

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF

RCRA DELISTING ADJUSTED STANDARD) AS 08-10
PETITION OF PEORIA DISPOSAL COMPANY) (Adjusted Standard – Land)
) (RCRA Delisting)

AFFIDAVIT OF ELECTRONIC FILING and
SERVICE BY U.S. MAIL, FIRST CLASS

PLEASE TAKE NOTICE that on June 26, 2008, I electronically filed with the Clerk of the Pollution Control Board of the State of Illinois the instrument(s) entitled RESPONSE OF PEORIA DISPOSAL COMPANY TO ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S RESPONSE TO RCRA DELISTING ADJUSTED STANDARD PETITION, and this Affidavit. I further certify that on this date I served these instruments, by placing one copy of each document in the U.S. Mail, First Class postage prepaid, addressed as follows:

United States Environmental Protection Agency
Office of Solid Waste and Emergency Response
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Bharat Mathur
Acting Regional Administrator
United States Environmental Protection Agency,
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

William D. Ingersoll
Manager, Enforcement Programs
Illinois Environmental Protection Agency
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P.O. Box 19276
Springfield, IL 62794-9276
(also served via email)

Respectfully submitted,



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RESPONSE OF PEORIA DISPOSAL COMPANY TO ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY'S RESPONSE TO RCRA
DELISTING ADJUSTED STANDARD PETITION

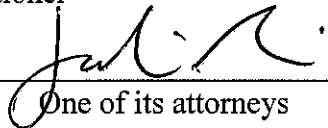
NOW COMES Peoria Disposal Company ("PDC"), by its attorneys, Elias, Meginness, Riffle & Seghetti, P.C. and Brown, Hay & Stephens, LLP, and as and for its Response to the Response of the Illinois Environmental Protection Agency ("IEPA") to the RCRA Delisting Adjusted Standard Petition (the "Petition"), submitted pursuant to 35 Ill. Adm. Code §104.416(d), states as follows:

On June 12, 2008, the IEPA filed its Response to the Petition, requesting clarification on several aspects of the Technical Support Document attached to the Petition as Exhibit 2. Attached herewith as Exhibit A is a document responding to the IEPA's Response, prepared by RMT, Inc., the consultant that prepared the Technical Support Document. Exhibit A is incorporated herein as and for the Response of PDC to the IEPA's Response, submitted pursuant to 35 Ill. Adm. Code §104.416(d)

Dated: June 26, 2008

Respectfully submitted,

PEORIA DISPOSAL COMPANY,
Petitioner

By:  _____
One of its attorneys

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EXHIBIT A

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF

RCRA DELISTING ADJUSTED STANDARD) AS 08-10
PETITION OF PEORIA DISPOSAL COMPANY) (Adjusted Standard – Land)
) (RCRA Delisting)

**SUPPLEMENT TO TECHNICAL SUPPORT DOCUMENT FOR THE RCRA DELISTING
ADJUSTED STANDARD PETITION FOR PDC EAF DUST STABILIZED RESIDUE,
RESPONDING TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S
RESPONSE TO RCRA DELISTING ADJUSTED STANDARD PETITION**

H. Section 104.406(h) - Justification of the proposed adjusted standard

IEPA Comment: *The Illinois EPA agrees that the treated K061 residue does not exhibit the characteristic of toxicity with respect to hexavalent chromium, cadmium, and lead. However, there are two concerns related to the Site Specific Model Assumptions used in the analysis of dioxins and furans, which is found in Appendix H.4 of Volume 1 of the Technical Support Document. These concerns will be addressed in turn below.*

PDC Response: The risk model for dioxins and furans is based on the assumption that waste materials are eroded from the landfill surface and carried as sediment to the nearest stream which supports a fishery. Notwithstanding the site-specific modifications to exposure assumptions to account for the nature of fish consumption from Indian Creek (discussed below), it is important to note that, in reality, the waste will always be covered with daily, intermediate or final cover and, therefore, will not be subject to erosion. Furthermore, even if waste materials would be eroded from the landfill surface, these sediments would be captured by the landfill's sediment control system, as required by Illinois landfill regulations at 35 Ill. Adm. Code Part 811.103(a)(1). Specifically, all storm water runoff from the Indian Creek Landfill will be routed to one of two sediment basins. These sediment basins are designed to provide sufficient detention to allow sediment to drop out of the water and, thus be retained within the basin. Only clear water is discharged from the sediment basins to surface water. Therefore, there is essentially no route of exposure for dioxins and furans (and other constituents) to fish in Indian Creek.

Even disregarding the sediment controls discussed above, the modeled tissue dioxin toxicity equivalent (TEQ) concentration for fish in Indian Creek, which serves as the input to the risk estimate, is 0.87 ng/kg. This modeled concentration is likely an overestimate, given the compounding of conservative assumptions in the migration and transport aspect of the model. As presented in the table below, the modeled concentration is consistent with national background TEQ concentrations in fish tissues.

Background Dioxin Concentrations in Fish Tissue

CATEGORY/DESCRIPTION	MAXIMUM OBSERVED CONCENTRATION	AVERAGE CONCENTRATION
DIOXIN TEQ (in ng/kg wet weight)		
NASQAN (background) ⁽¹⁾	7.18	1.12
Background ⁽¹⁾	3.02	0.59
Agricultural ⁽¹⁾	4.44	1.02
North American Background ⁽²⁾	--	1.16
DRAS Modeled fish tissue concentrations in Indian Creek⁽³⁾	0.87	

⁽¹⁾ Excerpted from the National Survey of Chemical Residues in Fish (USEPA, September 1992)

⁽²⁾ Reported in USEPA's Dioxin Reassessment (USEPA, 1994)

⁽³⁾ Modified DRAS 3.0 spreadsheet model (original provided by Todd Ramaly, USEPA Region 5) of PDC waste materials. Copies of any of these USEPA documents can be made available to the IPCB or IEPA

Dioxin/furans have been found throughout the world in practically all media including air, soil, water, sediment, fish and shellfish, and other food products such as meat and dairy products. The highest levels of these compounds are found in soils, sediments, and biota; very low levels are found in water and air. The widespread occurrence is not unexpected considering the numerous natural and anthropogenic sources that emit these compounds into the atmosphere, and the overall resistance of these compounds to biotic and abiotic transformation.

Modeled dioxin TEQ concentrations in fish tissue for Indian Creek are consistent with national and North American backgrounds and therefore are not expected to pose an unacceptable risk over and above background.

IEPA Comment: *With regard to the Dioxin/Furan DRAS modeling, (Summary at Appendix H.4, p. 2), the fraction of fish intake is reduced from the generic input of 1.0 to a site-specific input of 0.5. The rationale given in the table is that it is assumed 50% of all freshwater fish consumption for an individual is taken from Indian Creek. Although Illinois EPA has no information to contradict the usage of the lower number, neither is any reference source given to justify this adjustment. Additional information should be submitted by PDC to support this point.*

PDC Response: The "fraction ingested" variable is intended to account in the model for the portion of an individual's freshwater fish diet, over a 30-year period, anticipated to be harvested from Indian Creek. Indian Creek is a small stream which, in its entirety, drains only about 16.5 square miles. Indian Creek is not listed on the Illinois Department of Natural Resources (IDNR) compendium of "Places To Fish" provided in the IDNR's publication **2008 Illinois Fishing Information**. While that compendium is not complete, technical documents prepared by the Illinois State Water Survey (ISWS) and other factors demonstrate that Indian Creek cannot consistently support a significant fishery. A discussion of these factors is provided in the following paragraphs.

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ISWS Bulletin 57, "The 7-Day 10-Year Low Flows of Illinois Streams" (Singh and Stall, 1973) reports stream-flow data for 247 gaging stations within streams and rivers in Illinois. These data were used to develop the 7-Day, 10-Year Flow at each station. Streams where the 7-Day, 10-Year Flow was equal to zero were defined as "intermittent-flow streams". Although there were no gaging stations at Indian Creek, it is helpful to review the 7-Day, 10-Year Flows at stations located in the Mackinaw River watershed which exhibit similar drainage areas as Indian Creek. Data for six gaging stations with drainage areas less than 100 square miles were reported. Of these, four gaging stations measured flow from watersheds larger than 25 square miles, i.e. significantly larger than the entire Indian Creek watershed. All of these watersheds are reported to be intermittent-flow streams, i.e. their 7-Day, 10-Year Low Flow was reported as 0.0 cubic feet per second (cfs). These data indicate that Indian Creek has frequent periods with insufficient flow to support fish of edible size.

ISWS Contract Report 246, entitled "Groundwater Discharge to Illinois Streams" (O'Hearn and Gibb, 1980) reports base flows for various hydrographic regions throughout Illinois. The base streamflows with 50 and 90 percent probability of exceedance for the hydrographic region in which Indian Creek is located were reported as 0.14 and 0.02 cfs per square mile of drainage area, respectively. This indicates that the median Indian Creek streamflow at its discharge point is about 2.3 cfs, whereas this drops to about 0.3 cfs roughly 10 percent of the time. These low flow volumes will not support significant populations of fish of edible size.

Given the above, it is clearly demonstrated that Indian Creek cannot serve as a significant source of any individual's freshwater fish diet over an extended period. In reality, it is unlikely that Indian Creek could consistently support meal-sized fish.

The 50 percent value was based on professional judgment reflecting the conservative, yet highly unlikely, assumption that one-half of an individual's freshwater fish diet over a 30-year period would be sourced from Indian Creek.

IEPA Comment: *In the same Appendix H.4, Site Specific Model Assumptions table, the fish consumption rate is increased from the default input of 0.02 kg/day to the site-specific input of 0.06 kg/day. PDC indicates that this modification is intended to reflect the difference between recommended default model input for total fish consumption (marine and freshwater) and solely freshwater fish consumption. Illinois EPA has no objection to the use of the site-specific figure in this situation, because the freshwater fish number is more appropriate to any location within the State of Illinois. Additionally, as a higher number, it would result in a modeling output that would be more conservative with respect to human health. However, the apparent modeling input used, as indicated on the last page of Appendix H.4, was only 0.006 kg/day. This may be a typographical error, in which case, it should simply be corrected. However, the actual use of this incorrect value could result in lower DRAS Model recommendations for delisting of dioxins and furans, so PDC should be required to show the model as run with the correct 0.06 kg/day input.*

PDC Response: There is a typographical error in Appendix H.4. However, the modeled input reflects the correct freshwater consumption value of 0.006 kg/day. The typographical error is the 0.06 kg/day present in the Site Specific Model Assumptions table.

Mean Intake (g/day)	95th Percentile of Long-term Intake Distribution (g/day)	Study (Reference)
	53 (Value of 42 from Javitz was adjusted upward by 25 percent to account for recent increase in fish consumption)	TRI (Javitz, 1980; Ruffie et al., 1984)
20.1 (Total Fish) 14.1 (Marine Fish) 6.0 (Freshwater/Estuarine Fish)		U.S. EPA Analysis of CSFII, 1989-91

The fish consumption value relied upon in support of the PDC delisting petition was 0.006 kg/day (or 6 g/day). This value represents the freshwater portion of the recommended mean fish consumption value. As presented in the Section 10.10.1 of the Exposure Factors Handbook (1997), the generic fish consumption value of 0.02 kg/day reflects consumption of all fish including finfish (freshwater and marine) and shellfish (marine). The recommended values for mean intake by habitat/fish type are shown in Table 10-81 of the same reference, as excerpted below. The recommended values are 6.0 g/day for freshwater/ estuarine fish, 14.1 g/day for marine fish, and 20.1 g/day for all fish types.

Although the relied upon value is not more conservative than the generic model value, given that Indian Creek is a freshwater habitat, we concur with the IEPA that the "freshwater fish number is more appropriate," and the conducted modeling assumes all of the mean consumption value for freshwater fish is from Indian Creek, a very conservative assumption. Since the proposed language in the RCRA Delisting Adjusted Standard Petition for the PDC Electric Arc Furnace Dust Stabilized Residue (EAFDSR) limits disposal to only Subtitle D landfill facilities in Illinois, per 35 IL 720.122(r), these fish consumption and intake modeling assumptions would apply in any Subtitle D landfill disposal scenario in Illinois, because no marine fish sources are present.

Below is a corrected Site Specific Model Assumptions table for Appendix H.4:

Site Specific Model Assumptions

MODEL VARIABLE	GENERIC INPUT	SITE-SPECIFIC INPUT	RATIONALE
USLE Assumptions			
Waste Volume (cy/year)	80,000	95,000	Increased to 95,000 to match DRAS model run
Period of Waste Exposure (day)	30	10	The disposal area is covered on a daily basis. Value assumes deviation from standard practice 10 days/year.
Rainfall Erosion Potential, R (1/year)	300	175	Modified to reflect areas-specific value – taken from Figure B-1 of DRAS guidance document.
Support Practice Factor, P	1.0	0.5	Surface is contour terraced – original assumption assumes no management practice

Site Specific Model Assumptions

MODEL VARIABLE	GENERIC INPUT	SITE-SPECIFIC INPUT	RATIONALE
Distance to Stream (meter)	100	335	Value modified to reflect site-specific conditions – 1,100 ft to Indian Creek
Dietary Exposure/Risk Model Assumptions			
Fraction of fish intake from this source (F)	1.0	0.5	Assumes 50% of all freshwater fish consumption for an individual is taken from Indian Creek
Fish consumption rate (CR)	0.02 kg/day	0.006 kg/day	Fish consumption value reflects recommended freshwater fish consumption/day (EFH, 1997) Modified from 0.02 kg/day which is a recommended total (marine/freshwater) fish consumption rate

Dated: June 25, 2008



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 RMT, Inc.