BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING

AS 08-05 (RCRA Delisting)

NOTICE OF FILING

To: Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

Bradley P. Halloran, Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph St., Suite 11-500
Chicago, IL 60601

Paul Jagiello, Assistant Counsel
Division of Legal Counsel
Illinois Environmental Protection Agency
9511 West Harrison Street
Des Plaines, IL 60016

Lynn Buhl, Regional Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Mr. William Ingersoll, Manager
Enforcement Programs
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

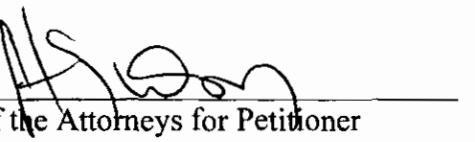
Please take notice that on July 24, 2008 the undersigned caused to be filed with the Clerk of the Illinois Pollution Control Board BFI WASTE SYSTEMS OF NORTH AMERICA'S REPLY BRIEF, MOTION TO AMEND PETITION FOR ADJUSTED STANDARD WASTE DELISTING, PROPOSED THIRD AMENDMENT TO PETITION FOR ADJUSTED STANDARD, NOTICE OF CORPORATE CONVERSION AND NAME CHANGE, and PETITIONER'S MOTION TO CORRECT TRANSCRIPT, copies of which are herewith served upon you.

By: One of the Attorneys for Petitioner

Patricia F. Sharkey
McGuireWoods LLP
77 West Wacker, Suite 4100
Chicago, IL 60601
Telephone: 312/849-8100

CERTIFICATE OF SERVICE

I, Patricia F. Sharkey, hereby certify that I served a copy of the above-listed documents upon those listed on the attached Notice of Filing on July 24, 2008 via First Class United States Mail, postage prepaid.



One of the Attorneys for Petitioner

McGuireWoods LLP
77 West Wacker, Suite 4100
Chicago, Illinois 60601
Telephone: 312/849-8100

\6432975.1

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING	**AS 08-05 (Adjusted Standard –Land) (Waste Delisting)**	

MOTION TO AMEND
PETITION FOR ADJUSTED STANDARD
WASTE DELISTING

NOW COMES BFI Waste Systems of North America, LLC ("BFI"), by its attorneys McGuireWoods LLP, and moves the Illinois Pollution Control Board ("Board") to accept the attached Proposed Third Amendment to the Petition for Adjusted Standard filed in this matter on November 21, 2007 for consideration in this proceeding.

In support thereof, BFI states:

1. On November 21, 2007, BFI filed a Petition for Adjusted Standard in this matter which included proposed language for the Adjusted Standard. That language was designed to expressly limit the scope of the hazardous waste delisting which is the subject of the Petition. See *Petition, pp. 14 to 16.*

2. Based upon the recommendation of the Illinois Environmental Protection Agency ("Illinois EPA") and conversations with Illinois EPA personnel, BFI proposed to amend the language of the Adjusted Standard on April 14, 2008. See *Proposed Amendment to Petition for Adjusted Standard.*

3. Based upon additional comments and questions from the Illinois EPA and the Board's Technical Personnel at the May 15, 2008 hearing, BFI again proposed to

amend the Adjusted Standard language on June 30, 2008. See *Proposed Second Amendment to Petition for Adjusted Standard.*

4. Today, BFI is proposing a third set of clarifying amendments to the language proposed in the Petition. See attached *Proposed Third Amendment to Petition for Adjusted Standard (Attachment A hereto)* which shows the amendments proposed today (in strike through and underscoring format) compared against the language proposed in the *Proposed Second Amendment.*

5. The amendments proposed today are necessary to accomplish the following:

a. **REVISED DELISTING LEVELS FOR COBALT AND TIN**

Today's amendments incorporate revised delisting levels for Cobalt and Tin in Table A in the Adjusted Standard. As discussed in *Petitioner's Reply Brief (pp.5 - 8)*, filed today, USEPA has recently specified what it believes to be the appropriate minimum base surface impoundment dilution attenuation factors ("DAF") for carcinogens and non-carcinogens. USEPA recommends these new DAF numbers be used in the DRAS model for all constituents which would otherwise have a zero DAF under the DRAS model default.

Because the USEPA recommended minimum DAF for Cobalt and Tin was less than that used in BFI's original DRAS modeling, BFI re-ran the DRAS model for these constituents and is now proposing that the lower delisting levels for Cobalt and Tin be incorporated in the Adjusted Standard. The historic data over nine years of sampling demonstrates that the Cobalt and Tin measured in the Davis Junction Phase I Unit leachate is well below these revised delisting levels.

b. **PETITIONER'S CORPORATE CONVERSION AND NAME CHANGE**

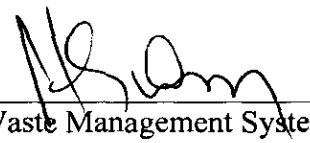
Since the original filing of this Petition, "BFI Waste Systems of North America, Inc.," a Delaware Corporation registered to do business in Illinois, has been converted into a Delaware limited liability company and changed its name to "BFI Waste Systems of North America, LLC." BFI is herewith filing a *Notice of Corporate Conversion and Name Change*. As stated in that Notice, this conversion and name change became effective on December 30, 2008. BFI Waste Systems of North America, LLC applied for and was granted approval to transact business in Illinois on January 15, 2008.

The undersigned counsel for BFI has discussed this conversion and name change with counsel for Illinois EPA, who agreed that these changes do not affect the Petition in this case. As a matter of law, BFI Waste Systems of North America, LLC succeeds to all of the rights and obligations of BFI Waste Systems of North America, Inc. It also maintains the same FEIN number. All representations made in the Petition, including all information provided to meet the requirements of 35 Ill. Adm. Code 104.406(a)-(e), 120.22, and 121.111, remain unchanged.

Amendments to the Adjusted Standard language proposed today are designed to reflect this change in the corporate form and name of BFI and to clarify that the Adjusted Standard applies to the leachate generated at Phase I Unit of the Davis Junction Landfill and the permitted post-closure operator of the closed Phase I Unit at the Davis Junction Landfill, regardless of this or any future change in corporate ownership, form or name.

WHEREFORE, BFI respectfully requests that the Board accept the attached Proposed Amendment to Petition for Adjusted Standard for consideration in this proceeding.

Respectfully submitted,



BFI Waste Management Systems of North America, LLC
By One of Its Attorneys

July 24, 2008

Patricia F. Sharkey
McGuireWoods LLC
Suite 4100
77 West Wacker Drive
Chicago, Illinois 60601
(312) 849-8100

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING	**AS 08-05 (Adjusted Standard –Land) (Waste Delisting)**	

PROPOSED THIRD AMENDMENT TO PETITION FOR ADJUSTED STANDARD

As discussed in the Motion to Amend Adjusted Standard Language, attached hereto, the Petitioner proposes the following THIRD AMENDMENT to the Adjusted Standard language which was originally contained in the Petition on pp.14- 16, was subsequently proposed to be amended on April 14, 2008, and was again proposed to be amended on June 30, 2008. This THIRD AMENDMENT amends the language as shown in the SECOND AMENDMENT by the addition of the underscored language below:

Proposed Adjusted Standard Language

Leachate generated at the closed Phase I Unit at the BFI Waste Systems of North America~~, Inc.~~ Davis Junction Landfill in Davis Junction, Ogle County, Illinois, RCRA ID No. ILD980700751, shall not be deemed a hazardous waste pursuant to 35 Ill. Adm. Code 721 under the following circumstances:

a) The Phase I Unit is subject to an Illinois Environmental Protection Agency RCRA Post –Closure Permit which prohibits the disposal of any new solid or liquid waste in the Phase I Unit, requires maintenance of the landfill cap and liner, and requires operation of a leachate collection system;

b) The leachate is hard-piped directly from the landfill to an on-site storage tank which is regulated under the RCRA Post-Closure Permit and is not stored or managed in a surface impoundment, conveyed by ditches or otherwise managed prior to transportation for off-site disposal;

c) The leachate does not exhibit any characteristic of hazardous waste as defined in 35 Ill. Adm. Code 721.121, 721.122, 721123 and 721.124 and also

does not exceed the delisting level concentrations in Table A below. Other than for the toxicity characteristics which are reflected in the delisting level concentrations in Table A below, compliance with a hazardous characteristic may be demonstrated based upon ~~BFI~~ the operator's knowledge of the leachate characteristics.

d) Prior to commencing initial transportation and disposal of the leachate pursuant to this Adjusted Standard, and quarterly thereafter for the first 12 months following the effective date of this Adjusted Standard, ~~BFI~~ the operator shall test a representative sample of the leachate and submit test results demonstrating compliance with the requirements of paragraph (c) above to the Illinois Environmental Protection Agency. Quarterly sampling shall continue until such time as ~~BFI~~ the operator has demonstrated compliance (including, if necessary, a compliance demonstrated by a verification test) in four consecutive quarters. Thereafter, such testing shall continue on a semi-annual basis. For any such initial, quarterly, or annual testing, if an original sample fails to meet the requirements of paragraph (c), then a verification sample will be collected within 7 days and Verification Testing shall be performed for the constituent(s) which failed to meet the requirements of paragraph (c). A verified failure to meet the requirements in paragraph (c) will be deemed present if both the original and verification sample fail to meet such requirements.

e) If a failure to meet the requirements in paragraph (c) is verified pursuant to the verification procedures in paragraph (d), ~~BFI~~ the operator shall notify the Illinois EPA and the leachate shall not be transported or disposed of except as a hazardous waste until such time as it is demonstrated by the Confirmatory Testing procedures below to meet the requirements of paragraph (c). Prior to re-initiating transportation and disposal pursuant to this Adjusted Standard, ~~BFI~~ the operator must perform Confirmatory Testing, including testing of a minimum of four representative samples taken over not less than a 14 day period, each of which confirms that the leachate meets the requirements of paragraph (c), and ~~BFI~~ the operator shall submit such results to the Illinois Environmental Protection Agency with a notification it intends to re-initiate transportation and disposal pursuant to the Adjusted Standard.

f) The leachate is transported in compliance with the requirements applicable to an Illinois Special Waste (35 Ill. Adm. Code Part 809) to and received by a permitted waste water treatment facility located in Illinois which has a Pretreatment Program which has been approved by the United States Environmental Protection Agency.

g) At least 30 days prior to transporting the first load of delisted leachate, ~~BFI~~ the operator shall provide the Illinois Environmental Protection Agency with the results of a test of a representative sample of the leachate demonstrating compliance with the requirements of paragraph (c) and a one-time written notification stating that it intends to commence transportation of delisted leachate

pursuant to this delisting and the name of the w ste water treatment facility to which the leachate will be transported. If ~~BFI~~ the operator changes disposal facilities, it shall provide to Illinois Environmental Protection Agency a one-time written notification of such change; and

h) ~~BFI~~ The operator shall not transport the leachate pursuant to this Adjusted Standard outside of the State of Illinois.

i) This adjusted standard waste delisting shall apply once the leachate is loaded for transport at the Davis Junction Landfill in Davis Junction, Ogle County, Illinois and during any subsequent transportation and handling, but shall not apply to any leachate from the Davis Junction facility which is released from the tanker truck to the environment (at the Davis Junction facility or at any other location) prior to delivery to a permitted waste water treatment facility as described in paragraph (f) above.

j) Any such leachate released to the environment as described in paragraph (i) above shall be considered a Resource Conservation and Recovery Act ("RCRA) listed hazardous waste and any such released leachate shall be addressed in accordance with applicable RCRA requirements.

Table A

Arsenic	0.525
Barium	100
Benzene	0.153
Cadmium	0.409
Carbon Disulfide	118
Chromium	5.0
Dichloropropene, cis-1, 3-	1,206
Cobalt	60.2
Copper	24,700
Diethyl phthalate	1,270
Endrin	32,700
Ethylbenzene	57.2
Isobutyl alcohol	299
Lead	5.0
Mercury	0.2
Methanol	499
Methyl ethyl ketone	200
Methylene chloride	0.198
Methyl isobutyl ketone	79.8
Naphthalene	6.51
Nickel	76.8
Cresol, p-	5.37
Phenol	645
Selenium	1.57

Styrene	6.2
Tetrachloroethylene	0.174
Tin	602
Toluene	40.2
Trichloroethylene	0.164
Vanadium	57.1
Vinyl chloride	0.2
Xylenes (total)	160
Zinc	760
Dichloroethane, 1-1-	99.8
Dichloroethane, 1,2-	0.0354
Dichlorobenzene, 1,4-	0.473
Dioxane, 1,4-	100
Heptachlor	0.008
TCDD, 2,3,7,8-	0.00000147
Trichlorophenoxypripionic acid, 2,4, 5- (Silvex)	1.0
Dichlorophenoxyacetic acid, 2,4- (2,4-D)	1.86
Dimethylphenol, 2,4-	27.6
Acetone	898

Respectfully submitted,

BFI Waste Management Systems of North America, LLC
By One of Its Attorneys

July 24, 2008

Patricia F. Sharkey
McGuireWoods LLC
Suite 4100
77 West Wacker Drive
Chicago, Illinois 60601
(312) 849-8100

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING	**AS 08-05 (Adjusted Standard – Land) (Waste Delisting)**

NOTICE OF CORPORATE CONVERSION AND NAME CHANGE

PLEASE BE ADVISED that the Petitioner in this matter, BFI Waste Systems of North America, Inc., a Delaware Corporation registered to do business in Illinois, has been converted into a Delaware limited liability company and changed its name to "BFI Waste Systems of North America, LLC." This conversion and name change became effective on December 30, 2008. BFI Waste Systems of North America, LLC applied for and was granted approval to transact business in Illinois on January 15, 2008. See Attachment A hereto.

Respectfully submitted,

BFI Waste Management Systems of North America, LLC
By One of Its Attorneys

July 24, 2008

Patricia F. Sharkey
McGuireWoods LLC
Suite 4100
77 West Wacker Drive
Chicago, Illinois 60601
(312) 849-8100

Attachment A to Notice of Corporate Conversion and Name Change, AS08-05

5657-630-4

BCA

13.45

$25.00

$38.45

Delaware

PAGE 1

The First State

FILED

JAN 15 2008

JESSE WHITE
SECRETARY OF STATE

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "BFI WASTE SYSTEMS OF NORTH AMERICA, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "BFI WASTE SYSTEMS OF NORTH AMERICA, INC." TO "BFI WASTE SYSTEMS OF NORTH AMERICA, LLC", FILED IN THIS OFFICE ON THE TWENTY-EIGHTH DAY OF DECEMBER, A.D. 2007, AT 8:30 O'CLOCK A.M.

5657-630-4

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTIETH DAY OF DECEMBER, A.D. 2007.

2263847 8100V

071369181

You may verify this certificate online at corp.delaware.gov/authver.shtml

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 6275171

DATE: 12-31-07

COPY

State of Delaware
Secretary of State
Division of Corporations
Delivered 08:19 AM 12/28/2007
FILED 08:30 AM 12/28/2007
SRV 071369181 - 2263847 FILE

STATE OF DELAWARE
CERTIFICATE OF CONVERSION
FROM A DOMESTIC CORPORATION TO A
DOMESTIC LIMITED LIABILITY COMPANY PURSUANT TO
SECTION 18-214 OF THE LIMITED LIABILITY COMPANY ACT

1. The Corporation was first incorporated in Delaware on May 23, 1991, and its jurisdiction immediately prior to the filing of this Certificate was Delaware.

2. The name of the Corporation immediately prior to the filing of this Certificate was BFI Waste Systems of North America, Inc. 5657630 4

3. The name of the Limited Liability Company as set forth in its Certificate of Formation is BFI Waste Systems of North America, LLC. ✓

4. This Certificate of Conversion shall be effective on December 30, 2007. ✓

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Conversion of BFI Waste Systems of North America, LLC this 28th day of December, 2007.

Jo Lynn White
Authorized Person

OFFICE OF THE SECRETARY OF STATE

JESSE WHITE • Secretary of State

JANUARY 15, 2008 0243720-1

C T CORPORATION SYSTEM
208 SO LASALLE ST, SUITE 814
CHICAGO, IL 60604-1101

RE BFI WASTE SYSTEMS OF NORTH AMERICA, LLC

DEAR SIR OR MADAM:

IT IS OUR PLEASURE TO APPROVE YOUR REQUEST TO TRANSACT BUSINESS IN THE STATE OF ILLINOIS. ENCLOSED PLEASE FIND AN APPROVED APPLICATION OF ADMISSION.

THE LIMITED LIABILITY COMPANY MUST FILE AN ANNUAL REPORT PRIOR TO THE FIRST DAY OF ITS ANNIVERSARY MONTH (MONTH OF QUALIFICATION) NEXT YEAR. A PRE-PRINTED ANNUAL REPORT FORM WILL BE SENT TO THE REGISTERED AGENT AT THE ADDRESS SHOWN ON THE RECORDS OF THIS OFFICE APPROXIMATELY 60 DAYS PRIOR TO ITS ANNIVERSARY MONTH.

MANY SERVICES ARE NOW AVAILABLE ON-LINE AT WWW.CYBERDRIVEILLINOIS.COM. AMONG OTHER SERVICES AT THIS SITE, YOU MAY CHECK THE STATUS OF THIS COMPANY, PURCHASE A CERTIFICATE OF GOOD STANDING, OR EVEN FILE THE ANNUAL REPORT REFERRED TO IN THE PREVIOUS PARAGRAPH.

SINCERELY YOURS,

Jesse White

JESSE WHITE
SECRETARY OF STATE

DEPARTMENT OF BUSINESS SERVICES
LIMITED LIABILITY COMPANY DIVISION
TELEPHONE (217)524-8008

JW:LLC

Form **LLC-45.5**
April 2007

Secretary of State Jesse White
Department of Business Services
Limited Liability Division
501 S. Second St., Rm. 351
Springfield, IL 62756
217-524-8008
www.cyberdriveillinois.com

Payment must be made by certified check, cashier's check, Illinois attorney's check, Illinois C.P.A.'s check or money order payable to Secretary of State.

Illinois
Limited Liability Company Act
Application for Admission to Transact Business

SUBMIT IN DUPLICATE
Must be typewritten.

This space for use by Secretary of State.

Filing Fee: $500
Penalty: $
Approved:

FILE # 0243-720-1

This space for use by Secretary of State.

FILED

JAN 15 2008

JESSE WHITE
SECRETARY OF STATE

1. Limited Liability Company Name: BFI Waste Systems of North America, LLC
Must comply with Section 1-10 of ILLCA or Item 2 below also applies.

2. Assumed Name: _____
By electing this Assumed Name, the Limited Liability Company hereby agrees not to use its Company Name in the transaction of business in Illinois. Form LLC-120 is attached.

3. Jurisdiction of Organization: Delaware

4. Date of Organization: 5-23-91

5. Period of Duration: Perpetual

6. Address, including County, of the Office required to be maintained in the jurisdiction of its organization or, if not required, of the Principal Place of Business: (P.O. Box alone or c/o is unacceptable.)

18500	North Allied Way	Suite #
Number	Street	
Phoenix, AZ	85054	Maricopa
City/State	ZIP Code	County

7. Registered Agent: C T Corporation System
First Name Middle Name Last Name

Registered Office: (P.O. Box alone or c/o is unacceptable.)

208	South LaSalle Street	814
Number	Street	Suite #
Chicago	Cook	Illinois 60604
City	County	ZIP Code

8. If applicable, Date on which Company first conducted business in Illinois: _____

(continued on back)

Printed by authority of the State of Illinois. August 2007 — 500 — LLC-17.9

LLC-45.5

9. Purpose(s) for which the Company is Organized and Proposes to Conduct Business in Illinois: (Include Business Code # from IRS Form 1065.)

non-hazardous solid waste management

(business code # 562000)

10. The Limited Liability Company: (check one)

☐ is managed by a manager or managers (List names and business addresses.)

☒ has management vested in the member or members (List names and addresses.)

Browning-Ferris Industries, LLC
18500 North Allied Way
Phoenix, AZ 85054

11. The Illinois Secretary of State is hereby appointed the agent of the Limited Liability Company for service of process under the circumstances set forth in subsection (b) of Section 1-50 of the Illinois Limited Liability Company Act.

12. **This application is accompanied by a Certificate of Good Standing or Existence, as well as a copy of the Articles of Organization, as amended, duly authenticated within the last 60 days, by the officer of the state or country wherein the LLC is formed.**

13. **If the period of duration is a date certain and is not stated in the Articles of Organization from the domestic state, a copy of that page from the Operating Agreement stating the date also must be submitted.**

14. The undersigned affirms, under penalties of perjury, having authority to sign hereto, that this application for admission to transact business is to the best of my knowledge and belief, true, correct and complete.

Dated January 14 (Month & Day), 2008 (Year)

Jo Lynn White

Signature (Must comply with Section 5-45 of ILLCA.)

Jo Lynn White, Assistant Secretary of*

Name and Title (type or print)

If applicant is a Company or other Entity, state Name of Company and indicate whether it is a member or manager of the LLC. Please refer to Sections 178.20(d) of the Administrative Rules.

*Allied Waste North America, Inc., Sole Member of Browning-Ferris Industries, LLC, Sole Member of BFI Waste Systems of North America, LLC

Printed by authority of the State of Illinois. August 2007 — 500 — LLC-17.9

IL061 - 10/31/2007 C T System Online

OFFICE OF THE SECRETARY OF STATE

JESSE WHITE • Secretary of State

JANUARY 15, 2008 5657-630-4

C T CORPORATION SYSTEM
600 S 2ND ST
SPRINGFIELD, IL 62704

RE BFI WASTE SYSTEMS OF NORTH AMERICA, INC.

DEAR SIR OR MADAM:

ENCLOSED YOU WILL FIND THE WITHDRAWAL FOR THE ABOVE NAMED CORPORATION.

THIS DOCUMENT MUST BE RECORDED IN THE OFFICE OF THE RECORDER OF THE COUNTY IN WHICH THE REGISTERED OFFICE OF THE CORPORATION IN THIS STATE WAS LOCATED, AS PROVIDED BY SECTION 1.10 OF THE BUSINESS CORPORATION ACT OF THE STATE OF ILLINOIS.

THE REQUIRED FILING FEE HAS BEEN RECEIVED AND PLACED TO THE CREDIT OF THE CORPORATION.

SINCERELY,

Jesse White

JESSE WHITE
SECRETARY OF STATE
TELEPHONE (217) 782-6961

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING	**AS 08-05 (Adjusted Standard –Land) (Waste Delisting)**

PETITIONER'S MOTION TO CORRECT TRANSCRIPT

NOW COMES Petitioner, BFI Waste Systems of North America, LLC ("BFI"), by its attorneys McGuireWoods LLP, and moves the Illinois Pollution Control Board ("Board") to correct the May 15, 2008 Transcript of Proceedings as attached.

WHEREFORE, BFI respectfully requests that the Board accept the attached transcript corrections.

Respectfully submitted,

BFI Waste Management Systems of North America, LLC

By One of Its Attorneys

July 24, 2008

Patricia F. Sharkey
McGuireWoods LLC
Suite 4100
77 West Wacker Drive
Chicago, Illinois 60601
(312) 849-8100

\6432928.1

ORIGINAL

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PETITION OF BFI WASTE SYSTEMS) AS 08-5
OF NORTH AMERICA, INC., FOR)
WASTE DELISTING.)

ORIGINAL

TRANSCRIPT OF PROCEEDINGS had in the above-entitled cause, taken before MARGARET R. BEDDARD, a Notary Public within and for the County of Kane, State of Illinois, and a Certified Shorthand Reporter of said state, at Room 301, 106 South 5th Street, Oregon, Illinois, on the 15th day of May, A.D. 2008, at 9:00 a.m

HEARING OFFICER: BRADLEY P. HALLORAN.

PRESENT:

McGUIRE WOODS, LLP,
(77 West Wacker Drive, Suite 4100,
Chicago, Illinois 60601),
BY: MS. PATRICIA F. SHARKEY and
MR. BRADLEY R. DANIELS,

appeared on behalf of the Petitioner;

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
(1021 North Grand Avenue East,
Post Office Box 19276,
Springfield, Illinois 62794),
BY: MR. WILLIAM D. INGERSOLL,

- and -

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
(9511 West Harrison Street,
Des Plaines, Illinois 60016),
BY: MR. PAUL R. JAGIELLO,

appeared on behalf of the Agency.

REPORTED BY MARGARET R. BEDDARD, CSR.

I N D E X

E X H I B I T S

NUMBER	MARKED FOR ID
NO EXHIBITS MARKED.	

HEARING OFFICER HALLORAN: Good morning, everyone. We're on the record now. My name is Bradley Halloran. I'm the hearing officer with the Illinois Pollution Control Board. I'm also assigned to this matter entitled In the Matter of Petition of BFI Waste Systems of North America, Inc., for Waste Delisting as documented as AS 08-5. Today is May 15, 2008, approximately 9:10 a.m.

I do want to note that -- at the top, that there are no members of the public here If there were, they would be allowed to state their peace

We're going to run this hearing pursuant to Section 104, Subpart D, and Section 101, Subpart F, of the Board's procedural rules.

I also want to note, for the record, that this hearing was properly noticed up. This hearing is intended to develop a record for the Illinois Pollution Control Board. I will not be making the ultimate decision in the case. That's left up to the four esteemed members of the Board. I'm only here to rule on evidentiary matters to make sure the hearing goes without a hitch.

A brief note. On April 15, 2008, I forwarded, via an hearing officer order, questions

from our technical units to the respective parties. The Petitioner filed prefiled testimony addressing those issues on May 6, 2008. To that end, we have Alisa Liu from our technical unit as well as Anand Rao that may or may not be asking questions.

With that said, Ms. Sharkey, would you like to introduce yourself, please.

MS. SHARKEY: My name is Patricia Sharkey. I'm with the law firm of McGuire Woods. I'm representing BFI -- I'm representing BFI Waste Systems of North America, Inc., today. Thank you. And we're going to be having -- With me I have two other witnesses who will be testifying on behalf of BFI, Mike Maxwell of Weaver Boos Consultants and Beth Steinhour -- Elizabeth Steinhour of Weaver Boos Consultants.

We do have an opening statement that we'd like to make, but perhaps you'd like to go through introductions first.

HEARING OFFICER HALLORAN: Mr. Ingersoll?

MR. INGERSOLL: I'm Bill Ingersoll from the Illinois EPA, Division of Legal Counsel, representing the Agency. Accompanying me today is Paul Jagiello also from our Division of Legal Counsel and Mark Crites. Mark is the permit engineer who has reviewed

the petition and interacted with technical staff for BFI -- the technical representatives of BFI. And Mark will be available if needed or if questions need to be directed -- technical questions need to be directed to the Agency.

HEARING OFFICER HALLORAN: Thank you, Mr. Ingersoll.

Ms. Sharkey, opening.

MS. SHARKEY: Yes. Thank you.

OPENING STATEMENT ON BEHALF OF
BFI WASTE SYSTEMS OF NORTH AMERICA, INC.

MS. SHARKEY: What we wanted to do is put into perspective what this petition is about, and I think we'd like to start by thanking the Board for the opportunity to have this hearing and particularly for having two members of its technical staff here today. And we really do appreciate both the opportunity to explain our petition and the opportunity to address any questions that the technical staff and the Board may have. And we look forward to this hearing as something of a dialogue to allow us to understand the Board's concerns and to be able to provide answers to any questions that may come up.

There is a lot of minutia involved in a

petition of this sort, and we are talking about delisting F039, which is a leachate from multiple sources. As a result, the list of constituents involved is quite long, and the petition here is actually quite extensive because we have provided the Board with probably the fullest demonstration of the character of a leachate or of a waste stream that it may have seen in any delisting petitions before. That's because we have a full nine years of sampling data from this landfill, which has been closed for 25 years. The reason for [redacted] nine years rather than 25 years is we, frankly, felt it was just enough, but also it is a period of time that represents the time since the landfill had a new cap put in place, an impermeable cover, and we believe that it's the best representation of how that landfill is functioning at this point.

But apart from all of the data that's here -- and there's an extensive amount of data -- what we want to make sure everybody understands is that the big picture here is that this is a very simple delisting, in fact. What we have is a leachate that is being generated in one unit at the Davis Junction Landfill. There are three units at

that landfill. One of them accepted hazardous waste for a period of, I believe, seven years. And the other landfills otherwise took the same material that this landfill took. This landfill had 2 percent hazardous waste. And, as a result, it is character -- the leachate is characterized as a hazardous leachate. The other two units at the same landfill did not take any hazardous material. And, as a result, the leachate from those units is not characterized as hazardous.

The leachate from the hazardous unit is -- must at this point be trucked 350 miles into Ohio in order for it to be handled at a facility that is permitted and authorized to accept hazardous liquid waste. Previously it was being hauled to the CID chemical waste management treatment facility in Calumet City over 100 miles from Davis Junction. However, recently BFI's been informed that CID cannot handle that material at this point. As a result, it's now going to Ohio, quite a distance. In contrast, the leachate from the nonhazardous units at the Davis Junction Landfill is going to a facility IPC that is in the Rockford area. I believe it's approximately seven miles from the Davis Junction

Landfill.

So what this is about is about not anything particularly new or dramatic that's going to happen with this leachate. The leachate is going to be hauled for treatment under this delisting. It could be hauled for treatment seven miles rather than being hauled for treatment 350 miles. We believe at the end of the day this is actually an environmentally beneficial delisting and that it certainly is going to minimize air emissions and use of energy. But, even beyond that, it's minimizing the risk of hauling a liquid material in a tanker truck over highways for a great distance -- greater distance than necessary. So the big picture on this is we're simply taking this material to one treatment plant instead of another, and it's a closer treatment plant. And both treatment plants are permitted to handle this type of material.

The only impediment for IPC being able to handle this material is the fact that it is characterized as a hazardous liquid -- hazardous waste under RCRA because of the fact that 2 percent of the waste handled in that landfill was hazardous waste. So we believe that the situation here is

actually pretty simple. We're not asking for a wide-open delisting. We are not asking for an across-the-board delisting. We're asking for a very limited type of delisting. And that is very limited by the language in the adjusted standard that we've proposed and put in the petition that's in front of the Board.

That language limits the disposal to a treatment facility, and it also limits the applicability of the delisting to the point at which the material leaves the facility. So all the while that the leachate is handled at the Davis Junction Landfill, it will be treated as it is now, as a RCRA hazardous waste. It will be loaded on to a tanker truck -- a 5,000-gallon tanker truck as it is now, and it will leave the facility under an Illinois waste -- an Illinois special waste manifest. It will then arrive at the treatment facility where it will be subject to Clean Water Act requirements. The facility, pursuant to our adjusted standard, would be required to be one that is permitted by USEPA and under its pre-treatment program.

So what we believe we're talking about under the conditional delisting and the way that

we've set this up in that delisting language is that it's a cradle to grave situation for governmental control of this waste stream. There's no point at which it's leaving or exiting a regulatory system. And I think when we look at how EPA has thought about this in the past and talked about the kinds of risks that delisting present, the biggest risk is -- and the biggest concern is where a waste stream is actually exiting a regulatory system. And that will never happen in this case.

Apart from that, we have, I think, a lot to talk about in terms of answering specific questions. We're well aware of there being guidance out there and a lot of history on delisting. And we believe what we have here is actually something that the Board has done before and talked about before, and that is conditional delistings that essentially allow for a waste that may not meet -- every constituent may not meet the parameters that it would be required for an open listing, but where by virtue of the type of delisting that's being requested and that condition listing -- the conditions in the delisting that some of those concerns are alleviated.

What we've given you is a lot of

information in this very, very big binder that -- We've presented two large binders as a part of the petition. But what you get out of that after nine years of testing for all of the Appendix 9 constituents is a very large majority of those constituents fall by the way side -- stream have not been detected. What we then come down to is a handful of constituents that we've identified as the final list of constituents. Many of those we have DRAS -- The DRAS being the model that EPA has required. The DRAS model has yielded a number of those that are -- We have analyzed under DRAS all of those that have actually been detected. For those, only a handful fall out as presenting any question outside of DRAS, meaning that they exceed of DRAS limits.

Of those, we have taken a hard look at each one of those. So this is really a situation where we go from quite a bit of data -- and, again, on a very conservative scenario that we've looked at this data -- and narrowed it down to a few constituents that are subject to other types of standards that we believe are appropriate to look at in this instance. And we will be talking about those in greater depth But, again, this is a scenario of a package that

could look very big, but at the end of the day comes down to a few issues

We appreciate the questions we received from the Board's technical staff What we'd like to do is put on two witnesses We're going to have Ms. Steinhour to begin with give an overview of the petition itself and what we've gone through in putting together the petition. Mr. Maxwell then is going to talk a bit about the modeling and the data. And then what we would like to do is actually turn to the questions that the Board -- the Board's technical staff presented us with and provide our prefiled testimony -- our testimony on that, a short discussion of each one of those, and then provide an opportunity for additional questions on those questions, if that is an acceptable way to proceed.

HEARING OFFICER HALLORAN: That sounds fine. Thank you, Ms. Sharkey.

Mr. Ingersoll, before Ms. Sharkey calls Ms. Steinhour, do you have any opening?

MR. INGERSOLL: Nothing. Thank you.

HEARING OFFICER HALLORAN: Thank you.

Ms. Sharkey?

MS. SHARKEY: I'd like to begin by having

Ms. Steinhour sworn in.

HEARING OFFICER HALLORAN. If you'd just raise your right hand, the court reporter will swear you in

(WHEREUPON, the witness was duly sworn)

ELIZABETH A. STEINHOUR,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

MS. STEINHOUR: Thank you for the opportunity to present the petition to the --

MS. SHARKEY: Excuse me. Before you begin, if I could ask Ms. Steinhour to state, for the record, her educational and professional background.

HEARING OFFICER HALLORAN: And spell your name, please.

MS. STEINHOUR: My name is Elizabeth, E-l-i-z-a-b-e-t-h, Steinhour, S-t-e-i-n-h-o-u-r. I have a bachelor's in legal studies from the University of Illinois. I've worked for the Illinois Environmental Regulatory Group for approximately eight years in development of the major environmental laws and regulations. And since then I've been in

the consulting field to assist our clients with compliance issues and maintaining compliance with the environmental laws and regulations.

MS. SHARKEY: And I would just like to say that Ms. Steinhour's resume is in the petition itself under Appendix I.

MS. STEINHOUR: And all of the land, air, water matters that I was involved with stemming back to the actual landfill regulations.

I am a senior project manager for Weaver Boos Consultants along with Mike Maxwell. I've been responsible for managing and assisting our clients in complying with the post-closure care activities at Davis Junction Landfill. I've been involved with that since 2001.

Ms. Sharkey, as she stated, Davis Junction Landfill, it's a closed landfill that has three units, one of the units, which is the subject of today's phase one. I wanted to just add to what Ms. Sharkey had stated by saying the 26,000 cubic yards of hazardous waste that was handled at Davis Junction is -- was 26,000 out of 1.9 million cubic yards of waste that was disposed of within that unit. Of the 1.9 million cubic yards, 87 percent of it was

general municipal waste, 11 percent was special waste, and the remaining 2 percent was hazardous waste.

The reason we looked back nine years, I also wanted to clarify, was because in 1998, '99 the landfill had put a new liner on -- over the phase one unit, and they put a dual leachate gas extraction system within the landfill So we felt that the past nine years has been representative of the conditions as they stand today and will stand until final closure of these final post-closure activities.

I also wanted to clarify that the reason CID is not accepting the waste from Davis Junction Landfill -- the wastewater is because they are overwhelmed with their own internal leachate that they're creating, so they do not have the capacity to handle leachate accepted from outside sources. It doesn't have anything to do with the characteristics of the leachate or anything like that. There are detailed records within the petition that detail what type of hazardous waste was received, where it came from. The landfill kept very good records as far as waste receipts.

The process -- What I wanted to focus on

today was to make the Board aware of the process that we've undertaken to prepare the delisting package It began a long time ago, and it's interesting. It was in May of 2003 that we actually had a meeting with the Agency to discuss the potential for delisting this hazardous waste leachate During that meeting, Weaver Boos outlined our suggested approach for preparing a delisting package for the Board. There was also discussion at that time concerning the potential for discharging to this -- to the sanitary sewer system, which would, thus, exempt the leachate from coverage under the RCRA program. What we did was we went back. And Weaver Boos and BFI, we both worked on evaluating the potential for a sanitary sewer system. Given the rural location of this landfill and the cost, it was not a feasible -- economically feasible option.

In 2003 we submitted a draft delisting petition to the Illinois EPA, which also included a draft sampling analysis plan. And the sampling and analysis plan was prepared after we had evaluated five years of leachate data and we'd also had discussions with USEPA and we'd reviewed their RCRA delisting guidance manual. We suggested further

monitoring at that time for certain selected constituents, and we said we would conduct that monitoring in addition to the annual leachate sampling that we conduct at the site.

In May of 2004 we provided the Agency with a draft delisting petition. During the summer of 2004, we, again, met with the Illinois EPA, and the Illinois EPA asked us to do a comparison of the hazardous versus the nonhazardous leachate. That comparison is provided in Appendix D to the petition. And our analysis resulted in showing no statistical significance between the non-haz and the haz leachate at the site.

In January of 2005 we received verbal comments from the IEPA regarding our draft petition and our sampling analysis plan. From February to June 5 -- June 2005, we implemented our SAP. We did six sampling events. We tried to sample so we had a representative idea of what was happening from different months other than our annual sampling event, which is in January and February.

In October of 2006 we, once again, met with the Agency. And in February 2008 we met with them to discuss the final draft to present it to the Illinois

EPA. We provided nine years of leachate data, 15 sampling events. There's over 10,000 data points that have been evaluated for approximately 300 constituents. The majority of the constituents have been non-detect for years. There has been little statistical significant variability in the concentration of the constituents that are present. As Ms. Sharkey stated, the disposal options are limited for this facility. And right now BFI's transporting the waste to Ohio, which is over 350 miles away.

We are requesting the adjusted standard and belief that it provides cradle to grave governmental control over this delisted waste. It will only allow BFI to transport the leachate to a regulated -- a wastewater treatment facility with a regulated treatment program, such as Interstate Pollution Control, which is seven miles -- not even seven miles away. And so, in essence, they will be able to transport the leachate -- the hazardous leachate in the same manner that they're transporting the nonhazardous leachate from that site.

I think we've provided protections in how we are going to handle the leachate by providing

notification to the Illinois EPA 60 days before we start transporting it under an approved delisting program. We've talked to the Agency and agreed that we'll sample the first initial trucks -- consecutive trucks going out of the facility, and we'll continue to do quarterly sampling on the first year and then semiannual sampling. So we will do -- be doing more sampling than we're currently doing under their post-closure permit.

We're going to transport it by a licensed hauler. We're going to transport it under a special waste manifest. And I think it's important to note that we're not going to be applying -- this wastewater is not going to be going into any land surface impoundment. It's not going to be going into a lined pond. It's actually going to go to this wastewater treatment, be pretreated, and have to comply with the NPDES permit requirements before its ultimate disposal.

We are not asking for any changes to the landfill's ground water monitoring program. We will continue to monitor that program in accordance with our RCRA post-closure permit. And, as Ms. Sharkey stated, if we have a spill, it's going to be covered

under the RCRA program because we're not handling it in -- It wouldn't be handled in accordance with the provisions of a delisting regulation site specific.

So if you have any questions.

HEARING OFFICER HALLORAN: Ms. Sharkey, do you have any direct, so to speak?

MS. SHARKEY: No, I don't. Thank you.

HEARING OFFICER HALLORAN: Before we go, Mr. Ingersoll, any queries?

MR. INGERSOLL: Yes, please.

CROSS-EXAMINATION

BY MR. INGERSOLL:

Q. Ms. Steinhour, exactly when in the process -- It's going to be -- The leachate is going to be in a tanker truck, and it's going to go to the receiving facility?

A. Right.

Q. Exactly at what point does the proposed delisting attach to that leachate?

A. We would like the proposed delisting to attach at the time. It will be handled as a -- It will be manifested as a special waste, and so from the point at which it leaves the facility. At the point at which it arrives at IPC's door, the manifest

that's attached to it, it's very important that it's a special waste manifest and not a RCRA hazardous waste manifest because then they would be precluded from accepting the wastewater.

Q So as it's going down the road -- even though it's a lot shorter than it's traveling now -- it would be a special waste and not a hazardous waste?

A. Right. But if there were a spill, it's our position that it wouldn't be -- it's not being handled in accordance with the delisting petition, so it would be a spill that's been manifested as a special waste from Davis Junction. And if it does spill, we would have to clean it up under the RCRA permitting program -- clean-up program.

Q. Because one of the conditions would have failed?

A. Right.

So the RCRA clean-up program would supersede the delisting petition if we had a spill and a release to the environment because the delisting petition says you manifest it, you transport it, and you have to dispose of it at IPC. If we dispose of it in any other manner -- We can't

put it in a landfill because it's a RCRA -- it would be a RCRA waste. We can't spread it on the ground or land apply it. It would be considered a RCRA wastewater.

Q. Okay. Now, as just a factual matter, when it gets to IPC, it's in a truck -- your truck -- BFI's truck. Then what's going to happen to it? I don't know what IPC's facility looks like. It's just factual background, not a regulatory question.

A. IPC has a chemical process that they use to treat their wastewater --

Q. Before that. Just physically what happens to the stuff?

A. Typically, it's my understanding that they put it in a separate holding tank. And they test it there, decide how they're going to treat it, and then they feed it into their system. So they don't just -- That's how typically the wastewater treatment facilities handle all leachate, whether it's hazardous or nonhazardous, because they want -- they have it coming from different facilities.

Q. That was just for we nontechnical folks here.

A. So what they'll do is they'll put it in

this holding tank. They'll test it. They have certain parameters that you have to meet. And then they'll treat it and dispose -- You know, it's discharged along with the other wastewater that they're handling at the facility.

MR. INGERSOLL: Okay. Thank you. I have nothing further.

HEARING OFFICER HALLORAN: Thank you, Mr. Ingersoll.

MR. RAO: I have a follow-up.

HEARING OFFICER HALLORAN: Yes, Mr. Rao.

MR. RAO: You just mentioned how once the leachate gets to the wastewater treatment plant they're going to hold it in some kind of a storage tank?

MS. STEINHOUR: What they'll do is they'll transfer it from the tank into a storage -- one of their holding tanks that they use for treating the wastewater.

MR RAO: Okay. Earlier, in your testimony, you also mentioned about how this leachate would be pretreated in accordance with NPDES permit --

MS. STEINHOUR: No. It will be subject to IPC's wastewater treatment facility, their pretreatment

regulatory programs and the toxicity characteristic procedure -- or the toxicity characteristic evaluation that was undertaken by USEPA to develop the current toxicity characteristic. This was one very relevant other regulatory program that we think is applicable here. Based upon that, we have proposed that the toxicity characteristic level for vinyl chloride, 0.2 milligrams per liter, be the proposed delisting level for vinyl chloride.

The last constituent that exceeded -- that identified concentrations over the generic DRAS delisting numbers was 1, 4 dioxane. And, again, using that same criteria that's laid out in the regulation referenced earlier, we looked at developing a site-specific model relative to the scenario where 1, 4 dioxane does happen to spill from the tanker truck. And the two primary parameters associated with the transport of that specific constituent as it's spilled to the environment are the infiltration rate into the soil and also the environmental degradation rate after it enters the environment. And we presented in the petition a model that documents that -- Actually, based upon those input parameters, the -- the 1, 4 dioxane concentration

should it be released into the environment in a catastrophic tanker spill actually decreased the concentrations very quickly based upon the geology of the area and the degradation rate of that particular parameter. And that result showed that a concentration of 1, 4 dioxane that's very high could legitimately be a delisting level. We defaulted that to a number of 100 milligrams per liter as the delisting level for 1, 4 dioxane based upon this model.

And that was the summary of the model that I had intended to cover.

MS. SHARKEY: I have one direct.

BY MS. SHARKEY:

Q. Could you elaborate a little bit more on the 1, 4 dioxane and what numbers you actually came to when you did the modal and explain a little bit more about what modeling for the 1, 4 dioxane was, what you look at specifically?

A. Yeah. What we looked at was we looked at -- The degradation rate is the rate that it degrades, and we looked at the half life, meaning similar to radioactivity in the sense that it will degrade -- half of it will degrade. It will take a

certain time for half of it to degrade. Based upon the half life, the degradation will take place over time. As a result of the very low permeability of the local soils, the amount of time that the leachate will take to percolate down to the uppermost aquifer is relatively large. In that time so many half lives go by -- so many half lives proceed. In fact, it takes hundreds of years for the leachate to get to the groundwater that by the time it reaches the groundwater there is very little risk.

And there was an equation that was presented in our petition that indicated that -- In fact, the number that was supported by the equation actually exceeded the one million part per million number, which, of course, is physically possible. And 100 was a round number, and we were racheting it back to 100. We think there's very little risk in the unlikely event that there's the catastrophic tanker spill during the transit.

MS. SHARKEY: That's all I have.

HEARING OFFICER HALLORAN: Thank you.

Mr. Ingersoll?

MR. INGERSOLL: No questions. Thank you.

HEARING OFFICER HALLORAN: Ms. Liu? Mr. Rao?

MR. RAO: We will wait until you get to the responses.

HEARING OFFICER HALLORAN: Thanks, Mr. Maxwell. You may stay seated, I guess.

MS. SHARKEY: Mr. Halloran, what I'd like to do at this point is if I could provide the legal -- our view of what the legal framework for the delisting petition in this instance is and some of the relevant legal questions. Then we go to the -- After I finish that, of course, if you had any questions about how we interpret the regulation, we'd be happy to take any questions on that as well. And then we would go to the prefiled testimony in response to the Agency's questions -- or the Board's questions.

HEARING OFFICER HALLORAN: Did you represent earlier you wanted to be put under oath?

MS. SHARKEY: I'd be happy to do that if you'd like me to.

HEARING OFFICER HALLORAN: It's entirely up to you.

Mr. Ingersoll, do you have a problem with that?

MR. INGERSOLL: No preference.

HEARING OFFICER HALLORAN: Please raise your

right hand.

(WHEREUPON, the witness was duly sworn.)

MS. SHARKEY: What we wanted to do is give a framework for the legal requirements here. We begin, I believe, with the Illinois Administrative Code 720.122(a), and that actually directs us to the parameters that the Board needs to look at in order to make its decision. Of course, the first is that the -- If you'll give me one moment. I apologize. I should have pulled out the regulations.

721.122 is the waste delisting provision in the Board's regulations. It, as I said, provides the conditions under which the Board can grant the petition. The first is under (a)(1), that the petition must demonstrate that the waste produced does not meet any of the criteria under which the waste was listed as a hazardous or acute waste. The second is that the Board must determine that there is a reasonable basis to believe that factors, including additional constituents other than those for which the waste was listed, could cause the waste to be a hazardous waste and that such factors do not warrant retaining the waste as a hazardous waste.

Notably, that particular decision is -- There is then a reference to the EPA RCRA delisting program guidance manual, and it says that a Board determination of that other factors question is to be looked at under the -- "in reliance upon and in a manner consistent with the EPA guidance manual."

The interesting thing about that is that -- I just want to point out that the guidance manual is -- has been apparently adopted by the Board as -- and incorporated into this regulation. Although, it's just an EPA guidance document. I did a little research and homework on this, and I'm quite sure Mr. Rao is nodding his head because he probably knows the history on this as well. What's interesting is that -- I'm not aware of very many instances in which the Board has ever adopted a guidance manual as an actual part of its regulation and decisionmaking in any way by an EPA guidance manual. Nonetheless, the Board appears to have done it here. And I think it was a matter of something that was done back in 1993.

And then when the Board -- When that manual was updated, the Board realized there was a problem when it asked this question and was told -- the record of that rulemaking indicates that the Agency

at that time said, "Well, we look at this, and we treat it as something that we're required to look at." So the Board went ahead and adopted this as a part of its regulations.

But I point out that it is an unusual situation in that it ought to cause us to look carefully at this because some of what we're going to be talking about, I think, as we get into the discussion of the technical staff's questions is that EPA itself does not treat the -- its guidance manual as something rigid that they must live within. In fact, they consider it -- They probably, in large part, act consistently with it, and there certainly are parts of it that they hold as being the Bible. But there are many parts of it that, indeed, they take different positions on. So I want to point out that the language here is that the Board must be in reliance upon and in a manner consistent with the EPA manual. And that does not necessarily mean word for word what the manual says.

Going beyond that, I think it's interesting that when you have a toxic waste you go to 720.122(d). And for a toxic waste we have a specific type of demonstration that must be made in the

petition. Petitioner must demonstrate, once again, that the waste does not contain the constituent or constituents that caused USEPA to list it as a waste. Secondly, that although containing it -- If you have the constituent in there, it's not a non-dstect. You found you have that constituent. You then have to demonstrate that it -- that that constituent does not cause the waste to -- Excuse me. Let me reword that. Although containing one or more of the hazardous constituents that caused EPA to list the waste, the waste does not meet the criterion in 35 Ill. Adm. Code 721.11(a)(3) when considering the factors that are listed there, which are A through K under that provision.

So what's very interesting here is if you look at this there's no reference here to the guidance manual anymore. The guidance manual is referred to for characteristic waste. It is not referred to for toxic waste. And I just want to point out that I think that there appears to be some intention here because the guidance manual is referenced in some places and not others.

In lieu of the guidance manual, in fact, what we do with the toxic wastes is we go to 721.111

For example in Shell Oil, in that case, which we have provided in our -- We've provided the proposed rule and final rule for the Shell Oil delisting in our prefiled testimony. In that case, USEPA required eight samples to be taken within the first 60 following the delisting. After that Shell was to sample quarterly and thereafter annually.

In another case -- Excuse me for just a moment. In another case on a delisting case on behalf of Auto Alliance International, EPA provided simply for quarterly sampling and then went to an annual verification sampling.

In another case, this one involved the Hanford Nuclear Site in Washington, the applicant for the delisting was the Department of Energy. They provided that DOE was to submit a plan. And they, in that instance, were sampling every 15th tank from the site. So it, again -- By the way, that was a land disposal scenario, I believe.

Nissan, a case that the Board had referenced -- had questions referenced, involved one -- I believe it involved one initial test within 60 days and annual testing thereafter.

Tenneco is another one, T-e-n-n-e-c-o.

Just a one-time notification. I don't believe they had any verification sampling.

Eastman Case, delisting quarterly for one year. Subsequently annual.

And ~~Chaparral~~ Chagaral is another one we looked at, eight full-scale treated batches and then annual.

So all of these delistings, I should say, except for Tenneco, were waste streams that were being generated by an ongoing process. And I think it's significant because an ongoing process or an ongoing activity, of course, could change. So consistency of that waste stream would be a real question. Of course, we argue that's not the case here, that we, in fact, have a very consistent waste stream and that we know what it is.

I guess I also wanted to say that in the Waste Management case, the petition before the Board, in that case they had proposed to delist a filter cake. But it was a filter cake that was being generated on an ongoing basis. It was not a closed situation such as we're suggesting here. And in that one the Board noted particularly that it was the fact that the future waste could be variable that was of concern and why there was a discussion of actually

testing every load and every batch. So we contrast the BFI waste as very unchanging. The landfill's been closed for 20 years. As you've heard, it has a low permeability cap. We have nine years of monitoring data showing very little variability in it.

Another distinguishing factor is BFI's large amount of analytical data and the lengthy period over which it was obtained. I think that gives, again, the specific chemicals that are there over this period of time. The range of concentrations are not -- We believe we have enough data here -- And Mr. Maxwell can testify to this in more depth. We have more data than others have, and we think it's enough to demonstrate the stability and the lack of significant variability of this waste.

In contrast, BP Amoco, when they presented the Board with a petition, came in with just three sampling events that were taken over a six-month period. In Shell Oil, which is another example before USEPA, they had four monitoring events performed over a period of approximately three months.

I think the Board also asked about

whether -- the question of whether this is a batch operation and looking at some of the particular language that USEPA in its manual has about multiple batch operations. And our answer to this is that this is not a batch operation at all. This is a single source, a ~~continual~~ continuous source, that is generating leachate. It's the landfill. And it's not in any way -- The fact that we are taking it out in 5,000-gallon batches does not convert this to being a batch source.

To close on this, we think that monitoring every batch would be extraordinarily expensive. It would be extraordinarily onerous. It would in effect -- probably would put us at a question mark ~~with~~ about whether or not it's worth doing this kind of thing if you're talking about having to sample every single load of this waste as it goes out. We think that it hasn't been required elsewhere, that it goes beyond even what the manual itself requires because the manual looks at that from multi-batch scenarios. All of the above delistings that I mentioned, with the exception of Tenneco, I believe were multi-year, ongoing source scenarios. So all of those, and still USEPA has not required that level of sampling. So we

situation that we know what those waste streams are.

Again, we think -- We think we've got greater data -- volume of data and greater controls in this situation. And, of course, because it's being destined for pretreatment, all of those things go into giving greater comfort than the ones that you've -- that USEPA has looked at where they're ongoing operations. They're talking about land disposal, and they don't have the kinds of very limited -- They're not going to be pretreated.

And I guess this is the moment where I can get this point as well I want to make it clear that this material's not only going to be pretreated at a pretreatment plant at IPC, it will then go to POTW where it will be treated again So it's going to get double treatment as opposed to those others that are land disposal.

MS. STEINHOUR: I think it's important to note, if you look at all the delisting petitions, we couldn't find a delisting petition that had as much data covering as many years with the seasonal variations. That data was actually collected, and we have collected it over this nine-year period. In these other instances, the source of that

nonhazardous -- that hazardous waste source was going to remain present by placing it in a land impoundment. With us, the source is actually being treated, doubly treated, and then they're going to discharge it under the Clean Water Act program. So this isn't an instance where we're delisting it, placing it in a lined pond or a lined landfill, and leaving it there with the potential hazard for some future event.

MS. SHARKEY: I think part of that is to say, if there were some slight variability to occur, the comfort you get here is that it's going to be treated, you know. In the other scenarios, it's not. It's just going to be there. It's going to go into the ground. So if they have that variability problem, it has serious consequences. Here the only scenario would be some variability that would be -- affects somehow the analysis done on that worst-case mismanagement scenario of the catastrophic spill. But other than that, it's going to a treatment -- And, by the way, we're going to provide you with evidence, for the record, on the fact that the catastrophic spill -- there's no experience of having that kind of spill by BFI in this region and by the

facility

hauler that they use.

MR. RAO: I have a question relating to what you were just talking about, variability in leachate quality. You have testified that BFI has submitted extensive leachate monitoring data to the Board, nine years worth of data. Also, earlier Mr. Maxwell testified about, I think, four chemical constituents which you found were about at delisting levels, which I think some of them you indicated were outliers.

So did you do statistical analysis of this monitoring data to see what kind of variability's there were with the leachate quality and how that may affect compliance with the delisting levels?

MR. MAXWELL: We have not.

MR. RAO: How did you determine those values for outliers? Was it based on a statistical analysis, or was it more about observing the data?

MR. MAXWELL: Primarily observing the data relative to the other data points that were out there and the fact that they both -- the higher concentrations both occurred during the same sampling events was the trigger for us thinking that there was something atypical or unusual about that particular sampling event.

MR. RAO: Would it be possible to?

MR. MAXWELL: It's possible.

MS. SHARKEY: We can give you a fuller answer to that in our written remarks because we'd need to go back -- I think Mike would need to go back and look. But what I'm believing is, at the time that we looked at it, there were other constituents that were also -- while they didn't exceed anything, that were also higher in that event, which led us to believe that there's something going on with that event, not just these two constituents.

MR. RAO: Yeah. Any additional information relating to the variability of data would be helpful. We were hoping that if you had any statistical analysis that would also support your monitoring frequency, that, you know, the analysis shows that the variations are not significant for any concern in terms of going over the delisting levels.

MR. MAXWELL: So the focus that you would have would be -- or the focus that you would suggest would be that we focus on the phase I -- the statistical analysis of the phase I data to try to represent variability within that data?

MR. RAO: Yes.

MR MAXWELL: Okay

MR RAO That's all we have on the monitoring frequency

MS SHARKEY: We'd move then -- If there are no further questions on that, we would move to number two, which was a question regarding one-time delistings versus multi-year delistings. That question was as follows. "Explain BFI's rationale for not utilizing the multi-year approach to derive the delisting levels using the multi-year values of 500,000 gallons per year versus" -- excuse me -- "5,000 gallons per year and seven-year" -- "a seven-year anticipated closure period." And I'm going to take the answer to this one.

BFI's delisting petition seeks a conditional delisting as defined in the United States Environmental Protection Agency's National Policy for Hazardous Waste Delistings, which was issued by Elizabeth A. Cotsworth, C-o-t-s-w-o-r-t-h, who at the time was acting director of the Office of Solid Waste. This is a July 1998 document. We've provided a copy with our prefiled testimony.

The restrictions here do not allow for any amount of leachate to be directly deposited on the

land in either a landfill or a surface impoundment, as we've said now probably over and over again. But, in contrast, the majority of EPA's delistings that we've reviewed are land disposal And I want to take and walk through this. This is by way of getting to the answer to your question, but to point out that land disposal is the focus of almost all of these.

The Automotive International Alliance -- Automotive Alliance International, that one was a delisting of a sludge filter cake that was going to a Subtitle D lined landfill. The Shell was -- We believe that the Shell case involved going to an on-site facility that we believe was a land-based facility. It's difficult to tell from -- if it was going to a land-based, on-site treatment system. It was going to on-site treatment. Okay. So that one was not a landfill.

The Department of Energy was going to a state land disposal situation. That's the Hanford case. Nissan was going to a Subtitle D landfill. Tenneco to a Subtitle D landfill. Eastman to a Subtitle D landfill. Shaparel to either an on-site land disposal or a municipal industrial sold waste landfill. And another one we found was a USG case

going to a Subtitle D solid waste landfill. We will provide you, by the way, with the Federal Registers on all these USEPA delistings.

MS. STEINHOUR: I think it's important to note, too, that in the Shell situation they were discharging directly to a stream. They weren't going to -- like we have, to a pretreatment facility, then to another facility that's going to pretreat it, before it's disposed and discharged under an ~~NPDES~~ NPDES permit.

MS. SHARKEY: So rather than modeling, those folks did, indeed, I think -- It's unclear. It's very difficult --

I ~~shouldn't~~ should tell you this. I don't know if you've tried to do this yourselves. But it's very difficult to get the underlying petitions. What you can get -- What's publically available information, easy to get hold of, are the Federal Registers in which these delistings have been adopted. What's more difficult is to actually get the petition behind them. And we actually did get the petition behind the Shell case. I have to say it was a Freedom of Information Act request. It took us -- It probably took six months to get an answer from USEPA, and it

was missing a key page once we got it As a result, the amount of information you have on these is somewhat limited.

As you know, the facts involved are really, really critical, we think, to the kind of determination that's made in each of these cases. But what we -- The information I've given you we were able to derive from the Federal Registers. What they've each done is they've - We believe they have modeled -- they've modeled one year of leachate in their DRAS modeling, we believe -- or leachate waste stream. What we've done here is not done that, and we've not done it because we're not going to a land disposal unit. What we've done here is modeled what we considered to be the reasonable worst-case mismanagement scenario. We think that's consistent with -- as we've said, with the Illinois Administrative Code, Section 720.111(a)(3). I believe it's (j). The one that talks about the implausible -- the plausible mismanagement scenarios and that that's the risk you're looking at.

In this case, of course -- We think this is conservative. To be honest with you, I think that we've been -- Some have suggested to us, "Why have

you gone this far? Why haven't you simply said it's going to a pretreatment facility? Why are you modeling at all?" And the answer to this is because we believed that the Board would like to see this type of modeling, and it has required it in other scenarios. But, indeed, we would point out that most of those other scenarios were not as limited as this. By virtue of limiting this, we've now got the only scenario in which there could be land application, which is what you would be looking at with putting all of that material in one place.

The only scenario is this catastrophic 5,000-gallon spill, and -- So we think it's conservative under the document that we've given you. But we also think it's just -- you know, that the common sense behind this is -- should be evident. There is no practical possibility that more than one tanker truck of leachate would be involved in a catastrophic accident at the same location. We think that there's -- We're talking about some multiples of the 5,000-gallon tanker truck. We think that's really pretty implausible. Moreover, there's clearly no possibility that all of the tanker trucks dispatched over an anticipated seven-year period

would be involved in catastrophic accidents. I'm sorry. I kind of like this. Even the more farfetched is that there would be a scenario where all of these tanker trucks would be involved in an incident -- catastrophic accidents at the same location. And that's what you'd have to do to get to the scenarios that people are looking at when they look at land disposal and they talk about modeling all of the material generated because they have to because they're going into a land disposal scenario where all of that material actually could leach down into the groundwater into the ground. Here there is no possibility of that.

So we think we've really done the worst-case scenario. And I want to point out that it's consistent with -- This is consistent with the way that USEPA has approached coming up with the most serious -- In the Federal OPA act, the Oil Pollution Control Act --

MS. STEINHOUR: The Oil Pollution -- The Oil Pollution Act. And it's a spill prevention control countermeasures program, the worst-case discharge scenario.

MS. SHARKEY: This can be found -- I've found

my notes It can be found at 40 CFR 112, Appendix D. They have an appendix there that is entitled Determining Worst-Case Discharge Planning Volumes for Purposes of Spill Prevention, Control, and Countermeasure Plan under the Federal Oil Pollution Prevention Regulations. So they have said one tanker truck is the correct volume to look at.

MS. STEINHOUR: And it's important to note that when they developed this worst-case discharge they were concerned about a tanker truck that was actually going to spill and run into a water of the US. So there would be some potential for transporting that spill across a large area other than just the ground.

MS. SHARKEY: And I think this is a very important point because at this point we recognize that the DRAS model has -- you know, generally says, you know, put in a whole year's worth of your waste stream and model that. But this is where we come back to the DRAS is one tool. It doesn't fit this situation very well. This really is a pretreatment and treatment situation. Therefore, it's inappropriate to use that one-year volume in it.

And we looked to and we provided you with that 1998 policy guidance because we think that it

explains that USEPA is well aware that conditional listings can provide safeguards and that an agency, like the Board, that is charged with doing these delistings can use its professional judgment to make decisions where that model and where the DRAS manual doesn't fit precisely. And, again, we go to the 1998 policy memo where they've said, "The Agency realizes" -- This is quote. "The Agency realizes that for a relatively small number of petition wastes that are not or will not be managed under a scenario our generic delisting models can assess regions" -- in this case it would be the Board -- "may have to consider site specific circumstances or consider adding specific conditions on a case-by-case basis." And this is, of course, in their policy guidance on conditional delistings.

So, again, under the unconditional delistings, the Agency loses control. The Board loses control. USEPA loses control of the waste stream. It's out of the system. Nobody -- It's considered nonhazardous and nobody cares about it anymore. In many states that don't have the special waste manifesting like Illinois does. The material might not even be tracked at all. The opposite is

true where you have a conditional delisting. And, again I won't go over it again and again.

The conservative assumptions that EPA has made in its DRAS model and including -- assuming that all of the waste generated will be disposed of in one unlined landfill don't need to be made. You don't need to have 100 percent assurance in this situation from that because you are getting assurance from the conditional delisting itself. And we've put more on this in the record in our prefiled testimony.

But I would like to take you back to the Board's own response to Waste Management in an opinion in AS 05-07 where the Board found that Waste Management had proposed to use a model that was for a lined landfill instead of for an unlined landfill. The Board said, you know, "That's inconsistent with USEPA policy. You really can't do this." But they said, "What you can do is come back to us and tell us why you can do this" -- "or why it is consistent." And I'm going to quote here. I'll take the quote. "While having no bearing on risk and hazard analysis, Waste Management, Inc., may also propose adjusted standard language that would condition the delisting on the disposal of the petitioned waste. For

example, only in a lined landfill."

So here was an instance -- We point this out because this is an instance of the Board itself saying - recognizing that even if - even if your modeling is different, if you're going to model for a different scenario, you need to limit your adjusted standard to that scenario. And so that's what we've done. We think that it's very consistent with what the Board said in Waste Management.

I don't want to be repetitive. I guess I would just close by saying that we think this is an instance in which the use of the total volume of the material here does not comport with the -- with any reality involved with this situation. There's no common sense scenario that would result in the total volume being released to the environment. Apart from that, the EPA has allowed this kind of thing. There's latitude under the EPA policy documents for fashioning a conditioned, adjusted standard here that would address the concerns.

I think I will leave it at that. I'll be happy to answer any questions.

HEARING OFFICER HALLORAN: Mr. Ingersoll?

MR. INGERSOLL: No.

HEARING OFFICER HALLORAN: Mr. Rao? Ms. Liu?

MS. LIU: Can I have a moment to confer?

HEARING OFFICER HALLORAN: Sure.

(WHEREUPON, there was a short interruption.)

MR. RAO: I just had a follow-up. This is more related to what you testified earlier about getting information from Shell Oil.

Just reviewing the Shell Oil decision that you had attached to the prefiled answers, it seemed like they used one year's worth of leachate that they generated. It seems like they used that -- At least they say they used the maximum volume. So in the information you got from them -- Because it's hard to tell from the Federal Register that they used. So I just wanted to know did you get that information from them as to what volumes or how they modeled?

MS. SHARKEY: I'm smiling because last night I asked my colleague at my law firm to look into that very question because we were asking ourselves -- We know what the volume was they talked about, but we don't know what they used in their model. We know what their annual production was. We're not sure what they used in their model. I don't think -- We'd

be happy to provide you with the portion of that -- of the application from Shell that talks about that, if that would be helpful. But we believe -- I'm getting the nod that we believe that the amount used was their annual volume

MR. RAO: Okay. In going through the additional information you got from Shell, were you able to discern why they did maximum volume over -- I don't know how many years they modeled. When I was looking at it, it seemed like their situation was similar to BFI's except they were hardpiping their leachate to the on-site treatment plant instead of shipping it out. But the modeling for -- If you can answer that. If have you any comments to make on that, it would be helpful to distinguish their situation from BFI's. If not now, in comments that's fine, too.

MS. SHARKEY: I would like to make a note of that and get back to you in writing with an answer on that question.

MR. RAO: That would be helpful.

MS. SHARKEY: Thank you.

MR. RAO: That is just a clarification question I had based on your response.

On page 5 of your prefiled answers and

looking at footnote 2, this footnote states that -- as follows. "Like RCRA treatment regulations, the Clean Water Act provides regulatory assurance that the leachate in this case will be treated to nonhazardous levels at the wastewater treatment facility before discharge to environment. Therefore, there is no risk associated with the disposal of the entire multi-year volume of leachate."

Could you please explain what the phrase "treated to nonhazardous level" means in the context of this proposed standard?

MS. SHARKEY: We're talking at the treatment plant?

MR. RAO: Yes.

MS. SHARKEY: Well, we believe that the treatment process at IPC and then the subsequent treatment process at the POTW will assure compliance with the Clean Water Act standards. Therefore, they're going to be treated to a level of treatment that is equivalent -- that would be at a nonhazardous level.

MR. RAO: When you say that it would be treated -- the leachate would be treated to nonhazardous levels at the treatment plant, will they

be specifically focusing on all the constituents that are listed in Table A of the proposed language or whatever the applicable water quality standards are specified in their NPDS permit?

MS. SHARKEY: I think it's certainly the latter. They're going to be treating this waste stream, as they do every waste stream, for the constituents that are -- I want to say that are trigger constituents, that are constituents that are deemed to allow them to -- If they treat for this particular constituent, they are assumed to be treating for others. I believe that that's the way they work. I probably should defer to Mr. Maxwell to answer this question.

MR. MAXWELL: Indicator parameters. They would be indicators of an overall issue.

MR. RAO: Okay.

MS. LIU: You mentioned earlier, I think, that the leachate from the other two phases goes to IPC already --

MS. SHARKEY: Correct.

MS. LIU: -- and that there was no statistical difference really that you found between the constituents and their concentrations and the leachate in the other two phases, and so far IPC

hasn't shown any concerns with the type of discharge they're getting from their treatment process; is that correct?

MR. MAXWELL: That's correct, yes.

MS. SHARKEY: I just want to make it clear, and I think your question was going there.

The kind of treatment that they'll be getting there will be -- There will be some testing to ensure that this material can be handled. And we actually have obtained -- through a Freedom of Information Act request to Illinois EPA have obtained files on IPC and what their treatment process is. We wanted to see the entire thing. And we have looked at what the treatment process is. It does involve pretesting of the materials that come in, and it does involve then several levels of chemical treatment that I believe our technical people -- and I probably ought to ask Beth and Mike to answer this. But we believe maybe -- it's as good as or better than actually the treatment that the same material -- that the hazardous material right now is receiving was receiving at CID at its facility.

MR. MAXWELL: I would agree with that.

MS. STEINHOUR: And these facilities -- This

isn't the only wastewater that they treat. Like you say, they're accepting wastewater from the nonhazardous units. They're accepting wastewater from other industrial facilities, as well as what they're receiving from the local communities. So, you know, what we found is whenever we're asking wastewater treatment facilities to accept nonhazardous waste leachate they look at the leachate. They look at their pretreatment program because this is data that they have to provide to the Illinois EPA in order to have an approved pretreatment program. So they're very cognizant of what they can accept, what they can treat, and how that impacts their destruction of it.

In this case, you not only have one entity besides BFI that's going to be looking at the leachate, you're going to have the second entity, which is the Rock River Reclamation District. So through the line, unlike Shell who has one pretreatment and then the discharge, ours is going to an independent entity that's going to be looking at it and then to a second independent entity that will be looking at what they're receiving.

MS. SHARKEY: Mr. Halloran, I wonder if it would

be appropriate at this point -- I know this will, to some extent, interfere with our -- the way we're proceeding But, as you know, BFI met with Illinois EPA to discuss the adjusted standard over many years. In addition, we met with them after they filed their original recommendation, which was for denial of this adjusted standard. After that meeting and further discussion, the Agency changed its position and filed a recommendation with no objection to this adjusted standard. You'll notice that some of what went in there in the change -- And we filed with our response to that document an amended petition that included the language that it shall have an approved -- USEPA approved pretreatment program at the facility that it's going to.

My question here is whether or not it would be useful to have Illinois EPA's perspective on the pretreatment program at this point in the record or if we just want to save that for later? I don't want to speak for the Agency, but I believe the Agency's -- part of the Agency's change in their position was, indeed, based on the fact that they are satisfied that the pretreatment program would address any issue that -- any constituents in that waste

stream

HEARING OFFICER HALLORAN: Mr Ingersoll, do you have any preference on whether you want to call Mr. Crites now or later?

MR. INGERSOLL: I have no preference. If we are going to put him on, I want to have a short break before we do so. And I would like to ask one question.

Has BFI gone through a waste acceptance process with IPC yet on this waste stream?

MS. SHARKEY: I don't think that we have gone through -- that we have gone though them formally with this particular waste stream, no.

MR. INGERSOLL: You have looked at what their acceptance protocols are?

MS. SHARKEY: They have seen the data. I'm being told by the BFI principals here that they have shared their data from this particular unit, which is called the phase 1 unit, with the IPC personnel. And they, of course, know very well the data from the other units that are disposing of their leachate there on a regular basis, which is very similar. But the answer I think, Mr. Ingersoll, is yes.

MR. INGERSOLL: Okay. Thank you.

HEARING OFFICER HALLORAN: Let's go off the record for a second.

(WHEREUPON, discussion was had off the record.)

HEARING OFFICER HALLORAN: We're back on the record. We're going to take a ten-minute break. We'll be back on the record then. Thank you.

(WHEREUPON, a recess was had.)

HEARING OFFICER HALLORAN: Mr. Ingersoll, you wanted to call Mr. Crites?

MR. INGERSOLL: Yes. Mr. Crites, could you take the witness stand.

HEARING OFFICER HALLORAN: Raise your right hand and the court reporter will swear you in, please.

(WHEREUPON, the witness was duly sworn.)

MARK L. CRITES,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. INGERSOLL:

Q. Please state your name and spell your last name, please.

A. My name is Mark Crites. The last name is

C-r-i-t-e-s.

Q. Could you give us a description of your educational background and your experience?

A. I have a bachelor of science in mechanical engineering from Southern Illinois University at Carbondale. I've been working for Illinois EPA since 1990 as a hazardous waste permit reviewer. I've done reviews on various hazardous waste-related issues, including other hazardous waste delistings, regulatory development. If it's related to hazardous waste, I've pretty much worked on it.

Q. Could you describe your involvement in this matter that led to the initial Agency recommendation?

A. We were contacted several years ago by BFI representatives saying that they were interested in potentially delisting the leachate coming from the phase I landfill at the Davis Junction facility. And, you know, we met with them and, you know, made it clear that it's a decision made by the Illinois Pollution Control Board, but that Illinois EPA does provide comments to the Board. It would be a good idea for them to work out things with us in advance to try to minimize the disagreements.

We met with them a few times over that

MR. INGERSOLL: The State is authorized

MR. RAO: The reason I ask is in some of the water delisting standards that the Board grants we have heard from the Agency saying that if -- you know, the Board's -- if the board grants a delisting standard for -- in a certain way that USEPA will not approve it. And I think they made us change the language in some of the delisting standards. I just wanted to get a clarification.

MR. INGERSOLL: I can comment better after checking with all of the liaisons -- the record liaisons. In my experience, at least in the RCRA program, we have that same kind of problem.

MS. STEINHOUR: Can I add something to that?

When we were -- at first initially met with Illinois EPA, we were actually working with USEPA on a delisting petition in the state of Indiana. So the person that -- I wasn't the person directly that had contacted USEPA. It was Ann Fritz from our office who had talked to USEPA about this delisting petition in Illinois that we were going to talk to Illinois EPA about. They said, "Well, you need to make a decision. Are you delisting this on the national level? If you are, to allow this to be a delisted

waste that's transported to Indiana or to Missouri or wherever, you need to come to us and get the delisting petition If you're delisting it within the state of Illinois, don't talk to me. You need to talk to Mark Crites."

MR. RAO: Okay. That helps.

MS. STEINHOUR: So we met with the Illinois EPA then.

MR. INGERSOLL: And we had this definitely within the authorized parts of our program.

MR. RAO: And that's one of the conditions, that the delisted waste will be disposed of in Illinois?

MS. STEINHOUR: Right.

MS. SHARKEY: Can I just ask, Mr. Rao? Would it be possible -- You've got, you said, some water matters, adjusted standards, where this question was raised?

MR. RAO: I don't know how well I can recall. But the issue was the Board granting adjusted standard from complying with the water quality standard and IEPA coming back and telling us, "No. You have to change the water quality standard. You cannot just say this particular facility will not meet the water quality standard and the reason is

that USEPA will not allow such a change."

MS. SHARKEY: I can understand that.

MR. INGERSOLL: Maybe the waters of the state are also waters of the United States in that situation. All of this activity is occurring within our state.

MR. RAO: This is just something that we wanted to --

MR. INGERSOLL: Okay. Like I say, I will check further both with the water people who go through this experience that you're talking about and try to explain a little better why --

MR. RAO: No. The only reason I bring it up is, if the board grants an adjusted standard, you know, consistent with the federal actions, is there one more [redacted] by the facts, or what --

MS. SHARKEY: It sounds very distinguishable from what we've got here, but we'd be happy to address that in our follow-up remarks as well.

MR. INGERSOLL: As will we.

MR. RAO: Thanks.

HEARING OFFICER HALLORAN: Sir, you may step down. Thank you.

MS. SHARKEY: Thank you for taking that out of

order. I appreciate it because I believe that it provides context to put together the discussion of the adequacy of the pretreatment at the point that it's being discussed in the record.

If the Board doesn't have any other questions -- I believe we were -- it was the Board's question that led to having the Agency's witness sworn in. I don't know if the Board has any other questions or if we should go on to our next question.

HEARING OFFICER HALLORAN: Go on to the next. I think you're on 3.

MS. SHARKEY: Mr. Maxwell is going to address this one.

MR. MAXWELL: The third topic that was raised by the Board had to do with the constituents of concern. We were asked to elaborate on the test results for the F039 constituents that were listed in the Board's Attachment A that do not seem to appear to be in Appendix D of our petition, and Appendix D of our petition was our analytical results.

We realized after reviewing this comment that the statement in the petition indicating that all F039 constituents were analyzed went above and beyond the data that we actually had. The

carcinogenic/noncarcinogenic effects. That was pointed out in the user alert that -- for certain parameters that have both effects. The proper means for evaluating them is to enter them twice into the DRAS model. We have listed a number of constituents in our prefiled testimony for which that was the case. They have both carcinogenic and noncarcinogenic effects. We did enter those twice in the model. We reran the model submitted with the prefiled testimony. It turns out that the delisting levels that were produced under the carcinogenic and noncarcinogenic factor approach were the same. So we have updated our model, but it doesn't significantly change our conclusions.

And then the final issue was -- that was raised in the user alert is this idea of the fish ingestion and the air volatiles pathway. Now, this one I have looked at subsequent to the filing that was made filed -- or the prefiled testimony. The fish ingestion -- The issue is that the calculation of -- the delisting levels that are produced by DRAS for the fish ingestion and the air volatiles pathway in some cases may be inaccurate.

I've looked closer at that and found that

the fish ingestion pathway isn't a relevant pathway that's part of our risk for any parameter. However, the air volatiles pathway is a part of the risk for several different parameters The user alert provides an equation to hand calculate the delisting level for that specific pathway, which I've done for all the parameters that we modeled for which the air volatile pathway was part of the risk. And we found that in the case of every parameter, except for two, the delisting level that was produced using the air volatiles pathway was actually higher than the delisting level that we used. So that has no influence at all on our delisting levels because you want to propose the most stringent delisting level.

There were two parameters that we identified where the delisting level for the air volatiles pathway was less than the delisting level that we proposed. Consequently, I think it's appropriate to submit as a follow-up to this hearing a revised explanation indicating what's been performed since we spoke with USEPA.

MS. SHARKEY: And those constituents were produced. Tell us what the constituents were.

MR. MAXWELL: They were cis-1,3 dichloropropene

and heptachlor.

MS. SHARKEY: And the maximum detected leachate concentrations were below the air exposure pathway?

MR. MAXWELL: Yes.

MS. SHARKEY: I guess what we're proposing is that we will submit a revised -- I don't want to call it a petition. But we're going -- We'll submit a revision with our comments -- a suggested revision that would incorporate those new levels into the list of delisting levels that we will be sampling for.

If there are no other questions, the next is number -- I believe it was number 5, which is a question that I was going to answer. This pertains to land disposal restrictions. The question is, "Please explain whether USEPA delisting guidance or policy allows delisting levels for constituents of concern to be higher than the land disposal restriction universal treatment standards," which, for the court reporter's benefit, we refer to as LDR and UTS.

Our response to this question is that UTS are technology-based standards. They must be met before a waste -- a hazardous waste can be applied to the land -- can be land disposed. As the name

implies, land disposal restrictions, they are intended for disposal scenarios that involve land. They are, indeed, technology based. The record on the adoption of those -- the UTS standards is very clear on this point that the distinction between -- Excuse me. It's very clear on this point, and there is a lengthy discussion in the preamble to the adoption of the land disposal restrictions, particularly the third third.

There were three sets of land disposal restriction regulatory dockets, and in the third they discuss the issue of the relationship between land disposal restrictions and the universal treatment standards concentrations that were developed for those and risk-based health and environmental hazard-based limits. And they make it very clear that USEPA was unable at the time that they adopted the UTS to actually promulgate risk-health and environmental risk-based standards for the UTS.

As a result, what they did was they went with a standard for treatability. And that standard is known as best demonstrated technology, BDT. It's based on best demonstrated technology for specific

categories of waste that the UTS were established. So they really serve a totally different function. They were technology based to begin with, and they are designed for ensuring that wastes that go into landfills are treated to the maximum extent possible under this best demonstrated technology.

In contrast, what the delisting -- what listing and delisting involves are those -- again, those -- that criterion that I mentioned in 721.111, which is the -- You know, again, I want to go back and make sure that it's in the record. The criterion is that after considering those multiple factors listed in the regulation there must be a conclusion that the waste is capable of posing a substantial present or potential hazard to human health or the environment. So that's the criterion for listing, and it's also the criterion for delisting. And you look at that long list of items that I've mentioned before, the nature of the toxicity, the concentration, persistence, bioaccumulation, all of that kind of thing. All of those are appropriate.

But I would point out that treatability -- ability to treat is not on that list at all. So it's not a criteria for which you list or delist a waste.

And I think that USEPA -- This question was actually brought up in a lawsuit that was filed in -- on the basis of the first two LDR UTS rulemakings. In the first third and the second third, they had not used a health-based criteria. In some instances, the health-based criteria was higher than the treatability standard. Frankly, industry people brought that lawsuit and said, "wait a minute. You should have to consider the health-based standards." And the Agency -- the Court found, no, they were not required to do it. In fact, the Resource Conservation Recovery Act requirement for LDR's was -- EPA was authorized to do it on a treatment basis.

EPA explains then in the preamble to the third third that -- you know, it goes back and explains again its action and explains that lawsuit and the opinion and better explains why they adopted these as technology-based standards. So I think that the record and history of these regulations make it clear that it's not a delisting criteria. Treatability should not be a delisting criteria.

I'd also just like to say that they also distinguish, by the way, in the Federal Register.

And this is from Fed. Reg. 6640, February 26, 1990. EPA distinguishes the generally applicable treatment standards from -- and this is a quote -- "Standards that are applied in particularized circumstances, such as RCRA clean closures, no migration determinations, and delistings." So I think they clearly were saying that these are not the kinds of standards that you would apply in a particularized situation where, indeed, you do the case-by-case look, as we're doing here at the -- whether or not that criterion -- that health-based and environmental criterion is met.

We did look for any other EPA guidance on this question of how LDR's are actually used. And I wanted to -- I'll go back to the point that they are land based. Therefore, land disposal. So they, in particular, would not seem to have a relevance in this case. We did not find any reference to LDR's in the USEPA guidance manual. I've tried to search using various terms and did not find any reference to it at all.

What we did find was a RCRA call center response, and this is the extent to which I found anything on this. And I will read it for the record.

This is the -- a call center response. And I apologize. I don't have the date of it here in front of me, but I will get that to you. They said, "The generator must comply with the LDR requirements before disposing of the delisted waste because LDR attaches at the point of generation. A delisting only absolves the generator from his obligation of handling the waste as hazardous. If a particular hazardous waste is eligible for a delisting and is granted, the delisting prior to generation, then the LDR requirements would not apply. Conversely, if a waste is generated and subsequently delisted, the generator would need to comply with the applicable part 268 requirements before disposal."

My view is -- in looking at this, is that what USEPA is doing is distinguishing LDR determinations from delisting determinations. What you hear is that there are two distinct elements to it. There's a delisting, and then there's a question of whether LDR applies. It's a two-step process. Notably, under this definition, the waste -- the leachate that BFI is generating would not be subject to LDR's even if it was going to a land disposal unit if it was generated after the point that this

delisting is issued. And so at that point -- Let's say -

I think that BFI at the Davis Junction Landfill has a large tank that is holding this material. After that material that had already been generated were gone, were hauled off to Ohio unfortunately, the rest of that leachate, I presume under this definition, would not be covered under LDR's even if it was going to a land unit.

I also wanted to point out a precedent for how EPA has dealt with this since because I think -- We don't have to get to that question because it's irrelevant because it's not going to a land unit. But another -- A case in which it was going to a land unit is the Nissan case that the Board had referenced, the Nissan delisting by USEPA. There you can see EPA's approach to land disposal restriction UTS and how they used those in that delisting.

What happened is that EPA asked -- in the proposed rule asked for comments on the use of LDR UTS's for evaluating Nissan's delisting petition. Nissan got back in its comments and said that UTS are inappropriate for setting delisting levels because they are not designed for such use. Rather UTS were

established to determined whether a hazardous waste could be land disposed Then in the final rule EPA decided not to set delisting levels based on LDR UTS for Nissan. Again, you know, one could wish they would be more express and talk about this better. But I think this is an example of where they asked the question, they got an answer, and they ended up not using LDR's as delisting levels.

Finally, just to say, I think that it actually could be counterproductive to use LDR levels as delisting levels because the incentives that were designed for the LDR program are to get waste streams out of land, keep them out of land as much as possible, and have them pretreated before. So that what we're doing here is actually very consistent with that. None of this is going to go to land. It will all be pretreated.

I hope that answers your questions, but we'll be happy to answer any other questions on this.

MS. LIU: Thank you actually for your very lengthy analysis kind of exploring perhaps what USEPA didn't have a chance or didn't vocalize. Thank you.

HEARING OFFICER HALLORAN: Mr. Ingersoll?

MR. INGERSOLL: Nothing.

HEARING OFFICER HALLORAN: You may proceed, Ms. Sharkey.

MS. SHARKEY: Okay. The next question involves the delisting levels and toxicity characteristic levels. So just -- Previously we were talking about the relationship between delisting levels and treatability levels. Now, we're talking about the relationship between delisting levels and the toxicity characteristic levels. And, in particular, the Board's question was, "Please explain BFI's rationale for not proposing the lower DRAS value as the delisting value for vinyl chloride."

Our response to this is that, indeed, the DRAS model calculated what we consider to be an overly conservative number for vinyl chloride. The number that it calculated was .028 milligrams per liter. We believe that number overstates the risk for vinyl chloride in this situation. We think that the land-based assumption that you have to put into the DRAS model results in a -- an overly conservative number here.

BFI has used the DRAS model and is very willing to accept the output of the DRAS model for the vast majority of the constituents that it looked

at. However, when you come down to one constituent such as this or two because we'll be -- look at ~~one~~ 1,4 ~~for~~ dioxane as well, that actually -- that exceed that, we think it's appropriate at that point to go back -- as I said earlier, go back and look at what are the real risks here. What's involved here? Do these two constituents solely on their own out of lists of hundreds -- the fact that these are slightly over -- And I'd say it's an order of magnitude difference to the criteria we're proposing for vinyl chloride. Is that difference enough to say this entire leachate must be treated as a hazardous leachate? Our argument is no.

With these two it's appropriate to go back and look carefully at the criteria in 721.111(a)(3) and to walk through -- look at that criterion and walk through the factors that need to be considered. In doing that, I think we've -- we've gone through and taken a look at that. Among those that need to be considered is the criteria -- factor J, which is "Action taken by other governmental agencies or regulatory programs based on the health or environmental hazards posed by the waste or waste constituents."

Unlike the technology-based treatability standards in the UTS, the toxic characteristic standards in RCRA -- I'm going to get my RCRA regulations wrong, but I believe it's 261.24, Table I, for vinyl chloride. The standard for vinyl chloride toxicity is 2. And that's an instance in which EPA listed specific levels at which they believe certain constituents are hazardous based on a health-based analysis.

It's very -- To me it's a very parallel analysis as the DRAS performs. And we took a look at the actual language in which EPA adopted the vinyl chloride standard for the toxicity characteristic, and what they did was very similar They first identified health-based concentration thresholds where drinking water was -- where drinking water MCL's were available, as was the case for vinyl chloride. EPA used the MCL in the model saying that MCL's are the most appropriate health criterion to use because they address groundwater ingestion pathways and were developed pursuant to a rigorous methodology in which all health information is evaluated. So they took the MCL's and they then put them into -- they applied a dilution and attenuation

factor that was developed using the subsurface fate and transport model known as EPACML It incorporated an unlined landfill or surface impoundment as the worst-case mismanagement scenario And then they used a Monte Carlo approach for the dilution attenuation factors, which includes a full range of distribution of values for all parameters rather than judgments made as to worst-case values. So they used -- They used that model. And the number that they came up with was 0.2 milligrams per liter. And that -- As I said, that number is almost an order of magnitude higher than the number that the DRAS model modeled here.

We believe that the analysis that EPA did for that characteristic is a very valid review of the risk posed -- the health-based risk posed by vinyl chloride at the .2 level. Clearly, EPA has accepted that level. And, clearly, wastes all over this country are being land disposed and being treated -- sent to treatment facilities and everything else at that level. And, in fact, the leachate at the phase 2 and phase 2 units at the Davis Junction Landfill in some instances would exceed the DRAS generated level here for vinyl chloride on that very

restrictive level.

Waste stream leachate all over the country -- BFI has particular experience in this, knows that vinyl chloride is a very typical degradation product of a number of waste streams that occur in municipal waste landfills as well as occurring in hazardous waste landfills. And the number that's being generated here, if it were really hazardous -- if it were really something that were hazardous to health and the environment, we are then -- we would say that, indeed, that lower level should be applied to all of these waste streams, and it's not being applied that way. So we think the particularized factors here are ones that would need to be -- should be considered.

And the fact that this waste stream is going to be handled through pretreatment ought to allow us to step outside the DRAS modal and look at a criterion that is health based as 721.111 allows and a criterion that is very consistent with how waste streams are being handled all over the country with that same level of that constituent in it.

And thank you. I'd be happy to answer any questions.

HEARING OFFICER HALLORAN: Mr. Ingersoll?

MR. INGERSOLL: Nothing. Thank you.

HEARING OFFICER HALLORAN: Thank you, Mr. Ingersoll.

Mr. Rao?

MR. RAO. We had a question not about vinyl chloride. But the question that was submitted to you through the hearing officer order, it was a two-part question. I think there was one on lead. And we didn't see an answer in your response.

MR. MAXWELL: The issue was that the proposed delisting level for lead was greater than the toxicity --

MR. RAO: Yeah.

MR. MAXWELL: Perhaps that was an oversight on our part. I don't think that there's an issue with defaulting to the toxicity characteristic for lead as the delisting level

MS. SHARKEY: I'm sorry I now recall. What Mr. Maxwell said is absolutely right. We will go ahead and, again, in our comments recommend that the Board insert the characteristic level as the default delisting level for lead.

MR. RAO: Okay. Thank you.

MR. RAO: Well, this is just -- In reviewing Shell, we saw this difference, and we wanted to bring it up I don't know whether I can -

MS. STEINHOUR: Is the difference though that Shell was actually taking -- It appears from -- And we're going to look into this a little more deeply It appeared that what Shell was doing though was taking their wastewater -- They were somehow doing some pretreatment to pull off the filter cake and doing this within some kind of surface impoundment on site before hard piping it to a discharge --

MR RAO. I'm not very sure as to how they were handling it. But the delisting decision that USEPA handed down very clearly said, you know, they had to do this testing before they can take advantage of the delisting. That was their initial sampling and verification. You had similar sampling and verification, but this was while the waste was being handled as a delisted waste.

Also, earlier one of the questions we talked about was the variability of the leachate, which Mr. Maxwell said he is going to take a look at to see if this particular analysis could be given to show that the leachate does not have significant

variability.

MS. LIU: We have a few more questions, and they all pertain to the structure of the proposed adjusted standard language.

Again, mentioning Shell Oil because of the similarity, USEPA had included several provisions addressing recordkeeping and notification requirements. The citation was 69 Fed. Reg. 77699. Except for requiring a one-time notification to Illinois EPA whenever there's a change in the disposal facility, the proposed adjusted standard language doesn't require that the Petitioner notify the Agency of the initial sampling and verification to comply with the delisting levels or any other subsequent ~~exceedancy~~ exceedances if the delisting levels are exceeded.

Could you please comment on whether or not such provisions should be included in the proposed adjusted standard language?

MS. SHARKEY: I believe it should be included. I think we would be happy to include that.

MS. LIU: Thank you.

MR. RAO: The next question goes to Subsection D of your proposed adjusted standard language.

Subsection D requires, "Monitoring samples to be analyzed for constituents listed in Table A and hazardous characteristics as defined in part 721." Further, Subsection D sets forward that, "Testing may be continued on a semiannual basis if the delisting levels have not exceeded."

Could you please clarify whether testing should also show that the leachate does not exhibit any hazardous waste characteristics before being tested on a semiannual basis, or is your intent just to limit it to the delisting levels?

MS. SHARKEY: I think we would intend the characteristics as well, yes.

MR. RAO: So the language needs to be clarified.

MS. SHARKEY: Thank you.

MR. RAO: We are sharing our questions here.

MS. STEINHOUR: We appreciate the fact that you took a hard look at this.

MS. LIU: The proposed adjusted standard language at Section -- Subsection E sets forth that, "If concentrations of constituents listed in Table A are confirmed to exceed the delisting levels using the verification procedures of Subsection D or if the leachate is confirmed to exhibit a hazardous

O/C

characteristic, then the leachate shall be managed as a hazardous waste until the Petitioner demonstrates that the leachate is below the adjusted standard criteria."

Would you please clarify whether the provisions of Subsection C apply to both initial testing and the ongoing semiannual testing?

O/K

MS. SHARKEY: Our intention is that the characteristics would be considered as well Yes, I think this is -- I think it was an oversight, but I think it was because we were basing what we were doing on some other petitions and delistings that didn't appear to have that We believe that is appropriate, and we'd be happy to recommend amending the language to include that. Thank you.

MR. RAO: And the last issue is -- it relates to Subsection E of the proposed language. Subsection E states that, "Prior to reinitiating management and disposal pursuant to this adjusted standard, additional testing should be done to confirm that concentrations of F039 constituents are below the delisting levels."

Could you please clarify whether F039 constituents referred to the Table A constituents

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PETITION OF BFI WASTE SYSTEMS OF NORTH AMERICA FOR AN ADJUSTED STANDARD WASTE DELISTING	**AS 08-05 (Adjusted Standard –Land) (Waste Delisting)**

PETITIONER'S REPLY BRIEF

Petitioner, BFI Waste Systems of North America, LLC ("BFI"), appreciates the opportunity to provide this Reply Brief to further clarify points made by the Illinois Environmental Protection Agency ("Illinois") in its brief and to provide certain additional information which has become available since the hearing and which responds to questions raised by the Board Technical Personnel.

1. The Board Technical Personnel asked whether there is any need for USEPA's approval of this delisting. See *Tr. p. 92.*

Both BFI and Illinois EPA have stated that USEPA approval is not required for this delisting. *Tr. pp. 92 to 94; BFI Post-hearing Brief, p.20; Illinois EPA Response Brief, p. 2.* The State of Illinois and the Illinois Pollution Control Board have been delegated the authority to delist a hazardous waste stream as long as the waste will be disposed of within Illinois. This point was recently confirmed by the United States Environmental Protection Agency ("USEPA") in an undated letter from Dale Meyer, Chief of the RCRA Programs Section, addressed to Alisa Liu, Environmental Scientist, Illinois Pollution

Control Board. Mr. Meyer stated: "[T]he State of Illinois has been authorized to conduct delistings for wastes disposed of within Illinois..." See *Attachment A, p. 1.*

2. Does USEPA Require Use of the DRAS Model?

BFI has offered its legal opinion that no regulation or statute requires the use of the DRAS Model and its generic assumptions to justify a delisting. See *BFI's Prefiled Testimony, pp. 4-8; Tr. pp.44-54.* The letter provided by Mr. Meyers confirms BFI's opinion and further explains that DRAS is simply one "tool" that may be used to demonstrate that the delisting criteria have been met:

> "Let me begin by pointing out that the DRAS is a tool we use in order to evaluate the potential risk posed by delisted wastes when disposed of in a subtitle D landfill or surface impoundment. DRAS is designed to conduct this evaluation based on the criteria for listing a hazardous waste (40 C.F.R. 261.11(a)(3)). Although this evaluation is a requirement of the regulations governing delistings (40 C.F.R. 260.22), the specific use of DRAS and its methodologies are not. As such, there is no regulatory requirement to use DRAS (or any specific version of DRAS.) ...[T]he State of Illinois...is free to evaluate the waste and the criterion in 40 C.F.R. 261.11(a)(3) using DRAS or any other appropriate assessment approach." *See Attachment A, p. 1.*

As USEPA itself does not treat the DRAS Model as the sole tool for analyzing a delisting petition, there is no reason the Board should do so. In this case, BFI has used both the DRAS model, with appropriate assumptions for this conditional delisting, and other health-based government standards to evaluate the risk posed by this delisting under the regulatory criteria.

3. In its pre-hearing questions, the Board Technical Personnel asked why BFI had not provided analytical data for eleven of the 206 constituents that are included in the F039 list.

BFI responded to this question in its Pre-Filed Testimony (*pp. 8-9*), at the hearing (*Tr. pp. 96 -103),* and in its Post-Hearing Brief (*pp. 21-22).* To recap, these constituents

are deemed unusual by analytical laboratories. BFI found that, of the three labs it contacted, no single lab had the technology capability to analyze for all of these constituents. BFI raised concern about getting data from different labs and asked the Board for guidance.

In response, the Board's Technical Personnel indicated at the hearing that the parameter of particular relevance was pthalic anhydrite, because pthalic anhydrite waste was specifically mentioned as being included in the 2% of hazardous waste accepted at the Phase I Unit. *Tr. pp. 100-102.* BFI agrees that pthalic anhydrite is a relevant constituent in this case, and, with its Post-Hearing Brief, BFI provided an analysis of a leachate sample for pthalic anhydrite (from the same laboratory that it normally uses). The results indicated that pthalic anhydrite was below the detection level.

Since the filing of its Post-Hearing Brief, BFI made another special request to the lab that had performed the prior analysis included in the Delisting Petition and was able to obtain data for a few additional semi-volatile constituents:

- 1,4-dinitrobenzene; and
- 1,2-diphenylhydrazine.

The attached laboratory report (*Attachment B*) indicates that these constituents were reported at concentrations below the detection limit. The report also indicates that the laboratory was unable to quantify results based on a known calibration standard for the following three semi-volatile compounds:

- Dibenzo(a,e)pyrene;
- 4,4'-methylene-bis(2-chloroaniline); and
- *Tris*(2,3-dibromopropyl)phosphate.

When it is not feasible to report a compound based on comparison to a known standard, the laboratory has other options for reporting a compound. The results reported using the other options are typically not as definitive as comparison to a known standard and consequently, the laboratory must appropriately flag data reported using alternative methods.

The alternative methodology involves the analysis of the output from the instrumentation used to analyze the sample. The output is typically a chromatogram (i.e., graph) that plots the response of the machine on the vertical axis vs. time on the horizontal axis. The graph would typically be a relatively flat line for a sample with no compounds of interest. The presence of various compounds in a sample is indicated by peaks that appear in the data at various times during the analysis of the sample. The timing and shape of the peaks is used to identify the compound and the area of the peaks is used to quantify the concentration of the various compounds.

Under standard laboratory operating conditions, standards of known concentrations are prepared and analyzed, so that the precise timing and shape of the peaks equating to certain concentrations is known and the chromatogram for the unknowns is compared to the known data. However, certain atypical compounds do not behave well using the comparison to a known standard. For example, the compound may break down during analysis, making accurate measurement of the concentration difficult.

As an alternative, the laboratory in this case searched for the three compounds on the chromatogram within a known spectrum range. The known spectrum range is based on a library search of a database on many hundreds of compounds. In this case, no peaks

were identified within the known spectrum for the compounds of interest. Therefore, the laboratory reported that the compound was "searched for but not detected."

Although BFI has made several good faith efforts to obtain an analysis of the F039 listed constituents, it has proven to be very difficult to obtain comparable valid information for a handful of unusual constituents. As previously stated, USEPA has not required testing for unusual constituents which are unlikely to be present in a particular leachate. In fact, although USEPA referenced the F039 list in the Federal Register adopting the delisting, it is apparent that USEPA did not require Shell Oil to address F039 constituents that were not also included in Appendix IX in its sampling and analysis plan. See *Post-Hearing Brief, pp. 20-22, and Attachment 4 to that Brief.* Therefore, the Board's adoption of this delisting, although missing analytical data on these few unusual F039 constituents, is consistent with USEPA precedent.

4. **The Board Technical Personnel asked BFI to address any additional parameters or information that is referenced in USEPA updates to the DRAS software.** ***See Tr. pp. 105 -111.***

In its Pre-Filed Testimony (*pp.19-22*), at the hearing (*Tr. pp. 105-111*) and in its Post-Hearing Brief (*pp. 22-23*), BFI addressed several USEPA updates to the DRAS software. However, at the time of filing BFI's Post-Hearing Brief, Mr. Ramaly at USEPA was unable to advise BFI or the Board on how to address zero Dilution Attenuation Factor ("DAF") values in DRAS when modeling for a surface impoundment. Since then, in the above referenced letter from Dale Meyer, Chief of the RCRA Programs Section, to Alisa Liu, USEPA provided the following response:

> "We are also responding to a separate inquiry made regarding potential corrections to the DRAS version 2 surface impoundment groundwater pathway for a proposal currently before the board. Mike Maxwell of Weaver Booz, Inc. noted corrections to landfill dilution attenuation factors

(DAFs) in previous DRAS user-alerts, explaining that there should not be any DAFs equal to zero. He asked if the same applies to surface impoundment DAFs, as several indeed have a value of zero. The effect of the zero DAF is to cancel the pathway for evaluation.

"Upon consulting with the original modeler for DRAS version 2 DAFs, we realized that the minimum base (before volume adjustment) surface impoundment DAFs for carcinogens should be 5.3 and for noncarcinogens 3.92. All the surface impoundment DAFs with zero values or values less than those quoted above should be modified in Steps 4 and 5 for the DRAS. Parameters, such as the DAFs, can be changed by scrolling across the database, typing the new value, then saving the updates. The change to the default value is site-specific and must be done each time DRAS is used for a new evaluation. Documentation of the change can be obtained by selecting to print the DRAS report *List of COCs with Altered Chemical Properties*."

Consistent with this new guidance, BFI has re-evaluated the DRAS Model with respect to the dilution attenuation factors (DAFs) for four constituents of concern (COCs) referenced in Item (1) of the User Alert for DRAS Version 2. The four COCs are:

- 1,1-Dichloroethane (a VOC);
- 1,2-Dichloroethane (a VOC);
- Cobalt (a metal); and
- Tin (a metal).

The default DAF for these four constituents was zero. However, as discussed in BFI's Pre-Filed Testimony and at the Hearing and also explained in the above letter from USEPA, a zero DAF value would cancel the pathway for evaluation for these constituents. Therefore, as part of BFI's original DRAS model, a non-zero number was manually entered for the above four constituents. BFI's original version of the DRAS model utilized the lowest DAF selected from the specific COCs modeled in DRAS for the general constituent category of volatile organic compounds (3.9) and metals (7.7). This was deemed conservative because the lower the DAF, the less dilution is included in

the model and hence the lower the delisting levels. Conversely, a higher DAF results in more modeled dilution of the source concentrations and higher delisting levels.

According to USEPA's letter, the minimum base (before volume adjustment) surface impoundment DAFs for carcinogens should be 5.3 and for noncarcinogens 3.92. The following provides a summary of the DAFs utilized in BFI's original DRAS model, compared to the DAFs referenced in the above USEPA letter.

Constituent	**Type**	**DAF in Original Model**	**USEPA Minimum DAF**
1,1-Dichloroethane	Non-Carcinogen	3.9	3.92
1,2-Dichloroethane	Carcinogen	3.9	5.3
Cobalt	Non-Carcinogen	7.7	3.92
Tin	Non-Carcinogen	7.7	3.92

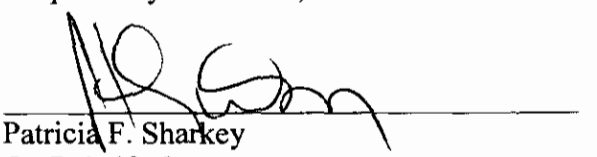
Since the DAF in the original model was greater than the above USEPA minimum DAF for Cobalt and Tin, BFI re-ran the DRAS model for these constituents with the DAFs referenced by USEPA. The DAF is the only input parameter that was modified. DRAS output from the re-analysis is attached as *Attachment C*. A summary of the revised delisting levels for Cobalt and Tin is provided in *Attachment D*. The proposed revised delisting level for cobalt is 60.2 mg/L and the revised delisting level for tin is 602 mg/L. The maximum concentration of both cobalt and tin detected at any time in the Davis Junction Phase I Unit leachate is well below both of these concentrations.

These delisting levels are reflected in the *Proposed Third Amendment to Adjusted Standard Language* which is being filed with the Board today.

RELIEF REQUESTED

BFI appreciates the Board's careful review of this Petition. BFI requests that the Board now grant the relief requested. Specifically, BFI requests that the Board adopt the Adjusted Standard language as proposed in BFI's *Proposed Third Amendment to Petition for Adjusted Standard*, which is being filed today with this Reply Brief, or such other language which the Board believes is consistent with the goals of this delisting, the record created in this proceeding, and the regulatory requirements for delisting.

Respectfully submitted,



Patricia F. Sharkey
On Behalf of
BFI Waste Systems of North America, LLC

Date: July 24, 2008

Patricia F. Sharkey, Esq.
McGuireWoods, LLP
77 W. Wacker Drive
Suite 4100
Chicago, IL 60601
312/849-8100

Attachment A
BFI Reply Brief
AS 08-05

LR-8J

Alisa Liu, P.E.
Environmental Scientist
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601

Dear Ms. Liu:

Thank you for your inquiry regarding the Delisting Risk Assessment Software (DRAS) and its use in evaluating delisting petitions. Please note that this response is confined to the questions posed to Todd Ramaly of my staff and does not constitute an opinion on the delisting. You indicated that Region 6 has elected to base proposed rules to grant delistings on the results of the *beta* version of DRAS version 3, which is not in general release to the public at this time. DRAS version 3 includes several updates to the modeling methodology, but requires a number of workaround adjustments in order to obtain reproducible results. DRAS version 3 is intended to replace DRAS version 2. You wanted to know which version should be used.

Let me begin by pointing out that the DRAS is a tool we use in order to evaluate the potential risk posed by delisted wastes when disposed of in a subtitle D landfill or surface impoundment. DRAS is designed to conduct this evaluation based on the criteria for listing a hazardous waste (40 C.F.R. § 261.11(a)(3)). Although this evaluation is a requirement of the regulations governing delistings (40 C.F.R. § 260.22), the specific use of DRAS and its methodologies are not. As such, there is no regulatory requirement to use DRAS (or any specific version of DRAS).

Furthermore, the authority to evaluate and conduct delistings is delegated to each U.S. Environmental Protection Agency Region. Thus, the approach to delisting may differ from Region to Region. In your case, the State of Illinois has been authorized to conduct delistings for wastes disposed of within Illinois and is free to evaluate the waste and the criterion in 40 C.F.R. § 261.11(a)(3) using DRAS or any other appropriate assessment approach.

At this time, EPA Region 5 is using DRAS version 2 with modifications for projects which have already been proposed by EPA for approval. DRAS version 3 is under active repair *and a version suitable for release to the general public should be available this summer.* EPA Region 5 intends to use this repaired version of DRAS 3 for new delisting determinations immediately upon its release.

We are also responding to a separate inquiry made regarding potential corrections to the DRAS version 2 surface impoundment groundwater pathway for a proposal currently before the board. Mike Maxwell of Weaver Booz, Inc. noted corrections to landfill dilution attenuation factors (DAFs) in previous DRAS user-alerts, explaining that there should not be any DAFs equal to zero. He asked if the same applies to surface impoundment DAFs, as several indeed have a value of zero. The effect of the zero DAF is to cancel the pathway for evaluation.

Upon consulting with the original modeler for DRAS version 2 DAFs, we realized that the minimum base (before volume adjustment) surface impoundment DAFs for carcinogens should be 5.3 and for noncarcinogens 3.92. All the surface impoundment DAFs with zero values or values less than those quoted above should be modified in Steps 4 and 5 for the DRAS. Parameters, such as the DAFs, can be changed by scrolling across the database, typing the new value, then saving the updates. The change to the default value is site-specific and must be done each time DRAS is used for a new evaluation. Documentation of the change can be obtained by selecting to print the DRAS report *List of COCs with Altered Chemical Properties*.

Please feel free to contact Todd Ramaly of my staff at (312) 353-7913 or at the address above with questions or comments.

Sincerely,

Dale Meyer
Chief
RCRA Programs Section

cc: M. Crites, IEPA
M. Maxwell, Weaver Booz, Inc.

Attachment B
BFI Reply Brief
AS 08-05

HERITAGE

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	28-MAY-08		A811980
	Completed	**PO Number**	
	30-JUN-08	DAVIS JUNCTION*****	
	Printed	**Sampled**	
	01-JUL-08	27-MAY-08 13:00	

Report To	Bill To
MIKE MAXWELL WEAVER BOOS AND GORDON 70 WEST MADISON SUITE 4250 CHICAGO, IL 60602	ACCOUNTS PAYABLE BFI WASTE SYSTEMS OF NORTH AMERICA INC. 26 WEST 580 SCHICK ROAD HANOVER PARK, IL 60133

Sample Description

CLIENT ID: PHASE I
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 9016
DESCRIPTION

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: C. WILLHITE Analysis Date: 04-JUN-08 22:00 Instrument: GC/MS SVOA Test: O505.3.0

Parameter	Result	Det. Limit	Units
PHTHALIC ANHYDRIDE	BDL	50	ug/L
1,4-DINITROBENZENE	BDL	50	ug/L
1,2-DIPHENYLHYDRAZINE	BDL	50	ug/L
...			
ALSO REQUESTED			

DIBENZO(A,E)PYRENE	*		
4,4'-METHYLENE-BIS(2-CHLOROANILINE)	*		
TRIS(2,3-DIBROMOPROPYL) PHOSPHATE	*		
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	37		% Rec
PHENOL-D5	28		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	59		% Rec
2,4,6-TRIBROMOPHENOL	56		% Rec
TERPHENYL-D14	42		% Rec

1:5 Dilution

Unable to analyze sample at lower dilution due to high concentration of non-target analytes.

Note: * Compound searched for but not detected. Standard was unavailable to determine retention time and detection limit.

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: J. BREWER | Analysis Date: 02-JUN-08 | Instrument: PREP | Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

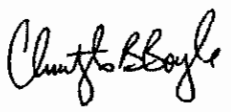
Sample Comments

AMENDED REPORT - CBB - 30-JUN-08 : SVL TICS added.

* See Note for Parameter

BDL Below Detection Limit

Sample was received on ice at temperature 2.2 C.
Sample chain of custody number 61659.



Approved by: CHRISTOPHER BOYLE 01-JUL-08

01020873

HERITAGE ENVIRONMENTAL SERVICES, LLC.

COMMERCIAL LABORATORY OPERATIONS

7901 West Morris Street Indianapolis IN 46231

www.heritage-enviro.com (800)827-4374 Fax: (317) 486-5095

I - 61659

Customer name/number: WEAVER BOOS | Submitter #

Project Name: DAVIS JUNCTION

Z Quote No: Z 151505 (Given to you by your contact)

PO No. or Project/Activity ID: 0120-96-30

PRINT HERITAGE TSR NAME: CHRIS BOYLE / STUART KINNAMAN

CUSTOMER STATUS: New / (Existing)

If no previous credit has been established with Heritage, **prepayment** (check, VISA, etc) is required at the time of sample submittal to the laboratory.

Sampled By: ROBERT SHEBUSKI

Analyses Requested (Note special detection limits or methods)

Send Report To:

Co:

Add:

Attn:

Phone: ( ) Yes

Fax: ( )

E-mail:

Sample Turn Around Time

Standard: Rush Date ___/___/___ Mo Day Yr

(Accelerated TAT subject to Additional Charge)

(Date must be Accepted and Approved by Lab)

Date Sampled	Time sampled	Comp	Grab	Sample ID and/or Location where your sample was taken	Sample type (Matrix): DW, GW, WW, Soil, Oil, Sludge, Swipe, Other	Number of Containers	Z151505	Remarks:	Lab use only Sample No.
5/27/09	1300 AM/PM		X	PHASE I	O	2	X		A811980
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								
	AM/PM								

Relinquished by: (Signature)	Date/Time 5/27/09 1600	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time /	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time /	Received by: (Signature)	
Received for Lab by: (Signature)	Date 5/28/09 Time 940	Temp. 2.2 °C ROI: YES / No	

Laboratory use only	Yes	No
Custody seals present/intact?	✓	
Broken containers?		✓
COC agree with sample labels?	✓	
Correct containers for testing?	✓	
Headspace issues acceptable?	✓	
Holding time(s) acceptable?	✓	
Preservative pH's acceptable?	✓	
Was pH left unadjusted?	✓	

Comments:

ORIGINAL

Attachment C
BFI Reply Brief
AS 08-05

Site and WMU Information

Delisting Petition Number:

DL-08-05

File Name:

Davis Junction LF Only Detects

Petitioner's Name:

BFI Waste Systems of North America, Inc.

Address 1:

26 West 580 Schick Rd.

Address 2:

City, State:

Hanover Park,

Zip Code:

60103

Analysis Performed by:

MBM

Date of Analysis:

Jul-16-2008

Waste Description:

Phase I Landfill Leachate

Waste Code:

F039

WMU Type:

Surface Impoundment

Waste Volume (yd^3):

24.75

Active Life (years):

1

Risk Factor:

1.00E-06

HQ Factor:

1.00E+00

List of COCs with Altered Chemical Properties

Chemical Name	CAS Number	Parameter Modified	Parameter Symbol	Parameter Units	Original Value	Modified Value
Dichloroethane, 1,1-	75-34-3	Surface Impoundment Dilution Attenuation Factor	DAFSI	L/mg	0	3.9
Dichloroethane, 1,2-	107-06-2	Surface Impoundment Dilution Attenuation Factor	DAFSI	L/mg	0	3.9
Acetone	67-64-1	Oral Reference Dose	RFDo	mg/kg-day	0.1	0.9
Arsenic	7440-38-2	Maximum Concentration Level	MCL	mg/L	0.05	0.01
Xylenes (total)	1330-20-7	Oral Reference Dose	RFDo	mg/kg-day	2	0.2
Xylenes (total)	1330-20-7	Inhalation Reference Dose	RFC	mg/m³	0	0.1
Trichloroethylene	79-01-6	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Vinyl chloride	75-01-4	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Benzene	71-43-2	Oral Reference Dose	RFDo	mg/kg-day	0.001	0.004
Benzene	71-43-2	Inhalation Reference Dose	RFC	mg/m³	0.009	0.03
Tetrachloroethylene	127-18-4	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Arsenic	7440-38-2	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Benzene	71-43-2	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Tin	7440-31-5	Surface Impoundment Dilution Attenuation Factor	DAFSI	L/mg	0	3.92
Cadmium	7440-43-9	Carcinogenic or Noncarcinogenic	CARCNON	—	Noncarcinogen	Carcinogen
Methylene chloride	75-09-2	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Dichlorobenzene, 1,4-	106-46-7	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Heptachlor	76-44-8	Carcinogenic or Noncarcinogenic	CARCNON	—	Carcinogen	Noncarcinogen
Toluene	108-88-3	Oral Reference Dose	RFDo	mg/kg-day	0.2	0.08
Toluene	108-88-3	Inhalation Reference Dose	RFC	mg/m³	0	5
Cadmium	7440-43-9	Surface Impoundment Dilution Attenuation Factor	DAFSI	L/mg	1	3.92
Methyl ethyl ketone	78-93-3	Inhalation Reference Dose	RFC	mg/m³	1	5

Limiting Pathways

		Detection Limit Analysis - Toxicity of Petitioned Waste cannot be confirmed if Detection Limits fall below maximum allowable concentration			
Chemical Name	**CAS Number**	**Maximum Allowable TCLP Concentration (mg/L)**	**Maximum Allowable TCLP Pathway**	**Maximum Allowable Total Concentration (mg/Kg)**	**Maximum Allowable Total Pathway**
Dichloroethane, 1,1-	75-34-3	9.98E-01	Groundwater Ingestion	1.65E+07	Air Volatile Inhalation
Dichloroethane, 1,2-	107-06-2	2.13E-02	Groundwater Ingestion	2.34E+03	Air Volatile Inhalation
Dioxane 1,4-	123-91-1	2.40E-01	Groundwater Ingestion	1.08E+05	Air Volatile Inhalation
Trichlorophenoxypropionic acid, 2,4,5- (Silvex)	93-72-1	1.43E+00	MCL	---	Not Applicable
Dichlorophenoxyacetic acid, 2,4- (2,4-D)	94-75-7	1.68E+00	MCL	---	Not Applicable
Dimethylphenol, 2,4-	105-67-9	2.76E+01	Groundwater Ingestion	---	Not Applicable
Acetone	67-64-1	8.38E+02	Groundwater Ingestion	---	Not Applicable
Trichloroethylene	79-01-6	1.64E-01	MCL	3.70E+04	Air Volatile Inhalation
Vanadium	7440-62-2	5.71E+01	Groundwater Ingestion	---	Not Applicable
Vinyl chloride	75-01-4	1.30E-03	Groundwater Ingestion	6.35E+03	Air Volatile Inhalation
Arsenic	7440-38-2	2.06E-03	Groundwater Ingestion	---	Not Applicable
Xylenes (total)	1330-20-7	1.60E+02	Groundwater Inhalation	3.79E+06	Air Volatile Inhalation
Zinc	7440-66-6	7.60E+02	Groundwater Ingestion	---	Not Applicable
Barium	7440-39-3	1.51E+02	MCL	---	Not Applicable
Dichlorobenzene, 1,4-	106-46-7	2.91E-01	Groundwater Ingestion	1.01E+04	Air Volatile Inhalation

Results for Analysis: Davis Junction LF Only Detects

Limiting Pathways

		Detection Limit Analysis - Toxicity of Petitioned Waste cannot be confirmed if Detection Limits fall below maximum allowable concentration			
Chemical Name	CAS Number	Maximum Allowable TCLP Concentration (mg/L)	Maximum Allowable TCLP Pathway	Maximum Allowable Total Concentration (mg/Kg)	Maximum Allowable Total Pathway
Heptachlor	76-44-8	4.45E+05	Groundwater Adult Dermal	8.01E+02	Air Volatile Inhalation
Methylene chloride	75-09-2	9.45E-01	MCL	1.17E+05	Air Volatile Inhalation
Methyl isobutyl ketone	108-10-1	7.98E+01	Groundwater Ingestion	—	Not Applicable
Naphthalene	91-20-3	6.51E+00	Groundwater Inhalation	1.16E+05	Air Volatile Inhalation
Nickel	7440-02-0	7.68E+01	Groundwater Ingestion	—	Not Applicable
Selenium	7782-49-2	1.57E+00	MCL	—	Not Applicable
Trichloroethylene	79-01-6	1.64E-01	MCL	—	Not Applicable
Vinyl chloride	75-01-4	5.32E-02	MCL	3.02E+06	Air Volatile Inhalation
Benzene	71-43-2	1.01E-01	Groundwater Ingestion	7.55E+03	Air Volatile Inhalation
Tetrachloroethylene	127-18-4	1.74E-01	MCL	—	Not Applicable
Arsenic	7440-38-2	5.91E-01	Groundwater Ingestion	—	Not Applicable
Benzene	71-43-2	4.02E-01	MCL	3.02E+05	Air Volatile Inhalation
Cresol, p-	106-44-5	5.37E+00	Groundwater Ingestion	—	Not Applicable
Phenol	108-95-2	6.45E+02	Groundwater Ingestion	—	Not Applicable
Styrene	100-42-5	6.20E+00	MCL	2.42E+05	Air Volatile Inhalation

Limiting Pathways

		Detection Limit Analysis - Toxicity of Petitioned Waste cannot be confirmed if Detection Limits fall below maximum allowable concentration			
Chemical Name	CAS Number	Maximum Allowable TCLP Concentration (mg/L)	Maximum Allowable TCLP Pathway	Maximum Allowable Total Concentration (mg/Kg)	Maximum Allowable Total Pathway
Tetrachloroethylene	127-18-4	4.89E-02	Groundwater Ingestion	1.26E+05	Air Volatile Inhalation
Tin	7440-31-5	6.02E+02	Groundwater Ingestion	---	Not Applicable
Cadmium	7440-43-9	4.09E-01	MCL	---	Not Applicable
Methylene chloride	75-09-2	1.98E-01	MCL	2.53E+07	Air Volatile Inhalation
Dichlorobenzene, 1,4-	106-46-7	7.16E+01	MCL	2.98E+07	Air Volatile Inhalation
Heptachlor	76-44-8	1.36E+08	MCL	---	Not Applicable
Toluene	108-88-3	4.02E+01	MCL	4.94E+08	Air Volatile Inhalation
TCDD, 2,3,7,8-	1746-01-6	1.47E-06	Groundwater Adult Dermal	9.38E-03	Air Volatile Inhalation
Cadmium	7440-43-9	4.09E-01	MCL	---	Not Applicable
Carbon disulfide	75-15-0	1.18E+02	Groundwater Ingestion	2.00E+07	Air Volatile Inhalation
Chromium	7440-47-3	1.04E+03	MCL	---	Not Applicable
Dichloropropene, cis-1,3-	10061-01-5	5.12E+05	Groundwater Ingestion	1.21E+03	Air Volatile Inhalation
Cobalt	7440-48-4	8.12E+01	Groundwater Ingestion	---	Not Applicable
Copper	7440-50-8	2.47E+04	MCL	---	Not Applicable
Dioctyl phthalate	117-84-	1.37E+03	Groundwater Ingestion	---	Not Applicable

Limiting Pathways

		Detection Limit Analysis - Toxicity of Petitioned Waste cannot be confirmed if Detection Limits fall below maximum allowable concentration			
Chemical Name	CAS Number	Maximum Allowable TCLP Concentration (mg/L)	Maximum Allowable TCLP Pathway	Maximum Allowable Total Concentration (mg/kg)	Maximum Allowable Total Pathway
Endrin	72-20-8	3.27E+04	MCL		
Ethylbenzene	100-41-4	5.72E+01	MCL	1.15E+07	Air Volatile Inhalation
Isobutyl alcohol	78-83-1	2.99E+02	Groundwater Ingestion		Not Applicable
Lead	7439-92-1	2.04E+02	MCL	--	Not Applicable
Mercury	7439-97-6	2.20E-01	Groundwater Inhalation	1.44E+03	Air Volatile Inhalation
Methanol	67-56-1	4.99E+02	Groundwater Ingestion	--	Not Applicable
Methyl ethyl ketone	78-93-3	5.99E+02	Groundwater Ingestion	2.76E+08	Air Volatile Inhalation

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Chemical Name Risk Factor = 1.00E-06 HQ Factor = 1.00E+00 * = Detection Limit	Waste Stream TCLP Concentration (mg/L)	Dilution Attenuation Factor (DAF)	Waste Volume Adjusted DAF	Maximum Allowable Concentration (mg/L)	DL	Max. Allowable Concentration Based on Groundwater Ingestion Pathway	Max. Allowable Concentration Based on Groundwater Inhalation Pathway	Max. Allowable Concentration Based on Adult Groundwater Dermal Absorption Pathway	Max. Allowable Concentration Based on Child Groundwater Dermal Absorption Pathway
Ethylbenzene	2.50E-01	1.20E+01	8.18E+01	**5.72E+01**		3.07E+02	4.33E+02	4.87E+02	2.24E+02
Styrene	8.70E-02	9.10E+00	6.20E+01	**6.20E+00**		4.66E+02	1.12E+03	1.01E+03	4.65E+02
Dichloropropene, cis-1,3-	1.00E-02	1.30E+08	1.23E+09	**5.12E+05**		5.12E+05	7.97E+05	6.68E+06	1.53E+07
Dimethy phenol, 2,4-	1.40E-01	5.40E+00	3.68E+01	**2.76E+01**		2.76E+01	---	1.79E+02	8.20E+01
Cresol, p-	1.60E+00	4.20E+00	2.86E+01	**5.37E+00**		5.37E+00	---	6.15E+01	2.82E+01
Dichlorobenzene, 1,4-	1.30E-02	1.40E+01	9.54E+01	**2.91E-01**		2.91E-01	4.73E-01	5.00E-01	1.15E+00
Dichlorobenzene, 1,4-	1.30E-02	1.40E+01	9.54E+01	**2.91E-01**		2.91E-01	4.73E-01	5.00E-01	1.15E+00
Dichloroethane, 1,2-	2.30E-02	3.90E+00	2.66E+01	**2.13E-02**		2.13E-02	3.54E-02	6.45E-01	1.48E+00
Methyl isobutyl ketone	1.80E+00	3.90E+00	2.66E+01	**7.98E+01**		7.98E+01	---	2.92E+03	1.34E+03
Toluene	4.70E-01	5.90E+00	4.02E+01	**4.02E+01**		1.21E+02	3.66E+03	3.29E+02	1.51E+02
Phenol	9.10E-01	4.20E+00	2.86E+01	**6.45E+02**		6.45E+02	---	1.42E+04	6.54E+03
Dioxane, 1,4-	3.30E+01	5.30E+00	3.61E+01	**2.40E-01**		2.40E-01	1.47E+01	1.40E+02	3.22E+02
Tetrachloroethylene	5.90E-03	5.10E+00	3.48E+01	**4.89E-02**		4.89E-02	2.04E+00	3.19E-01	7.32E-01
Tetrachloroethylene	5.90E-03	5.10E+00	3.48E+01	**4.89E-02**		4.89E-02	2.04E+00	3.19E-01	7.32E-01
Xylenes (total)	1.10E+00	1.30E+01	8.86E+01	**1.60E+02**		6.65E+02	1.60E+02	1.01E+03	4.66E+02
TCDD, 2,3,7,8-	4.40E-09	1.90E+04	1.29E+05	**1.47E-06**		6.31E-05	1.39E-03	1.47E-06	3.38E-06
Methano	1.40E+00	5.90E+00	4.02E+01	**4.99E+02**		4.99E+02	---	2.54E+05	1.14E+05
Acetone	2.00E+01	3.90E-00	2.66E+01	**8.98E+02**		8.98E+02	---	2.55E+05	1.17E+05
Benzene	2.70E-02	5.90E+00	4.02E+01	**1.01E-01**		1.01E-01	1.53E-01	8.79E-01	2.02E+00
Benzene	2.70E-02	5.90E+00	4.02E+01	**1.01E-01**		1.01E-01	1.53E-01	8.79E-01	2.02E+00
Endrin	1.50E-03	2.40E+06	1.64E+07	**3.27E+04**		1.84E+05	---	6.98E+04	4.12E+04
Lead	1.80E-01	2.00E+03	1.36E+04	**2.04E+02**		---	---	---	---

Results for Analysis: Davis Junction LF Only Detects

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Max. Allowable Concentration Based on MCL
5.72E+01
6.20E+00
—
—
—
7.16E+01
7.16E+01
1.33E-01
—
4.02E+01
—
—
1.74E-01
1.74E-01
8.86E+02
—
—
—
4.02E-01
4.02E-01
3.27E+04
2.04E+02

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Chemical Name Risk Factor = 1.00E-06 HQ Factor = 1.00E+00 * = Detection Limit	Waste Stream TCLP Concentration (mg/L)	Dilution Attenuation Factor (DAF)	Waste Volume Adjusted DAF	Maximum Allowable Concentration (mg/L)	DL	Max. Allowable Concentration Based on Groundwater Ingestion Pathway	Max. Allowable Concentration Based on Groundwater Inhalation Pathway	Max. Allowable Concentration Based on Adult Groundwater Dermal Absorption Pathway	Max. Allowable Concentration Based on Child Groundwater Dermal Absorption Pathway
Mercury	4.00E-02	[illegible]	[illegible]	**2.20E-01**		7.57E-01	[illegible]	---	---
Nickel	9.50E-01	1.50E+01	1.02E+02	**7.68E+01**		7.68E+01	---	---	---
[illegible]	[illegible]	[illegible]	[illegible]	**6.02E+02**		6.02E+02	---	---	---
Arsenic	5.40E-02	7.70E+00	5.25E+01	**2.56E-03**		2.56E-03	---	---	---
Arsenic	5.40E-02	7.70E+00	5.25E+01	**2.56E-03**		2.56E-03	---	---	---
Barium	1.30E+00	1.11E+01	7.56E+01	**1.51E+02**		1.99E+02	---	---	---
Cadmium	1.80E-02	1.20E+01	8.18E+01	**4.09E-01**		1.54E+00	---	---	---
Cadmium	1.80E-02	1.20E+01	8.18E+01	**4.09E-01**		1.54E+00	---	---	---
Chromium	[illegible]	[illegible]	[illegible]	**1.04E+03**		6.67E+05	---	---	---
Cobalt	3.00E+00	3.92E+00	2.67E+01	**6.02E+01**		6.02E+01	---	---	---
Copper	2.50E-02	[illegible]	[illegible]	**2.47E+04**		2.85E+04	---	---	---
Vanadium	3.60E-02	3.19E+01	2.17E+02	**5.71E+01**		5.71E+01	---	---	---
Zinc	1.40E+00	[illegible]	[illegible]	**7.60E+02**		7.60E+02	---	---	---
Vinyl chloride	4.40E-01	3.90E+00	2.66E+01	**1.30E-03**		1.30E-03	8.72E-02	2.85E-02	6.55E-02
Vinyl chloride	4.40E-01	3.90E+00	2.66E+01	**1.30E-03**		1.30E-03	[illegible]	2.85E-02	6.55E-02
Methylene chloride	5.80E-01	5.80E+00	3.95E+01	**1.98E-01**		8.90E+01	5.54E+02	2.66E+03	1.22E+03
Methylene chloride	5.80E-01	5.80E+00	3.95E+01	**1.98E-01**		8.90E+01	5.54E+02	2.66E+03	1.22E+03
Carbon disulfide	6.10E-02	4.60E+00	3.13E+01	**1.18E+02**		1.18E+02	3.34E+02	1.00E+03	4.60E+02
Dichloroethane, 1,1-	9.70E-02	[illegible]	2.60E+01	**9.98E+01**		9.98E+01	2.22E+02	1.37E+03	6.30E+02
Heptachlor	5.30E-04	5.00E+10	3.41E+11	**4.45E+05**		5.53E+06	3.22E+08	4.45E+05	1.02E+06
Heptachlor	5.30E-04	5.00E+10	3.41E+11	**4.45E+05**		5.53E+06	3.22E+08	4.45E+05	1.02E+06
Selenium	3.20E-02	4.60E+00	3.13E+01	**1.57E+00**		5.88E+00	---	---	---

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Max Allowable Concentration Based on MCL
4.03E-01
—
—
2.62E+00
5.25E-01
1.51E+02
4.09E-01
4.09E-01
1.04E+03
—
2.47E+04
—
—
5.32E-02
5.32E-02
1.98E-01
1.98E-01
—
—
1.36E+08
1.36E+08
1.57E+00

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Chemical Name Risk Factor = 1.00E-06 HQ Factor = 1.00E+00 * = Detection Limit	Waste Stream TCLP Concentration (mg/L)	Dilution Attenuation Factor (DAF)	Waste Volume Adjusted DAF	Maximum Allowable Concentration (mg/L)	DL	Max. Allowable Concentration Based on Groundwater Ingestion Pathway	Max. Allowable Concentration Based on Groundwater Inhalation Pathway	Max. Allowable Concentration Based on Adult Groundwater Dermal Absorption Pathway	Max. Allowable Concentration Based on Child Groundwater Dermal Absorption Pathway
Isobutyl alcohol	3.70E+00	3.90E+00	2.66E+01	**2.99E+02**		2.99E+02	---	1.88E+04	8.65E+03
Methyl ethyl ketone	1.20E+01	3.90E+00	2.66E+01	**5.99E+02**		5.99E+02	4.37E+04	8.04E+04	3.69E+04
Trichloroethylene	5.30E-01	4.80E+00	3.27E+01	**1.64E-01**		7.37E+00	---	1.07E+01	4.81E+00
Trichloroethylene	5.30E-01	4.80E+00	3.27E+01	**1.64E-01**		7.37E+00	---	1.07E+01	4.81E+00
Diethyl phthalate	5.40E-01	6.20E+00	4.23E+01	**1.27E+03**		1.27E+03	---	1.30E+04	5.96E+03
Naphthalene	3.80E-02	1.40E+01	9.54E+01	**6.51E+00**		7.16E+01	6.51E+00	9.25E+01	4.25E+01
Trichlorophenoxypropionic acid, 2,4,5- (Silvex)	8.30E-02	4.20E+00	2.86E+01	**1.43E+00**		8.60E+00	---	2.86E+01	1.31E+01
Dichlorophenoxyacetic acid, 2,4- (2,4-D)	3.90E-01	3.90E+00	2.66E+01	**1.86E+00**		9.98E+00	---	7.19E+01	3.30E+01

Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways

Max. Allowable Concentration Based on MCL
—
—
1.64E-01
1.64E-01
—
—
1.43E+00
1.86E+00

Table III
Summary of Delisting Levels
Davis Junction Landfill - Phase I
Delisting Petition

Constituent	CAS No.	Max. Allowable Concen. Based on GW Ingestion[a] (mg/L)	Max. Allowable Concen. Based on MCL[a] (mg/L)	Limiting Pathway[b]	Applicable Groundwater Ingestion Pathway Limit[c] (mg/L)	Max. Allowable Concen. Based on GW Inhalation[a] (mg/L)	Max. Allowable Concen. Based on Adult Groundwater Dermal[a] (mg/L)	Max. Allowable Concen. Based on Child Groundwater Dermal[a] (mg/L)	Delisting Level[d] (mg/L)	Maximum Detected Concen. in Leachate (mg/L)
Cobalt	7440-48-4	60.2	--	Groundwater Ingestion	**60.2**	--	--	--	60.2	3.0
Tin	7440-31-5	602	--	Groundwater Ingestion	**602**	--	--	--	602	0.12

-- No delisting level provided by DRAS.

[a] From Maximum Allowable TCLP Concentrations - Groundwater Exposure Pathways Output from DRAS.

[b] From Limiting Pathways DRAS Output.

[c] In accordance with Sec. 4.2.5.7 of RCRA Delisting Technical Support Document, when DRAS indicates that groundwater ingestion is the limiting groundwater pathway, the user has the option of considering either of the groundwater ingestion pathway delisting levels: the risk-based maximum acceptable TCLP concentration or the MCL-based maximum allowable TCLP concentration. If the groundwater ingestion pathway is the limiting pathway, then the greater of the risk-based maximum acceptable TCLP concentration and the MCL-based concentration is listed in this column.

[d] Pursuant to Section 4.2.3 of the Delisting Technical Support Document, Delisting Level is lower of Applicable Groundwater Ingestion Pathway Limit and the maximum allowable concentrations based on groundwater inhalation, adult groundwater dermal, and child groundwater dermal (value shown in **bold**).

Attachment D
BFI Reply Brief
45 08-05