77825
Aldicarb	39053
Atrazine	39033
Benzene*	34030
Benzo(a)pyrene	34247
Carbofuran	81405
Carbon Tetrachloride*	32102
Chlordane*	39350
Dalapon	38432
Dichloromethane	34423
Di(2-ethylhexyl)phthalate	39100
1,2-Dibromo-3-chloropropane	38760
Dinoseb (DNBP)	81287
Endothall	38926
Endrin	39390
Ethylene Dibromide (EDB)	77651
Heptachlor*	39410
Heptachlor Epoxide*	39420
Hexachlorocyclopentadiene	34386
Lindane (Gamma-Hexachlor cyclohexane)	39782
2,4-D	39730
ortho-Dichlorobenzene	34536
para-Dichlorobenzene	34576
1,2-Dichloroethane*	34531
1,1-Dichloroethylene	34501
cis-1,2-Dichloroethylene	77093
trans-1,2-Dichloroethylene	34546

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1,2-Dichloropropane*	34541
Ethylbenzene	78113
Methoxychlor	39480
Monochlorobenzene (Chlorobenzene)	34301
Pentachlorophenol*	39032
Phenols	32730
Picloram	39720
Polychlorinated Biphenyls (PCBs) (as decachloro-biphenyl)*	39516
Simazine	39055
Styrene	77128
2,4,5-TP (Silvex)	39760
Tetrachloroethylene*	34475
Toluene	34010
Toxaphene*	39400
1,2,4-Trichlorobenzene	34551
1,1,1-Trichloroethane	34506
1,1,2-Trichloroethane	34511
Trichloroethylene*	39180
Vinyl Chloride*	39175
Xylenes	81551

*Denotes a carcinogen

NOTE: Indicate what is being used as the measuring point in the Collector Comment section of the Chemical Analysis form.

NOTE: Leachate samples are not to be filtered.

<u>Constituent (Unfiltered, ug/L)</u>	<u>STORET Number</u>
Arsenic	01002
Barium	01007
Benzene	34030
Cadmium	01027
Carbon Tetrachloride	32102
Chlordane	39350
Chlorobenzene	34301
Chloroform	32106
Chromium	01034
o-Cresol	77152
m-Cresol	77151
p-Cresol	77146

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2,4-D	39730
1,4-Dichlorobenzene	34571
1,2-Dichloroethane	34531
1,1-Dichloroethylene	34501
2,4-Dinitrotoluene	34611
Endrin	39390
Heptachlor Epoxide	39420
Hexachlorobenzene	39700
Hexachlorobutadiene	39702
Hexachloroethane	34396
Lead	01051
Lindane	39782
Mercury	71900
Methoxychlor	39480
Methyl Ethyl Ketone	81595
Nitrobenzene	34447
Pentachlorophenol	39032
Pyridine	77045
Selenium	01147
Silver	01077
Tetrachloroethylene	34475
Toxaphene	39400
Trichloroethylene	39180
2,4,5-Trichlorophenol	77687
2,4,6-Trichlorophenol	34621
2,4,5-TP (Silvex)	39760
Vinyl Chloride	39175

21. All monitoring points shall be maintained in accordance with the approved permit application such that the required samples and measurements may be obtained.
22. Sampling should commence concurrently with issuance of the permit. Statistical evaluations should be performed for all parameters that have an established background. The established background should be taken over one year and include at least 4 sampling events. The parameter list included with this permit supersedes any previous list. The first quarterly statistical evaluations shall be performed on samples taken during the months of January-February 2005 and the results submitted to the Illinois EPA by January 15, 2006.
23. The schedule for sample collection and submission of quarterly monitoring results is as follows:

Page 12

<u>Sampling Quarter</u>	<u>Sampling Due</u>	<u>Report Due Date</u>
Jan-Feb (1st)	List 1, 2, 4A	April 15
April-May (2nd)	List 1, 2, 3, 4A, 4B, 4C	July 15
July-Aug (3rd)	List 1, 2, 4A	October 15
Oct-Nov (4th)	List 1, 2, 4A, 4B, 4C	January 15

- 1 - Field Parameters
- 2 - Indicator Parameters
- 3 - Annual Parameters
- 4A - Leachate Field Parameters
- 4B - Leachate Monitoring Parameters
- 4C - Leachate Monitoring Parameters

24. Annually, the operator shall prepare an assessment of the monitoring program which shall include an evaluation of the groundwater flow direction and the hydraulic gradients at the facility. This assessment shall be submitted with the monitoring results due on July 15.
25. Information required by Conditions 18 and 23 in Attachment A must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found in Attachment C. Additional guidance regarding the submittal of the information in an electronic format can be found at www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html

JLM:MA:bjh\04172s.doc

ATTACHMENT B

A. This method should be used to predict the confidence limit when single groundwater samples are taken from each monitoring (test) well.

1. Determine the arithmetic mean (\overline{X}_b) of each indicator parameter for the background sampling period. If more than one background (upgradient) well is

$$\overline{X}_b = [X_1 + X_2 + \dots + X_n]/n$$

used, an equal number of samples must be taken from each well.
Where:

\overline{X}_b = Average background value for a given chemical parameter

X_n = Background values for each upgradient sample

n = the number of background samples taken

2. Calculate the background variance (S_b^2) and standard deviation (S_b) for each parameter using the values (X_n) from each background sample of the upgradient

$$S_b^2 = [(X_1 - \overline{X}_b)^2 + (X_2 - \overline{X}_b)^2 + \dots + (X_n - \overline{X}_b)^2]/n - 1$$

well(s) as follows:

$$CL = \overline{X}_b + (t\sqrt{1+1/n})(S_b)$$

$$S_b = \sqrt{S_b^2}$$

3. Calculate the upper confidence limit using the following formula:
Where:

CL = upper confidence limit prediction

(upper and lower limits should be calculated for pH)

t = one-tailed t value at the required significance

level and at n-1 degrees of freedom from Table 1

(a two-tailed t value should be used for pH)

4. If the values of any routine parameter for any monitoring well exceeds the upper confidence limit for that parameter, the permittee shall conclude that a statistically significant change has occurred at that well.

5. When some of the background (upgradient) values are less than the Method Detection Limit (MDL), a value of one-half (2) the MDL shall be substituted for each background value that is reported as less than the MDL. All other computations shall be calculated as given above.
- B. If all the background (upgradient) values are less than the MDL for a given parameter, the Practical Quantitation Limit (PQL), as given in 35 Ill. Adm. Code Part 724 Appendix I shall be used to evaluate data from monitoring wells. If the analytical results from any monitoring well exceeds two (2) times the PQL for any single parameter, or if they exceed the PQLs for two or more parameters, the permittee shall conclude that a statistically significant change has occurred.

Table 1
Standard T-Tables Level of Significance

Degrees of freedom	t-values		t-values	
	99%	(one-tail) 95%	99%	(two-tail)* 95%
3	4.541	2.353	5.841	3.182
4	3.747	2.132	4.604	2.776
5	3.365	2.015	4.032	2.571
6	3.143	1.943	3.707	2.447
7	2.998	1.895	3.499	2.365
8	2.896	1.860	3.355	2.306
9	2.821	1.833	3.250	2.262
10	2.764	1.812	3.169	2.228
11	2.718	1.796	3.106	2.201
12	2.681	1.782	3.055	2.179
13	2.650	1.771	3.012	2.160
14	2.624	1.761	2.977	2.145
15	2.602	1.753	2.947	2.131
16	2.583	1.746	2.921	2.120
17	2.567	1.740	2.898	2.110
18	2.552	1.734	2.878	2.101
19	2.539	1.729	2.861	2.093
20	2.528	1.725	2.845	2.086
21	2.518	1.721	2.831	2.080
22	2.508	1.717	2.819	2.074
23	2.500	1.714	2.807	2.069
24	2.492	1.711	2.797	2.064
25	2.485	1.708	2.787	2.060
30	2.457	1.697	2.750	2.042
40	2.423	1.684	2.704	2.021

Adopted from Table III of "Statistical Tables for Biological Agricultural and Medical Research" (1947. R.A. Fisher and F. Yates).

* For pH only when required.

REVISED 1/97 (VMB)

ATTACHMENT C

Formatting Requirements for the 01 Record of the Electronically Submitted Groundwater and Leachate Data (the 01 Record portion of the LPC-160 is included for example purposes)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF LAND POLLUTION CONTROL CHEMICAL ANALYSIS FORM

Page 1 of _____

RECORD CODE							TRANS CODE
L	P	C	S	M	O	I	A
1	2	3	4	5	6	7	8
REPORT DUE DATE _____ / _____ / _____							
			36	M	D	Y	41

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER _____	MONITOR POINT NUMBER _____
9 _____ 18 _____	(see Instructions) 19 _____ 22 _____
REGION _____ CO. _____	DATE COLLECTED _____ / _____ / _____
	23 M D Y 28
FACILITY NAME _____	

FOR IEPA USE ONLY
LAB _____
29 _____
DATE RECEIVED _____ / _____ / _____
42 M D Y 47

BACKGROUND SAMPLE (X) _____ TIME COLLECTED _____ : _____
(24 Hr. Clock) 54 55 11 M 58

UNABLE TO COLLECT SAMPLE _____
(see Instructions) 59

MONITOR POINT SAMPLED BY _____ OTHER (SPECIFY) _____
(see Instructions) 60

SAMPLE FIELD FILTERED — INORGANICS (X) _____ ORGANICS (X) _____
61 62

SAMPLE APPEARANCE _____
63 _____

COLLECTOR COMMENTS _____
102 _____
103 _____

LAB COMMENTS _____
142 _____
150 _____

199

IL 532 1213
LPC 160 01/90

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$25,000 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

**ATTACHMENT C
(con't.)**

*Only Key punch with Data in Column 35 or Columns 38-47

KEY:

<u>Spaces Numbered</u>	<u>Description</u>	<u>Format</u>
Spaces 1-7	Record Code	LPCSM01
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	G000
Spaces 23-28	Date Collected	000000
Space 29	Lab	
Spaces 30-35	Filler	
Spaces 36-41	Report Due Date	000000
Spaces 42-47	Date Received	000000
Spaces 48-53	Filler 2	
Space 54	Background Sample	
Spaces 55-58	Time Collected	0000
Space 59	Unable to Collect Sample	
Space 60	Monitoring Point Sampled By	
Space 61	Field Filtered – Inorganic	
Space 62	Field Filtered – Organic	
Spaces 63-102	Sample Appearance	
Spaces 103-142	Collector Comments	
Spaces 143-149	Filler 3	
Spaces 150-199	Lab Comments	

ATTACHMENT C (con't.)
Formatting Requirements for the 02 Record of the Electronically Submitted Groundwater and Leachate Data (the 02 Record portion of the LPC-160 is included for example purposes)

RECORD CODE L P C S M 0 2 TRANS CODE A (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	Remarks See Inst.	Replicate	< or >	VALUE
Q	TEMP OF WATER (unfiltered °F)	0 0 0 1 1 <small>30 34 35 36 37</small>				-----●----- <small>38 47</small>
Q	SPEC COND (unfiltered umhos)	0 0 0 9 4				-----●-----
Q	pH (unfiltered units)	0 0 4 0 0				-----●-----
Q	ELEV OF GW SURF (ft ref MSL)	7 1 9 9 3				-----●-----
Q	DEPTH OF WATER (ft below LS)	7 2 0 1 9				-----●-----
A	BTM WELL ELEV (ft ref MSL)	7 2 0 2 0				-----●-----
Q	DEPTH TO WATER FR MEA PT (ft)	7 2 1 0 9				-----●-----
						-----●-----
						-----●-----

IL 532 1213
LPC 160 01/90

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$25,000 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

*Only Keypunch with Data in Column 35 or Columns 38-47

KEY:

<u>Spaces Numbered</u>	<u>Description</u>	<u>Format</u>
Spaces 1-7	Record Code	LPCSM02
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	
Spaces 23-28	Date Collected	
Space 29	Lab	
Spaces 30-34	STORET Number	
Space 35	Remarks	
Space 36	Replicate	
Space 37	< or >	
Space 38-47	Value	


CERTIFICATE OF SERVICE

I, the undersigned attorney at law, hereby certify that on January 19, 2005, I served true and correct copies of a REQUEST FOR NINETY DAY EXTENSION OF APPEAL PERIOD, by placing true and correct copies in properly sealed and addressed envelopes and by depositing said sealed envelopes in a U.S. mail drop box located within Springfield, Illinois, with sufficient First Class Mail postage affixed thereto, upon the following named persons:

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

John Dennison
URS Corporation
122 South Michigan Avenue
Suite 1920
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent


John J. Kim
Assistant Counsel
Special Assistant Attorney General
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