FRNP-RPT-0148

Annual Document of Polychlorinated Biphenyls at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, for January 1, 2019–December 31, 2019

Solution Four Rivers NUCLEAR PARTNERSHIP, LLC

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Date Issued—June 2020

U.S. DEPARTMENT OF ENERGY Office of Environmental Management

Prepared by FOUR RIVERS NUCLEAR PARTNERSHIP, LLC, Managing the Deactivation and Remediation Project at the Paducah Gaseous Diffusion Plant under Contract No. DE-EM0004895

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ACRONYMS

CD	Certificate of Disposal
CFR	Code of Federal Regulations
CY	calendar year
DSSI	Diversified Scientific Services, LLC
EPA	U.S. Environmental Protection Agency
IWTS	Integrated Waste Tracking System
TSDF	treatment, storage, and disposal facility
UHWM	Uniform Hazardous Waste Manifest

EXECUTIVE SUMMARY

This Annual Document of Polychlorinated Biphenyls at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, for January 1, 2019–December 31, 2019, (Annual Document) was prepared to meet applicable requirements of the Toxic Substances Control Act, as codified in the *Code of Federal Regulations* at 40 *CFR* Part 761, Subpart J. The mailing address for the U.S. Department of Energy Paducah Site is 5501 Hobbs Road, Kevil, Kentucky 42053. The physical address is 5600 Hobbs Road, Kevil, Kentucky 42053. The U.S. Environmental Protection Agency (EPA) Identification Number is KY8-890-008-982. The Annual Document provides records and information required by 40 *CFR* § 761.180(a), Records and Monitoring.

The Annual Records required by 40 *CFR* § 761.180(a)(1) are located in Sections 1–4 and address the signed manifests, certificates of disposal, waste storage area inspections, and spill cleanup activities, respectively. The information for the annual document log, which is required by 40 *CFR* § 761.180(a)(2), is located in Section 1 and Sections 5–7. The annual document log includes the name, address, and EPA identification number of the facility, unique manifest number of every polychlorinated biphenyl (PCB) waste manifest generated by the facility during the calendar year (CY) (Section 1), PCB electrical equipment remaining in service at the end of the CY (Section 5), information on PCB waste shipped off-site and stored at the facility (Section 6), and PCB waste shipment receipt log (Section 7). The appendices contain the PCB waste manifests, PCB waste certificates of disposal, PCB waste storage area inspection records, and PCB waste inventory tables.

The PCB items in service and PCB activities at the Paducah Site for CY 2019 are summarized below:

PCB transformers in service as of 12/31/2019:	0
Total PCBs in kg in PCB transformers as of 12/31/2019:	0
PCB large capacitors in service as of 12/31/2019:	0
PCB waste in kg ¹ generated in CY 2019:	5,736
PCB waste in kg ² shipped off-site for treatment/disposal in CY 2019:	4,818
PCB waste in kg ³ remaining in storage for disposal as of 12/31/2019:	

Throughout CY 2019, the Paducah Site generated nine manifested shipments of PCB wastes to off-site treatment/disposal facilities. Eight Certificates of Disposal were received in CY 2019 for PCB wastes disposed of.

Due to the nature and history of operations at the Paducah Site, all PCB waste is suspected of being radiologically contaminated, and all PCB waste is considered potentially radiologically contaminated until it is certified otherwise. The U.S. Department of Energy has ongoing programs to characterize the radiological contamination of waste so it can be disposed of appropriately. In accordance with 40 *CFR* § 761.65, PCB wastes shall not be stored for more than one year. Radiologically contaminated PCB wastes may be stored beyond the one-year limit as outlined in 40 *CFR* § 761.65(a)(1). Efforts to secure disposal of radioactive PCB waste items exceeding the one-year storage limitation are discussed in the *Annual Compliance Agreement Report for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, January 1 through December 31, 2019*, FRNP-RPT-0153, dated June 2020 in accordance with the

¹ The weights in kg are taken from the Integrated Waste Tracking System (IWTS), Requests for Disposal, or generator supplied information and may be estimated.

 $^{^{2}}$ The weights in kg were taken from the Uniform Hazardous Waste Manifests, as shown in Table 1.1, which differ from IWTS weights shown in Table D.4.

³ See note 1.

Modification to the February 20, 1992, Compliance Agreement Between the United States Department of Energy and the United States Environmental Protection Agency, Washington, D.C., Toxic Substances Control Act, approved May 30, 2017.

1. PCB WASTE MANIFESTS

Uniform Hazardous Waste Manifests (UHWMs) of polychlorinated biphenyl (PCB) wastes shipped by the facility during the calendar year (CY) are annual records required by 40 *CFR* § 761.180(a)(1)(i). This section of the Annual Document contains the signed manifests of PCB wastes shipped off-site for disposal during CY 2019.

Nine manifests with 30 containers of solid and liquid PCB wastes were shipped for disposal. Copies of the UHWMs are located in Appendix A. PCB wastes were shipped to the following disposal sites:

- Energy Solutions disposal facility in Clive, UT;
- Diversified Scientific Services, LLC, (DSSI) Perma-Fix facility in Kingston, TN; and
- Clean Harbors Deer Park, LLC facility in LaPorte, TX.

Table 1.1 summarizes the 2019 manifested PCB waste shipments. The table includes the manifest number, the shipment destination, the number of PCB containers/items on the manifest, and the net weight in kilograms of PCBs containers/items shipped. The weights listed in this table were obtained from the UHWMs. The weights of wastes listed on the manifests were calculated based on the weight of the PCB-contaminated waste contents of the shipping container(s) or the estimated volume of the shipment. The weight on the manifest may differ from the weight recorded in the Integrated Waste Tracking System (IWTS) and the PCB and Additional Information attachment to the UHWM. When completing manifest documentation, the Deactivation and Remediation Contractor works with various treatment, storage, and disposal facilities (TSDFs) to facilitate acceptance. On occasion, the manifested weights are adjusted due to factors such as differences in the receiving facility's scale or because the TSDF requires the gross weight to be manifested instead of the net weight; however, the waste database is kept intact to reflect the operating weights while the waste was managed on-site.

UHWM Number	Date Shipped	Shipment Destination	Number of PCB Containers	Weight from UHWM (kg) ^{1,2}
013496416FLE	5/28/2019	Clean Harbors Deer Park, LaPorte, TX	9	1,410
019694554JJK	2/25/2019	<i>EnergySolutions,</i> Clive, UT	2	191
019694567JJK	2/27/2019	DSSI, Inc., Kingston, TN	4	772
019694615JJK	6/18/2019	EnergySolutions, Clive, UT	3	1,350
019694647JJK	8/21/2019	DSSI, Inc., Kingston, TN	4	839
019694669JJK	9/10/2019	DSSI, Inc., Kingston, TN	1	109
019694693JJK	10/31/2019	<i>EnergySolutions,</i> Clive, UT	5	118
019694703JJK	9/25/2019	DSSI, Inc., Kingston, TN	1	3
019694743JJK	12/16/2019	<i>EnergySolutions,</i> Clive, UT	1	25
	Total UHWM:	9	30	4,818

Table 1.1. PCB Waste Manifests Summary

¹ The weights in kg were taken from the UHWMs which may differ from IWTS weights shown in Table D.4. ² Due to rounding, the weight totals may vary by 1 kg.

2. PCB WASTE CERTIFICATES OF DISPOSAL

Certificates of Disposal (CDs) that have been received by the facility during the CY for PCB wastes disposed of are annual records required by 40 *CFR* § 761.180(a)(1)(ii). Eight CDs were received in 2019 from the following facilities:

- Energy*Solutions* disposal facility in Clive, Utah;
- DSSI Perma-Fix facility in Kingston, Tennessee; and
- Materials and Energy Corporation facility in Oak Ridge, TN.

Table 2.1 lists the UHWM number, disposal facility, date disposed of, number of PCB containers/items disposed of, and weight in kilograms of PCBs items shipped. The weights listed in the table were obtained from the UHWMs.

The CDs are presented in Appendix B. If the CD received in 2019 was for waste shipped in 2019, the manifests are shown in Table 1.1 and Appendix A.

UHWM	Earliest Date Removed from Service	Date Shipped	Disposer	Containers Disposed of	Net Weight from UHWM (kg) ¹	Date of Disposal	Date CD Received
006841816JJK	4/28/2016	8/19/2016	DSSI, Inc., Kingston, TN	1	29	4/29/2019	8/29/2019
006841816JJK	7/7/2016	8/19/2016	DSSI, Inc., Kingston, TN	1	11	4/29/2019	8/29/2019
006841893JJK	5/8/2017	7/11/2017	Materials and Energy Corporation, Oak Ridge, TN	1	0 2	9/7/2017	1/18/2019
006841953JJK	9/19/2017	8/23/2018	DSSI, Inc., Kingston, TN	1	119	2/9/2019	2/14/2019
006841953JJK	9/20/2017	8/23/2018	DSSI, Inc., Kingston, TN	1	117	2/9/2019	2/14/2019
019694524 JJK	4/18/2018	9/26/2018	EnergySolutions, Clive, UT	1	24	6/13/2019	6/14/2019
019694524 JJK	6/7/2018	9/26/2018	EnergySolutions, Clive, UT	1	27	6/13/2019	6/14/2019
019694524 JJK	8/9/2018	9/26/2018	EnergySolutions, Clive, UT	1	26	6/13/2019	6/14/2019
019694525JJK	4/23/2018	9/26/2018	EnergySolutions, Clive, UT	1	191	8/16/2019	8/23/2019
019694554JJK	4/25/2018	2/25/2019	EnergySolutions, Clive, UT	1	169	6/27/2019	7/3/2019
019694554JJK	9/5/2018	2/25/2019	EnergySolutions, Clive, UT	1	23	6/27/2019	7/3/2019
019694615JJK	6/27/2018	6/18/2019	EnergySolutions, Clive, UT	1	471	6/27/2019	7/3/2019
019694615JJK	7/25/2018	6/18/2019	EnergySolutions, Clive, UT	1	360	6/27/2019	7/3/2019
019694615JJK	8/10/2018	6/18/2019	EnergySolutions, Clive, UT	1	519	6/27/2019	7/3/2019
019694647JJK	8/22/2018	8/21/2019	DSSI, Inc., Kingston, TN	1	306	12/10/2019	12/19/2019
019694647JJK	9/5/2018	8/21/2019	DSSI, Inc., Kingston, TN	1	153	12/10/2019	12/19/2019
			Totals	16	2,546		

Table 2.1. PCB Waste Certificates of Disposal Summary

¹ The weights in kg were taken from the UHWMs, as shown in Table 1.1, which differs from IWTS weights shown in Table 6.1. ² Weight listed as zero due to rounding 0.045 kg.

³Due to rounding, the weight totals may vary by 1 kg.

3. PCB WASTE STORAGE AREA INSPECTION RECORDS

Records of inspections performed in accordance with 40 *CFR* § 761.65(c)(5) are annual records required by 40 *CFR* § 761.180(a)(1)(iii).

Table 3.1 lists the PCB waste storage areas (i.e., a building or an area within a building) established and/or operated for PCB wastes at the Paducah Site during CY 2019. Appendix C contains information from the PCB Waste Inspection database and lists the dates of inspection and a "Yes/No" check to indicate if leaks/spills were found.

Building	Waste Area Designator
C-331	G-331-PCB-01 ^{a, b}
C-335	G-335-04 ^{a,c}
C-337	G-337-02 ^a
C-337	G-337-03 ^a
C-337	G-337-05 ^{a, d}
C-337	G-337-PCB-02 ^a
C-337	S-337-05 ^{e, f}
C-733	C-733
C-746-Q	C-746-Q
C-752-A	C-752-A
C-753-A	C-753-A
C-757	G-757-03 ^a

Table 3.1. PCB Waste Storage Areas at the Paducah Site

^aWaste Area Designators that begin with a "G" indicate a generator staging area, which is a temporary storage area for non-Resource Conservation and Recovery Act, PCB, and/or low-level (radioactive) waste.

^b G-331-PCB-01 was closed on June 19, 2019.

^c G-335-04 was closed on June 19, 2019.

 $^{\rm d}$ G-337-05 was closed on October 16, 2019.

^e Waste Area Designators that begin with a "S" indicate a satellite accumulation area, which is a temporary storage area for Resource Conservation and Recovery Act, PCB, and/or low-level (radioactive) waste.

^fS-337-05 was opened on July 30, 2019, and closed on October 16, 2019.

4. PCB SPILL CLEANUP RECORDS

Records of cleanup and disposal of any spilled or leaked materials from PCB Items in storage in accordance with 40 *CFR* § 761.65(c)(5) are annual records required by 40 *CFR* § 761.180(a)(1)(iii). Because no spills occurred in PCB storage areas during CY 2019, there are no records.

5. PCB ELECTRICAL EQUIPMENT IN SERVICE

No PCB (\geq 500 ppm) transformers or PCB (\geq 500 ppm) large capacitors were in service at the Paducah Site as of December 31, 2019, which is summarized in Table 5.1. In addition, no PCB transformers or PCB large capacitors were removed from service in CY 2019. Sixty-seven PCB transformers were removed from service, drained, and flushed during 2015. They were stored in place in C-337 during CY 2019. Residual flushate was removed over time as it drained through and collected in the units.

There are no CY 2019 PCB transformer maintenance records because there was no maintenance performed on these transformers, and the transformers currently are not in service.

Туре	Number in Service	Volume (gal)	PCB (kg)
PCB transformers*	0	0	0
PCB large high-voltage capacitors	0	0	0

Table 5.1. PCB Electrical Equipment in Serviceas of December 31, 2019

*There were 67 PCB transformers that were removed from service, drained, flushed, and stored in place in 2015. Due to their size and the structural interferences in the process buildings, options for disposal of these items continue to be evaluated.

6. PCB WASTE ACTIVITY

PCB waste activities performed by the facility during the CY 2019 are annual records required by 40 *CFR* § 761.180 (a)(2)(iii). The PCB Waste Activity Summary for CY 2019 is shown in Table 6.1. Detail tables supporting the summary table are located in Appendix D. Throughout the tables, the PCB Date, often referred to as PCB DTS (date to storage), reflects the date PCB waste was first added to a container and is the origin date of the container.

The PCB Waste Inventory for December 31, 2018, has been adjusted from the "PCB Waste Inventory as of December 31, 2018," reported as Table 10.9 of the *Annual Document of Polychlorinated Biphenyls at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, for January 1, 2018–December 31, 2018*, FRNP-RPT-0101. The net changes to the January 1, 2019, beginning inventory include adjustments because of in-process collection containers at the time of 2018 inventory, information received after the 2018 report submittal, and/or weight corrections. The detailed listing of the December 31, 2018, corrections and adjustments is provided in Appendix D, Table D.1.

The detailed listing of PCB waste generated during CY 2019 table is provided in Appendix D, Table D.2.

The detailed listing of the adjustments to the CY 2019 PCB inventory is provided in Appendix D, Table D.3.

The detailed listing of the PCB waste shipped in CY 2019 is provided in Appendix D, Table D.4.

The detailed listing of the PCB waste inventory as of December 31, 2019, is provided in Appendix D, Table D.5.

There was no PCB waste received from off-site facilities in CY 2019.

PCB Waste Items In Inventory	12/31/201	8 Inventory	Adjus	ctions and stments to 1g Inventory ^a	1/1/2019	9 Inventory	Gen	erated		ons to 2019 entory ^b	Shipped for	Disposal	12/31/2019	9 Inventory
	pc	kg	pc	kg	pc	kg	pc	kg	рс	kg	pc	kg	рс	kg
ARTICLES	2	32,795	0	0	2	32,795	0	0	0	0	0	0	2	32,795
PCB Transformers (drained)	2	32,795	0	0	2	32,795	0	0	0	0	0	0	2	32,795
ARTICLE CONTAINERS ^c	5	2,714	0	56	5	2,771	2	1,018	0	0	5	2,771	2	1,018
Large Capacitors	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Ballasts	2	272	0	56	2	328	1	46	0	0	2	328	1	46
Misc. Equip. (motors, pumps, etc.)	3	2,442	0	0	3	2,442	1	973	0	0	3	2,442	1	973
CONTAINERS	9	1,143	0	321	9	1,463	30	4,718	0	0	25	3,791	14	2,390
Liquids ^d	5	564	-1	310	4	874	17	3,315	0	0	15	2,943	6	1,246
Solids	4	579	1	11	5	590	13	1,403	0	0	10	848	8	1,144
BULK PCB REMEDIATION														
WASTE SOLIDS <	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49 MG/Kg ^e														
TOTAL ^f	16	36,652	0	377	16	37,029	32	5,736	0	0	30	6,562	18	36,203

Table 6.1. PCB Waste Activity Summary for CY 2019

 $pc = piece \ count; \ kg = kilogram \ (rounded \ to \ the \ nearest \ whole \ number \ for \ the \ summaries)$

^a The Corrections and Adjustments to Beginning Inventory column includes adjustments because of in-process collection containers at time of 2018 inventory, information received after the 2018 report submittal, characterization waste

category adjustments, and/or weight corrections. Weights reported in this summary include the weight of the container (drum/box), except for tanks/tankers.

^b The Adjustments to 2019 Inventory column includes adjustments due to repackaging of wastes or because of in-process collection containers during time of 2019 inventory. Weights reported in this summary include the weight of the container (drum/box), except for tanks/tankers.

^c Article Containers are drums or boxes of PCB transformers, PCB large capacitors, electrical equipment, PCB light ballasts, or PCB small capacitors.

^dPortable (mobile) tanks and totes are counted as Containers.

^ePCB Remediation Waste Solids disposed at the on-site C-746-U Landfill

^fDue to rounding, the weight totals may vary by 1 kg.

7. PCB WASTE SHIPMENT RECEIPT LOG

A PCB waste shipment receipt log is required by 40 *CFR* § 761.180(a)(2)(viii). The log is included as Table 7.1. The table is an excerpt from a data file, which includes a record of phone calls or other agreed method to confirm receipt of PCB waste shipments. Information in the log that is not required for this report has been omitted from Table 7.1.

Table 7.1. CY 2019 PCB Waste Shipment Receipt Log

Actual Ship Date	Shipment Destination	UHWM #	Comments / Notes	Date Manifest Received	Comments for Manifest Inquiries and Requests	TSCA	Confirmation e-mail received from TSDF
5/28/2019	Clean Harbors Deer Park, LaPorte, TX	013496416FLE	(9) Containers of Hazardous/TSCA Waste	6/20/2019		RCRA/TSCA Mixed (RTM)	PCB confirmation of arrival from Vivian at CH on 5/29/19 via phone
2/25/2019	EnergySolutions, Clive, UT	019694554JJK	(2) Drums of TSCA/LLW	3/1/2019		TSCA MIXED (TM)	Received PCB confirmation from Albert Evans via e-mail on 2/28/2019
8/21/2019	DSSI, Inc., Kingston, TN	019694647JJK	 (6) Drums of Mixed Waste (Unused Kerosene), (4) Drums of PCB/LLW (Oiled Filled Door Closures and Vent Duct Oil and Water), and (1) Drum of LLW (PF Pump Oil) 	8/22/2019	Received signed manifest on 8/22/2019; however, further analysis will be completed prior to applying managmenet codes. Received manifest with management codes on 9/25/2019.	RTM	Received PCB confirmation from Tibby Snipes via e-mail on 8/22/2019
9/10/2019	DSSI, Inc., Kingston, TN	019694669JJK	(41) Containers of MLLW and (1) Container of PCB/LLW	9/12/2019	Received UHWM with management codes on 10/08/2019.	RTM	Received PCB confirmation from Tibby Snipes via e-mail on 9/12/2019
10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK	(5) Drums of TSCA Waste – RAGS, PANS, PLASTIC, PADS, PPE	11/18/2019		ТМ	Received PCB Delivery Confirmation from Albert Jones via e-mail on 11/5/2019
9/25/2019	DSSI, Inc., Kingston, TN	019694703JJK	(4) Drums of RCRA and TSCA Waste	9/28/2019	Received signed manifest on 9/28/2019; however, further analysis will be completed prior to applying managmenet codes. Received management codes on 10/22/2019.	RTM	Received PCB confirmaion from Tibby Snipes via e-mail on 9/28/2019
12/16/2019	EnergySolutions, Clive, UT	019694743JJK	(1) Drum of MLLW with TSCA	12/20/2019		RTM	Received PCB Delivery confirmation from EnergySolutions via phone on 12/19/2019
2/27/2019	DSSI, Inc., Kingston, TN	019694567JJK	(4) Drums of TSCA/LLW and (1) Drum of Corrosive Liquids-RCRA	2/28/2019	Received signed manifest on 2/28/2019; however, further analysis will be completed prior to applying management codes. Received signed manifest with management codes on 4/3/2019.	RTM	Received PCB confirmation from Tibby Smith via e-mail on 2/28/2019
6/18/2019	Energy <i>Solutions</i> , Clive, UT	019694615JJK	(3) ST-90s of MLLWTSCA (Pot Heads) & (8) Drums of MLLW (circuit boards and light bulbs)	6/24/2019		RTM	Received PCB confirmation from Albert Evans via phone call on 6/21/2019

APPENDIX A

PCB WASTE MANIFESTS

ease print or type. DG 1902715534	SC PP	W 3/12/			m Approved	. OMB No.	2050-00
UNIFORM HAZARDOUS 1. Generator ID Number 2. Page 1 of 3. Er	nergency Respon	nse Phone	4. Manifest			101	
WASTE MANIFEST KY8890008982	00) 483-	3718			9641	LP I	-LE
5. Generator's Name and Mailing Address Four Rivers Nuclear Partnership, LLC	ator's Site Addre	ss (if different t	nan mailing addre	ss)			
651 d Lebbs Dand	ME						
-Kevil, KY 42053 Generator's Phone: (270) 441-6698	INC						
Generator's Phone: (270) 441-6698	_		U.S. EPAID	Number		_	
			1				
Clean Harbors Environmental Services, Inc.			U.S. EPAID	Number	322	250	_
ALM TR.			TAK	2681	7182	INI	
8. Designated Facility Name and Site Address			U.S. EPA ID	Number	16-	are-	
Clean Harbors Deer Park, LLC 2027 Independence Parkway South La Porte, TX 77571 Franky Frank Deer Constant			TXD	055	1413	78	
ga, 9b. U.S. DOT Description (including Proper thipping Name, Hazard Class, ID Number,	10. Cont	lainers	11. Total	12. Unit	1		
HM and Packing Group (if any))	No.	Type	Quantity	Wt.Nol.	13.	Waste Code	es
1.5.5-25-19	f		1410	K	ſ		1
AG, UN3092, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (PCB'S, LEAD), 9, PG HI (1 LB)	9	DW	3109E	P		DORS DUTS2	9H
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3.	-		-	-			
				-			
Four Rivers Nuclear Partnership, LLC (FRNP) and the U.S. Department of Energy (DOE) are co-generators pursual	to a Co-Genera	tar percement o	ated September	2017.11-	at this serve	1	
EMODOLASS, Including, but not limited to, characteriting waste, manifesting waste to off-site failties, podagin with RCRA requirements. Transportation hereunder is for DOE and the actual total transportation charges puid 14. Special Finding Instructions and Additional Information 1. CHIUSUGGESTATION TRANSPORTATION Processing and the actual total transportation charges puid 1. CHIUSUGGESTATION TRANSPORTATION Processing waster to off-site failties, podagin 1. CHIUSUGGESTATION TRANSPORTATION Processing waster and the actual total transportation charges puid 1. CHIUSUGGESTATION TRANSPORTATION Processing waster and the actual total transportation charges puid 1. CHIUSUGGESTATION TRANSPORTATION Processing waster and the actual total transportation charges puid 1. CHIUSUGGESTATION Processing and the actual total transportation charges puid 1. CHIUSUGGESTATION Processing and the actual total transportation charges puid 1. CHIUSUGGESTATION Processing and the actual total transportation charges puid 1. CHIUSUGGESTATION Processing and total total total transportation charges puid 1. CHIUSUGGESTATION Processing and total total total total transportation charges puid 1. CHIUSUGGESTATION Processing and total tota	are to be reimbur	iste for Ganspor		to Contract	DE-EMODOLAS	12/1 12/1	9 3/12/
with RCRA requirements. Transportation hereunder is for DOE and the actual teal transportation charges puld 13. Special Handting Instructions and Andrican Information 13. CHARLES AND	are to be reimbut	rsed by the Gove the pypersed described above alional governm	Accurve by the proper sh ental regulations			rdance 35. 712/1 Date	
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24. Generator's Name FUUV RIVEYS NUCLEAR PUTTI	revsn.	ιp				
25. Transporter Company Name CLEAD HOUDOLS GNV	SAVCS.J	$\lambda c. 1$	1AD Number	03936	2252	20
26. Transporter Company Name		l		·········		
27a. 27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, HM and Packing Group (if any))	28. Conta No.	20	Total 30. Iantity WL	Unit 3 Vol.	1. Waste Code	s T
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32. Special Handling Instructions and Additional Information						
33. TransporterAcknowledgment of Receipt of Materials					Month Be	, jo
34. Transporter Acknowledgment of Receipt of Materials Signal	109				Month Day	
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, a	nd recycling systems)					
I	I			1		
VForm 8700-22A (Rev. 12-17) Previous editions are obsolete.		IGNATED FA		EPA's e-M	ANIFEST	SYS"FM

PCB and Additional Information Attachment	. Page	2 of 2
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Manifest Number: 013496416 FLE

Shipment ID Number: 013496416 FLE

Shipment Date: 5/28/2019

UHWM Section	RFD	Container / WASTE ID	Description	PCB Date to Storage	Accumulation Storage Date	VOLUME	GROSS WT (Ib)	GROSS WT (Kg)	NET WT (ib)	NET WT (Kg)
9b.1	121734	121734-01	PCB Contaminated Transformer Oil	3/12/2019	03/12/19	7	426	193	370	168
9b.1	121734	121734-02	PCB Contaminated Transformer Oil	3/20/2019	03/20/19	6.73	446	202	390	177
9b.1	121734	121734-03	PCB Contaminated Transformer Oil	3/28/2019	03/28/19	6.73	446	202	390	177
9b.1	121734	121734-04	PCB Contaminated Transformer Oil	4/3/2019	04/03/19	7.4	436	198	381	173
9b.1	121734	121734-05	PCB Contaminated Transformer Oil	4/15/2019	04/15/19	7.4	410	186	354	161
9b.1	121734	121734-06	PCB Contaminated Transformer Oil	4/23/2019	04/23/19	7.4	428	194	372	169
9b.1	121734	121734-07	PCB Contaminated Transformer Oil	4/23/2019	04/23/19	7.4	434	197	378	171
9b.1	121734	121734-08	PCB Contaminated Transformer Oil	5/5/2019	05/05/19	7.4	430	195	374	170
9b.1	121734	121734-09	PCB Contaminated Transformer Oil	5/6/2019	05/06/19	7.4	156	71	100	45
Totals:							3612	1638	3109	1410

Totals:

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

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ENVIRONMENT	SERVICES®

Land Disposal Restriction Notification Form

Page : 1 of 1

Printed Date :May 23, 2019

MANIFEST INF	ORMATION							
Generate	or: Four Rivers	Nuclear Partnersh	nip, LLC		Manifest Tracking	g Info.		
Addre	ss: 5511 Hobbs Kevil,KY 42				013496416fle			
	EPA ID #: KY 8 8 9 0 0 0 8 9 8 2 Sales Order No: 1902715							
Line Item:	Page No:	Profile No:	Treatability Gro		LDR Disposal Catego			
	1	CH1030668	NON-WASTEW		2 (This is subject to L			
1.		CH 1030000	INOIN-WASTEW	AIEN				
EPA Waste Co	.Lde	i	Ė	EPA Wa	iste SubCategory			
D008					haracteristic for Lead			
			LDR Chemical	Data				
Chemical				Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment		
CADMIUM				Y	N	N		
	(SUM OF ALL PO	CB ISOMERS, OR	ALL AROCHL	Ŷ	N	N		
	<u>Applies to</u> <u>Manifest Line</u> <u>Items</u>							
Pursuant to 40 Part 268.	CFR 268.7(a), I	hereby notify that t	his shipment conta	ins waste res	tricted under 40 CFR	1.		
Waste analysis Signature : Title :	s data, where ava	illable, is attached.	Print Na	ame <u>(</u>	523-19	<u>lare</u>		

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

-		
Generator	Name:	

Four Rivers Nuclear Partnership LLC (FRNP)

rH1030668

Manifest Doc. No. :

State Manifest No .:

013496416 FLE

Profile No .:

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

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1	D022	CHLOROFORM	\square	А
2	D039	TETRACHLOROETHENE	\square	A
3	D008	LEAD	\square	A
4	D018	BENZENE	\square	A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here: \Box

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT A.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and Imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS B.3

*I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS B.4

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS F

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restriction	This waste i	s a newly identified waste th	hat is not current	ly subject to any	40 CFR Part 268	restriction
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I hereby certify th	at all information s	submitted in this and all asso	ciated documents is complete and accurate, to the best of my knowledge and information
	11 /	Λ	<i>Ela</i> 112

Signature	onia l	臣	h	Title	Waste Engineer	_ Date	5/2	<u>v//9</u>	
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Form A1 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

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In Christian Westerweiten	- \\\\? 	Komienenes	- ACAMATICATION - A AND A A		Thursde l'Avelia
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0,28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0,14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

A. _ Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems.

B. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems.

C. High TOC ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

D002:

D. Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.

E. Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems.

Form A1 Page 2 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

			HON AND CERTIFICATION	•	_	
Generator N	lame: FRN		Manifest Doc. No. :	013	<u> </u>	76416FLE
Profile No.:	CH	1630668	State Manifest No.:			AL
This form is IS NOT an	s a continuation f	rom form A1 for a waste identified Disposal Notification and Certifica	by more than five USEPA waste co	ode/subca	tegor	y groups. This page by itself
Continue (f	rom form A1, Pag	ge 1) to identify ALL USEPA haza	rdous wastes that apply to this wast	te shipme	nt (as	defined by 40 CFR 261). For
each waste	number, identify	the corresponding subcategory (write in the description from 40 CFR aste must be managed. Spent solve	268.40, o	or che	eck NONE if the waste does
constituent	(s) and underlyin	a hazardous constituent(s) if appli	cable, must be listed and attached			-
			n diserve samer Planner i horderen same samer			as annaithear fran Carl
	$\Gamma_{1,2}^{i}$ $\Gamma_{1,2}^{i}$ $\Gamma_{1,1}^{i}$ $\Gamma_{1,2}^{i}$ $\Gamma_{1,2}^{i}$		n an e ches de alge l'a de le <u>Presionen - cara</u> -su Regionala de la c			
$\frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^$	notes as transmates				1-17	
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1 hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Waste Engineer Title_

Date 5/2//19

Form A2 Page 1 of 2

FRNP

°H1030668

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator	Name	:
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Manifest Doc. No. :

State Manifest No .:

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									_

Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

		LEADER THE ROLL OF HERSELF DESCRIPTION	FUELD FROM THE LICK SUB-	MPEN CREEK	614	
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information. Signature 5/21/19 Date

Waste Engineer Title

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator	Name:
Generalui	Name.

Manifest Doc. No. : 013496416 FLF

Profile No.:

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FRNP

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State Manifest No.:

NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST		WW	NWW	GONSTITUENT	HOWMUST	.WW (mg/l)	NWW (mg/kg)
	THIS CONSTITUEN		(mg/l)	(mg/kg); vaniess		THIS CONSTITUENT	EUNE/UK	unless
	BEMANAGE			noted		BE MANAGED?		noted
	DEMANAGE			REPRESENTATION FOR		Statistics and the second second second		
Acenaphthylene	<u> </u>		0.059	3.4	2-Chloro-1,3-butadiene	<	0.057	0.281
Acenapthene			0.059	3.4	Chlorodibromomethane		0.057	15
Acetone			0.28	160	Chloroethane		0.27	6.0
Acetonitrile			5.6	38 ¹	bis(2-Chloroethoxy)methane		0.036	7.2
Acetophenone			0.010	9.7	bis(2-Chloroethyl)ether		0.033	6.0
2-Acetylaminofluorene			0.059	140	Chloroform		0.046	6.0
Acrolein			0.29	NA	bis(2-Chloroisopropyl)ether		0.055	7.2
Acylamide			191	231	p-Chloro-m-cresol		0.018	14 NA'
Acrylonitrile		-	0.24	84	2-Chloroethyl vinyl ether		0.0621	NA
Aldicarb sulfone		1	0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride		0.19	30
Aldrin		1	0.021	0.066	2-Chloronaphthalene		0.055	5.6
4-Aminobiphenyl		Τ	0.13	NA	2-Chlorophenol		0.044	5.7
Aniline			0.81	14	3-Chloropropylene	<i> </i>	0.036	30
Anthracene			0.059	3.4	Chrysene		0.059	3.4
Aramite			0.36	NA	o-Cresol		0.11	5.6
alpha-(BHC)			0.00014	0.066	m-Cresol	· · · · · · · · · · · · · · · · · · ·	0.77	5.6
beta-(BHC)			0.00014	0.066	p-Cresol		0.77	5.6
delta-(BHC)			0.023	0.066	m-Cumenyl methylcarbamate		0.0561	1.41
gamma-(BHC)	6		0.0017	0.066	Cyclohexanone		0.36	0.75 mg/l ¹
Barban	N		0.056	1.41	o,p'-DDD	<u> </u>	0.023	0.087
Bendiocarb	N		0.0561	1.4	p,p'-DDD	¥	0.023	0.087
Benomyl	N ·	•	0.056	1.41	o,p'-DDE	N.	0.031	0.087
Benzene	5		0.14	10	p,p'-DDE	L	0.031	0.087
Benz(a)anthracene			0.059	3.4	o,p'-DDT	1	0.0039	0.087
Benzal chloride	5		0.055 ¹	6.0 ¹	p,p'-DDT		0.0039	0.087
Benzo(b)fluoranthene ³			0.11	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(k)fluoranthene ³			0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo (g,h,i)perylene			0.0055	1.8	1,2-Dibromo-3-chloropropane		0.11	15
Benzo(a)pyrene			0.061	3.4	1,2-Dibromomethane/ Ethylene dibromide		0,028	15
Bromodichloromethane	6		0.35	15	Dibromomethane		0.11	15
Bromomethane/Methyl Bromide			0.11	15	m-Dichlorobenzene		0.036	6.0
4-Bromophenyl phenyl ether			0.055	15	o-Dichlorobenzene		0.088	6.0
n-Butyl alcohol			5,6	2.6	p-Dichlorobenzene		0.090	6.0
Butylate			0.0421	1.41	Dichlorodifluoromethane		0.23	7.2
Butyl benzyl phthalate			0.017	28	1,1-Dichioroethane		0.059	6.0
2-sec-Butyl-4,6- dinitrophenol/Dinoseb			0.066	2.5	1,2-Dichloroethane	· /	0.21	6.0
Carbaryl			0.0061	0.141	1,1-Dichloroethylene		0.025	6.0
Carbary			0.0561	1.41	trans-1,2-Dichloroethylene		0.054	30
Carbofuran			0,0061	0.141	2.4-Dichlorophenol		0.044	14
Carboluran phenol			0.0561	1.4	2.6-Dichlorophenol		0.044	14
Carbon disulfide			3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
Carbon tetrachloride			0.057	6.0	1,2-Dichloropropane		0.85	18
Carbosulfan			.0.028 ¹	1.4 ¹	cis-1,3-Dichloropropylene		0.036	18
Chlordane (alpha and gamma isomers)			0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
p-Chloroaniline			0.46	16	Dieldrin	1/	0.017	0.13
	1		0.057	6.0	Diethyl phthalate	V N	0.20	28

Form B1 Page 1 of 3

Page 5 of 7

POOR QUALITY ORIGINAL

CONSTITUENT	HOW MUST		WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOWMUST		NVVV (mg/kg)
	CONSTITUE			Unless		CONSTITUENT		Luniess
	BE MANAGE	D7		inoted		BEMANAGED	0.40	noted
Chlorobenzilate	K		0.10	NA 14	p-Dimethylaminoazobenzene Methylene chloride		0,13 ¹ 0,089	30
2,4-Dimethyl phenol			0.036	28	Methyl ethyl ketone		0.28	36
Dimethyl phthalate Di-n-butyl phthalate			0.047	28	Methyl isobutyl ketone		0.14	33
1,4-Dinitrobenzene		+	0.32	2.3	Methyl methacrylate		0.14	160
4,6-Dinitro-o-cresal			0.28	160	Methyl methansulfonate		0.018	NA
2,4-Dinitrophenol			0.12	160	Methyl parathion		0.014	4.6
2,4-Dinitrotoluene		-	0.32	140	Metolcarb		0.0561	1.4
2.6-Dinitrotoluene		1	0.55	28	Mexacarbate		0.056 ¹	1.4 ¹
Di-n-octyl phthalate			0.017	28	Molinate		0.042 ¹	1.41
Di-n-propyInitrosamine		1	0.40	14	Naphthalene		0.059	5.6
1,4-Dioxane		1	12.0	170	2-Naphthylamine		0.52	NA
Diphenylamine ³			0.92	131	o-Nitroaniline		0.27 ¹	141
DiphenyInitrosamine ³			0.92	13 ¹	p-Nitroaniline		0.028	28
1,2-Diphenylhydrazine		1.	0.087	NA	Nitrobenzene		0.068	14
Disulfoton			0.017	6.2	5-Nitro-o-toluidine		0.32	28
Dithiocarbamates (total)		L	0.028	281	o-Nitrophenol		0.028'	13 ¹
Endosulfan I			0.023	0.066	p-Nitrophenol		0.12	29 28
Endosulfan II			0.029	0.13	N-Nitrosodiethylamine		0.40	2.31
Endosulfan sulfate	· · · /		0.029	0.13	N-Nitrosodimethylamine		0.40	17
Endrin	· · · · · · · · · · · · · · · · · · ·		0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	2.3
Endrin aldehyde	-		0.025	0.13	N-Nitrosomethylethylamine N-Nitrosomorpholine		0.40	2.3
EPTC		<u></u> :	0.0421	33	N-Nitrosopiperidine		0.013	35
Ethyl acetate				10	N-Nitrosopyrrolidine		0.013	35
Ethyl benzene			0,057	360	Oxamyl		0.0561	0.281
Ethyl cyanide/Propanenitrile	<i> </i>		0.24	160	Parathion		0.014	4.6
Ethyl ether					Total PCBs (sum of all PCB			
Bis(2-Ethylhexyl)phthalate			0.28	28 · 160	isomers or all Aroclors)	A	0.10	10 1.4 ¹
Ethyl methacrylate			0.14	NA	Pentachlorobenzene		0.0551	101
Ethylene oxide			0.12		PecDDs (All			
Famphur	N		0.017	15	Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene	رد. اد		0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene			0.059	3.4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride	2		0.0561	1.41	Pentachloronitrobenzene		0.055	4.8
Heptachlor			0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide			0.016	0.066	Phenacetin		0.081	16
Hexachlorobenzene			0.055	10	Phenanthrene		0.059	5.6
Hexachlorobutadiene			0.055	5.6	Phenol		0.039	6.2
Hexachlorocyclopentadiene			0.057	2.4	Phorate		0.021	4,6
HxCDDs (All Hexachrorodibenzo-p-dioxins)			0.000063	0.001	Phthalic acid		0.0551	28 ¹
HxCDFs (All Hexachlorodibenzofurans)			0.000063	0.001	Phthalic anhydride		0.055	28 ¹
Hexachloroethane			0.055	30	Physostigmine		0.0561	1.4 ¹
Hexachloropropylene			0.035	30	Physostigmine salicylate		0.0561	1.41
Indeno(1,2,3-c,d)pyrene			0.0055	3.4	Promecarb		0.0561	1.41
Iodomethane			0.19	65	Pronamide		0.093	1.5
Isobutyl alcohol			5.6	170	Propham		0.056'	1.41
Isodrin			0.021	0.066	Propoxur		0.0561	1.4
Isosafrole			0.081	2.6	Prosulfocarb		0.042	1.41
Kepone			0.0011	0.13	Pyrene		0.067	8.2
Methacrylonitrile			0.24	84	Pyridine		0.014	16
Methanol			5.6	0.75 mg/l ¹	Safrole		0.081	22
Methapyrilene			0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methiocarb	ļ. ļ		0.0561	1.41	1,2,4,5-Tetrachlorobenzene			14
Methomyl			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor	1		0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0,000063	0.001
3-Methylcholanthrene			0.0055	15	1,1,1,2-Tetrachloroethane		0.057	6.0
4,4'-Methylene bis(2-	1				1,1,2,2-Tetrachloroethane		0.057	6.0
chloroaniline)		\rightarrow	0.50	30	1,1,2,2-1 etrachioroethane	L	0.007	0.0

Form B1 Page 2 of 3

Page 6 of 7

POOR QUALITY ORIGINAL

Bet MARAGED Index Permanance Permanance<	NWW (mg/kg): unless:
Construction Last Thiodicarb 0.0681 1.4 ⁴ Antimony 1.4 Antimony 1.9 Thiophanate-methyl 0.0681 1.4 ⁴ Antimony 1.2 Thiophanate-methyl 0.0681 1.4 Antimony 0.62 Tributene 0.0095 2.6 Bartum 0.62 Construction 0.62 Tributone 0.042 ⁴ 1.4 ⁴ Beryllum 0.62 Construction 0.62 2,4,5-Trichorophenol 0.055 19 Cadmium 0.69 1.1,1-Trichorophanae 0.064 6.0 Chromium (Total) 2.77 1,1,2-Trichorophenol 0.054 6.0 Chromium (Total) 1.2 Trichorophenol 0.88 2.4,5-Trichorophenol <td>inoted :</td>	inoted :
2.3,4 Principal 1.9 Thiodicarb 0.0191 1.4 Antimony 1.9 Thiodicarb 0.0681 1.4 ⁴ Arsenic 1.4 Toluphanate-methyl 0.0695 2.6 Barlum 1.2 Trialate 0.0895 2.6 Barlum 1.2 Trialate 0.042 ¹ 1.4 ⁴ Beryllum 0.82 Tribromomethane/Bromoform 0.63 15 Beryllum 0.82 2,4,5-Tribromophenol 0.035 19 Cadmium A 0.69 1,1,1-Trichloroethane 0.054 6.0 Chromium (Total) 2.77 1,1,2-Trichloroethane 0.054 6.0 Chromium (Total) 2.77 1,1,2-Trichloroethane 0.054 6.0 Chromium (Total) 1.2 Trichloroethane 0.054 6.0 Chromium (Total) 1.2 1,1,2-Trichlorophenol 0.18 7.4 Fluoride 35 2,4,5-Trichlorophenol 0.72 7.9 Lead 0.69	2.1 mg/l
Thiolicarb 1.4 Antimony 1.3 Thiophanate-methyl 0.0661 1.4 ⁴ Arsenic 1.4 Toluene 0.0600 10 Barlum 1.2 Toxaphene 0.0600 10 Barlum 1.2 Triallate 0.042 ⁴ 1.4 ⁴ Beryllium 0.82 Thioromothane/Bromoform 0.63 15 Beryllium 0.82 Z,4,6-Triformophenol 0.035 7.4 Cadmium A 0.69 1,2,4-Trichlorobenzene 0.065 19 Cadmium A 0.69 1,1,1-Trichloroethane 0.054 6.0 Chromium (Total) 2.77 1,1,2-Trichloroethane 0.054 6.0 Chromium (Total) 2.77 Trichloroethane 0.054 6.0 Chromium (Total) 1.2 Z,4,5-Trichlorophenol 0.054 6.0 Chromium (Total) 1.2 Z,4,5-Trichlorophenol 0.035 7.4 Lead 0.69 Z,4,5-Trichlorophenol 0.72 7.9 Lead 0.69 Z,4,5-Trichlorophenol 0.72 7.9 Lea	TCLP 1.15 mg/l
Thiophanate-methyl 0.0601 1.4 Arsend 1.4 Toluene 0.080 10 Barlum 1.2 Toxaphene 0.0096 2.6 Barlum 1.2 Triallate 0.0421 1.4' Beryllium 0.82 Tribromomethane/Bromoform 0.63 15 Beryllium 0.82 2,4,6-Tribromophenol 0.035 7.4 Cadmium A 0.69 1,2,4-Trichiorobenzene 0.064 6.0 Chromium (Total) 2.77 1,1,1-Trichioroethane 0.064 6.0 Chromium (Total) 2.77 1,1,2-Trichioroethane 0.064 6.0 Chromium (Total) 2.77 1,1,2-Trichioroethane 0.064 6.0 Chromium (Total) 2.77 Trichiorophenol 0.054 6.0 Cyanides (Total) 1.2 2,4,5-Trichiorophenol 0.18 7.4 Lead 0.69 2,4,5-Trichiorophenol 0.057 30 Mercury (Nonwastewater from Reform Reform NA 1,2,3-Trichiorophenoxyacetic actic actic	TCLP ⁴ 5.0 mg/l
Toluene 0.080 10 Barum 1.2 Toxaphene 0.0095 2.6 Barum 1.2 Trilalate 0.042 ¹ 1.4 ¹ Beryllum 0.82 Tribromomethane/Bromoform 0.63 15 Beryllum 0.82 2,4,6-Tribromophenol 0.035 7.4 Cadmium A 0.69 1,2,4-Trichlorobenzane 0.055 19 Cadmium 0.69 2.77 1,1,1-Trichloroethane 0.064 6.0 Chromium (Total) 2.77 1,1,2-Trichloroethane 0.064 6.0 Chromium (Total) 2.77 1,1,2-Trichloroethane 0.064 6.0 Chromium (Total) 2.77 Trichloroethylene 0.064 6.0 Cyanides (Total) 1.2 Trichlorophenol 0.055 7.4 Lead 0.69 2,4,5-Trichlorophenol 0.72 7.9 Lead 0.69 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T 0.72 7.9 Lead 0.69 1,1,2-Trichlororophenoxyacetic acid/2,4,5-T <td>TCLP 7.6 mg/l</td>	TCLP 7.6 mg/l
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1,1,1-Trichloroethane 0,054 6.0 Chromum (1 dat) 2,17 1,1,2-Trichloroethane 0,054 6.0 Chromum (1 dat) 2,77 Trichloroethylene 0,054 6.0 Chromum (Total) 1.2 Trichloroethylene 0,054 6.0 Cyanides (Total) 1.2 Trichlorophenol 0.18 7.4 Fluoride 35 2,4,6-Trichlorophenol 0.035 7.4 Lead 0.69 2,4,5-Trichlorophenol 0.72 7.9 Lead 0.69 1,2,3-Trichlorophenoxyacetic acid/2,4,5-T 0.057 30 Mercury (Nonwastewater from red acid/2,4,5-T NA 1,1,2-Trichloro-1,2,2- 0.057 30 Mercury (All others) 0.15 Trise(2,3- 0.011 0.10 ⁴ Nickel 3.98 3.98 Dibromopropyl)phosphate 0.11 0.10 ⁴ Nickel 3.98 3.98 Vernolate 0.027 6.0 Selenium 0.82 3.98 3.98 3.98 3.98 3.98 3.98 3.98	0.11 mg/l TCLP ⁴
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Trichloroethylene $\sqrt{2}$ 0.054 6.0 Cyanides (Total) 1.2 Trichloromonofluoromethane 0.020 30 Cyanides (Amenable) 0.86 2,4,5-Trichlorophenol 0.18 7.4 Fluoride 35 2,4,6-Trichlorophenol 0.035 7.4 Lead 0.69 2,4,5-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 2,4,5-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 1,1,2-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 1,1,2-Trichlorophane 0.85 30 Mercury (Nonwastewater from Retort) NA 1,1,2-Trichlorophane 0.067 30 Mercury (All others) 0.15 Trisc/2,3- 0.057 30 Mercury (All others) 0.15 Dibromopropy/lphosphate 0.042 ⁴ 6.0 ⁴ Selenium 0.82 Vernolate 0.27 6.0 Selenium 0.82 Vyli chloride 0.32 30 Silver 0.43 55	0.60 mg/l TCLP ⁴
Trichloromonofluoromethane 0.020 30 Cyanides (Amenable) 0.86 2,4,5-Trichlorophenol 0.18 7.4 Fluoride 35 2,4,5-Trichlorophenol 0.035 7.4 Lead 0.69 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T 0.72 7.9 Lead 0.69 1,2,3-Trichlorophonoxyacetic acid/2,4,5-T 0.72 7.9 Lead 0.69 1,2,3-Trichlorophonoxyacetic acid/2,4,5-T 0.85 30 Mercury (Nonwastewater from Retort) NA 1,1,2-Trichloro-1,2,2- 0.057 30 Mercury (All others) 0.15 Tris-(2,3- 0.081 ⁴ 1.5 ⁴ Nickel 3.98 Dibromopropyl)phosphate 0.042 ⁴ 6.0 ⁴ Selenium 0.82 Vinyl chloride 0.27 6.0 Selenium 0.43 Xylenes – mixed isomers (sum 0.32 30 Silver 0.43 55 Silver 0.43 1.4 55 Thallium 1.4	590
2,4,5-Trichlorophenol 0.035 7.4 Lead 0.69 2,4,5-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 acid/2,4,5-T 0.72 7.9 Lead 0.69 1,2,3-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 1,2,3-Trichlorophenoxyacetic 0.85 30 Mercury (Nonwastewater from Refort) NA 1,1,2-Trichloro-1,2,2- 0.057 30 Mercury (All others) 0.15 Trie-(2,3- 0.081 ¹ 1.5 ⁴ Nickel 3.98 Tris-(2,3- 0.11 0.10 ⁴ Nickel 3.98 Dibromopropy()phosphate 0.042 ⁴ 6.0 ⁴ Selenium 0.82 Vernolate 0.277 6.0 Selenium 0.82 Xylenes – mixed isomers (sum construction) 0.32 30 Silver 0.43 Gr., and p-xylene 0.32 30 Silver 0.43 Gr., and p-xylene 0.32 30 Silver 0.43 Gr., and p-xylene 1.4 Thallium 1.4 4.35 1.119 Vanadium 4.3 ² </td <td>30¹</td>	30 ¹
2,4,5-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 2,4,5-Trichlorophenoxyacetic 0.72 7.9 Lead 0.69 1,2,3-Trichlorophenoxyacetic 0.85 30 Mercury (Nonwastewater from Retort) NA 1,1,2-Trichloro-1,2,2- 0.057 30 Mercury (All others) 0.15 trifluoroethane 0.081 ⁴ 1.5 ⁴ Nickel 3.98 Tris-(2,3- 0.11 0.10 ⁴ Nickel 3.98 Dibromocropy()phosphate 0.042 ¹ 6.0 ⁴ Selenium 0.82 Vernolate 0.27 6.0 Selenium 0.82 Xylenes – mixed isomers (sum of o-m- and p-xylene 0.32 30 Silver 0.43 Theilium 1.4 Theilium Allow Mercury (Nonwastewater from Retort) Mercury (All others) 0.15 Dibromocropy()phosphate 0.081 ⁴ 1.5 ⁴ Vernolate 0.27 6.0 Selenium 0.43 Silver 0.43 Theilium	NA ⁴
2,4,5-T 0.72 7.9 Lead 0.89 1,2,3-Trichloropropane 0.85 30 Mercury (Nonwastewater from Retort) NA 1,1,2-Trichloro-1,2,2- 0.057 30 Mercury (All others) 0.15 Triethylamine 0.081 ⁴ 1.5 ⁴ Nickel 3.98 Tris-(2,3- 0.11 0.10 ⁴ Nickel 3.98 Dibromopropyl)phosphate 0.042 ⁴ 6.0 ⁴ Selenium 0.82 Vernolate 0.277 6.0 Selenium 0.82 Xylenes – mixed isomers (sum of o_mm, and p-xylene 0.32 30 Silver 0.43 Thallium 1.4 Silver 0.43 Mercury (Vanadium	0.37 mg/l
1,2,3-Trichloropropane 0.85 30 Mercury (Nonwastewater from Retort) NA 1,1,2-Trichloro-1,2,2- trifluoreethane 0.057 30 Mercury (All others) 0.15 Triethylamine 0.081 ⁴ 1.5 ⁴ Nickel 3.98 Tris-(2,3- Dibromopropyl)phosphate 0.11 0.10 ⁴ Nickel 3.98 Vernolate 0.042 ⁴ 6.0 ⁴ Selenium 0.82 Vinyl chloride 0.27 6.0 Selenium 0.43 Xylenes – mixed isomers (sum of o-,m-, and p-xylene 0.32 30 Silver 0.43 Silver 0.43 14 14 14 14 55 51 Thallium 1.4 1.4	0.75 mg/l ⁴ TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane 0.057 30 Mercury (All others) 0.15 Triethylamine 0.081 ¹ 1.5 ¹ Nickel 3.98 Tris-(2,3- Dibromopropyl)phosphate 0.11 0.10 ¹ Nickel 3.98 Vernolate 0.042 ¹ 6.0 ¹ Selenium 0.82 Vinyl chloride 0.27 6.0 Selenium 0.82 Xylenes – mixed isomers (sum 0.32 30 Silver 0.43	0.20 mg/l TCLP
Inducted are0.0811 1.51 Nickel3.98Tris-(2,3- Dibromopropy()phosphate0.11 0.10^1 Nickel3.98Vemolate0.0421 6.0^1 Selenium0.82Vinyl chloride0.27 6.0 Selenium0.82Xylenes - mixed isomers (sum of o-,m-, and p-xylene0.3230Silver0.43Silver0.43141414StringString1.41.4StringSulfide1.41.4StringSulfide1.4StringSulfide1.4StringSulfide1.4StringSulfide1.4StringSulfide1.4StringSulfide1.4StringSulfide1.4StringString1.4StringString1.4StringString1.4	0.025 mg/ TCLP
Tris-(2,3- Dibromopropy()phosphate 0.11 0.10 ¹ Nickel 3.98 Vemolate 0.042 ¹ 6.0 ¹ Selenium 0.82 Vinyl chloride 0.27 6.0 Selenium 0.82 Xylenes – mixed isomers (sum of o-,m-, and p-xylene 0.32 30 Silver 0.43 Silver 0.43 0.43 14 14 Silver Thallium 1.4 1.4 Vanadium Vanadium 4.3 ² 14	5.0 mg/l TCLP
Distribution 0.042 ¹ 6.0 ¹ Selenium 0.82 Vinyl chloride 0.27 6.0 Selenium 0.82 Xylenes – mixed isomers (sum of o-,m-, and p-xylene 0.32 30 Silver 0.43 Silver 0.43 0.43 0.43 0.43 0.43 Silver 0.43 0.43 0.43 0.43 0.43 Silver 0.43 1.4 1.4 1.4 1.4 1.4 Silver Image: Silver Image: Silver Image: Silver 1.4 1.4	11 mg/l TCLP ⁴
Vinyl chloride 0.27 6.0 Selenium 0.82 Xylenes - mixed isomers (sum of o-,m-, and p-xylene 0.32 30 Silver 0.43 Silver 0.43 0.43 0.43 0.43 Silver 0.43 1.4 1.4 Silver Thallium 1.4 1.4 Vanadium 4.3 ² 1.4 1.4	0.16 mg/l TCLP
Xylenes - mixed isomers (sum 0.32 30 Silver 0.43 of o-,m-, and p-xylene 0.32 30 Silver 0.43 Silver 0.43 0.43 0.43 Silver 0.43 0.43 Sulfide 14 14 Silver Thallium 1.4 Vanadium 4.3 ² 14	5.7 mg/l TCLP ⁸
of c-,m-, and p-xylene 0.43	0.30 mg/l TCLP
Sulfide 14 55 511117 1.4 Thallium 1.4 Thallium 1.4 Vanadium 4.3 ²	0.14 mg/l TCLP ⁴
Thallium 1.4 Vanadium 4.3 ²	NA ²
Thallium 1.4 Vanadium 4.3 ²	0.078 mg/ TCLP ¹
Vanadium 4.3 ²	0.20 mg/l
	TCLP ⁴ 1.6 mg/l TCLP ²
	TCLP ² 4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 ⁵ This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

QUALITY Interference of the standard in additional standard in additaditional standard in additaditional standard in add	POOR		FRNP is responsible for performing all Resource Conservation and Recovery Act (RCRA) generator activities on behave or	DOLLI FKMP and DOC for an activity	des under une scope or comm	-
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Image: and Packing Group (fram) No. Type Quantity WV.Vol. TS. Wester Codes IV. No. 2913. Radioactive material, surface contarminated objects (SCC-1), Z DM 181 K IV. (PCE), Np237, To-98, Th-230, U-234, U-235, U-238, Solid/Oxide, Z DM 181 K 48 MBQ, Fissile Excepted						82598898
18. Discrepancy		ates				
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18. Discrepancy		(RUU)				
18. Discrepancy		USA	14. Special Handling Instructions and Additional Information Truck: 50116 Trailer: 253236 TID: 349526	Start Date: N/A	PCBS	itart Date: 04/25/18
18. Discrepancy		an, wi			If undelivera	ble, return to generato
18. Discrepancy		Neen				
18. Discrepancy		S, INC.	marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable in	nternational and national government		
18. Discrepancy		CIALES	I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator)	or (b) (if I am a small quantity ge	enerator) is true.	Month Day Year
18. Discrepancy		ASSO	Kegina Pea			
18. Discrepancy		LER&	16. International Shipments .			
18. Discrepancy		J. KEL	17. Transporter Acknowledgment of Receipt of Materials	Date learning 0.0.	2	
18. Discrepancy		d by J.	Transporter 1 Printed Typed Name Signature	Allus ta	ten	Month Day
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Bann Safe Barn B. W. Down				Residue	Partial Rejection	Full Rejection
Manifest Remence Number:		i i			,	
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Facility's Phone:			Facility's Phone:		T	
BY: Month Day. Year			18c. Signature of Alternate Facility (or Generator)			Month Day Year
19. Hazardous Wasta Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 2. 3. 4.			19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and r	ecycling systems)		
H132 2. 3. 4.		Ì	² . 3.		4.	9
20. Designaled Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as nded in Item 18a				cept as noted in Item 18a		
Printed Typed Name Month Day Year Albert Funds 2128119						
EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.		ı E			D FACILITY TO EF	

POOR

A-14

PCB and Additional Information Attachment, Page 2 of 2

Manifest Number: 019694554 JJK

Shipment ID Number: 9750-09-0004

Shipment Date: 2/25/2019

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	PCB Date to Storage	NET VOLUME (ft3)	GROSS Wt (Ib)	Gross Wt (Kg)	NET Wt (lb)	Net Wt (Kg)	Maximum Activity MBq
9b.1	121424	121424-05	PAD18C40897	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	09/05/18	7.4	106	48	50	23	23
9b.1	121516	121516-01	PAD18C40576	PCB LIGHT BALLASTS/TRANSFORMERS/CAPACITORS/ETC.	04/25/18	7.4	428	194	372	169	23
		Totals	2			14.8	534	242	422	191	46

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

Plea	ise print or type.			,							Form	n Approved.	OMB No. 2	2050-0039
Î	UNIFORM HA WASTE MA	ZARDOUS	1. Generator ID Num	KX 888	0008982	2. Page 1 of		jency Response 1-270-4	41-6211		.969	^{umber} 1456	7 J .	JK
	5. Generator's N			⁽¹⁾ - where - we also inc			Generato FRNF		(if different th	an mailing addres	ss)			
			ers Nuclear I obs Road, Ki			NF)		cah Gaseo	us Diffus	ion Plant				
	Generator's Pho		ios Road, rv	evii, N 1 420	103			Hobbs Rd.						
	6. Transporter 1		9							U.S, EPA ID I				
	7. Transporter 2		SISTIC Inc.							U.S. EPA ID N		VAR000	012005	
	7. Itansporter 2	Company Name	3								lamber			
	8. Designated Fa	acility Name and Diversifie	d Scientific	Services, In	ic. DSSI					U.S. EPA ID I	Number			
			sher Road											
	Facility's Phone:	Kinston,	TN 37763	1-865-376-	8747						7	ND982	109142	
	1 000		on (including Proper S	Shipping Name, Haza	ard Class, ID Numbe	er,		10. Contai	T	11. Total	12. Unit	13.	Waste Code:	s
		cking Group (if a	, Radioactiv	e material, l	ow specific	activity (LSA-I	No.	Туре	Quantity	Wt./Vol.			
OR	RQ	7, (PCB)	, Am-241, N	p-237, Pu-2	238, Pu-239	, To-99, T	rh-230	. 4	DM	772	ĸ			
RAT		Liquid/Ox	(ide, 1.76 N	18q, Fissile	Excepted									
GENERATOR	2.	UN 1760	, Waste, C o	rrosive liqui	ds, n.o.s. (a	contains Z	linc				к	D002		
	x	Chloride	Solution), 8	, 111				1	DM	3				
	3.													
							1							
	- Four Ri	ivers Nuclear Par	triership, LLC (FRNP) :	and the U.S. Departm	nent of Energy (DOE)	are co-generato	rs pursuant	to a Co-Generat	or agreement	dated September	r 13. 2017. U	nder this agree	ement.	
	FRNP Is EM000	s responsible for 14895, including,	performing all Resou but not limited to, ch ts. Transportation her	rce Conservation and aracterizing waste, m	Recovery Act (RCRA nanifesting waste to	 a) generator activities, off-site facilities, 	vities on be packaging	half of both FRNI and labeling was	P and DOE for ste for transpo	r all activities unde ort, and storing an	er the scope nd managing	of FRNP's Cont waste, in acco	tract DE ordance	
			s and Additional Into 216 Vari: 25		2058516	Acoun	iulation :	Start Date:	3/8/20	18 PC	8 Date t	o Storage	10/	10/17
		ERG #1	62, 154 In	the event o	of an RQ Re	elease, ca	11-80	0-424-88	02	lf undeli	iverabl	e, return	i to g en	erator
		Exclusive	e Use Shipm	ient, See At	tachment fe	or Additio	nal Inf	0		Shipme				
	marked an Exporter, I	nd labeled/placar certify that the c	R'S CERTIFICATION ded, and are in all re contents of this consi- imization statement i	spects in proper con anment conform to th	ndition for transport a he terms of the attac	according to app ched EPA Ackno	licable inter wledgment	mational and nat of Consent.	ional governr	mental regulations	nipping nam s. If export s	hipment and I	am the Prim	iary
	Generator's/Offe	eror's Printed/Tv	ped Name		-	S	gnature					Мо	nth Day	Year
	1/ ach	lle T.	elfair	on beh	IF of Fr	ZNPL	FOC	fill.	Sello	Gu		á	2 2	119
E	16. International	I Shipments	Import to			Export from	U.S.	Port of er	ntry/exit:					
I'T'L		nature (for expo						Date leav	ing U.S.:					
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ANS	Transporter 2 P	rinted/ ped Na	me	p		S	ignature	-	_	0		Mo	onth Day 1	Year"
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1	18. Discrepancy	y cy Indication Spi		~			Г							
			ace 🛄 Quan	tity	Туре	DEC	CE	anifest Reference	e Number	Partial Re	ejection		Full Rej	jection
≥	18b. Alternate F	Facility (or Gene	rator)			T FE	B 2	8 2019		U.S. EPA ID	Number			
CI-							\mathcal{N}	1	U					
DFA	Facility's Phone		ility (or Generator)			BY:	AK					I M	lonth Da	iy Year
ATE	i loc, Signature	UI AILEITIQLE I QU	inty (or Generator)										1	,
DESIGNATED FACILITY	19. Hazardous	Waste Report N	anagement Method	Codes (i.e., codes fo	or hazardous waste	treatment, dispo	sal, and red	cycling systems)				I		
E S	1,			2.		3				4.				
1				lan af an article at the	and an and the	word huit -	nifont	nt oo natad in N						
	20. Designated Printed/Typed M		or Operator: Certifica	nion of receipt of haz	ardous materials co		anifest exce Signature	$\frac{\mu}{2}$ as noted in Re	601 III	1		M	ionth Day	y Year
	Ti	Fland	Clark				2	1/-	11	'll			2 2	8/19
EP	A Form 8700-2	and the state of t) Previous edition:	s are obsolete.			//	DE	SIGNATE	ED FACILITY	Y TO EP	A's e-MA	NIFEST	SYSTEM
							U	/						

PCB and	Additional	Information	Attachment,	Page	2 of 2
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019694567 JJK

DSSI-19-020

2/27/2019

Manifest Number:

Shipment ID Number:

Shipment Date:

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	PCB Date to Storage	Accumulation Storage Date	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	NET WT (Ib)	NET Wt (Kg)	Maximum Activity MBq
9b.1	121255	121255-02	PAD17C36463	Lube Oil/PCB Rinseate collected in Sight Glasses from Transformer Draining, Post- TSCA Rinse	10/10/2017	N/A	7.4	476	216	420	191	0.434
9b.1	121423	121423-02	PAD18C40024	VENTILATION DUCT OIL AND WATER	6/13/2018	N/A	5.95	446	202	390	177	0.403
9b.1	121423	121423-03	PAD18C40031	VENTILATION DUCT OIL AND WATER	9/25/2018	N/A	7.4	498	226	442	200	0.456
9b.1	121423	121423-04	PAD18C41096	VENTILATION DUCT OIL AND WATER	11/1/2018	N/A	7.4	506	230	450	204	0.465
9b.2	121466	121466-01	PAD18C40408	Corrosive Waste	N/A	03/08/18	0.67	18	8	7	3	0.002
		Totals	5				28.82	1944	882	1709	775	1.76

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

4

POOR QUALITY ORIGINAL

7

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	FRNP	Manifest Doc. No. :	019694564JJK
Profile No.:	T5.4236 (19-02-016)	_ State Manifest No.:	NA CT 4-9-1

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

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1	D002	Corrosive		3	A
2			FE]-	>
3		25 21/9/19]	
4	<			1	

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

[•]I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penallies for submitting a false certification, including the possibility of fine and imprisonment."

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

- C. RESTRICTED WASTE SUBJECT TO A VARIANCE This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
- For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."
- E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Demis Afch	Title Waste Engineer	Date_2/19/19
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Form A1 Page 1 of 2

Page 1 of 7

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		Line sol ventriva	NEMRI-ARMENDESDAMDAABSDO		
		- M-SEMEDIE			
FOUNDED OF THE PROCESSION - CONSTITUENCES THE REPORT OF THE SECOND - SUSES ADDED TO STORE FOR THE SECOND -	Wetaroutinas		Sanaciares (SEP Analysicaus) Wata endershi		
Acetone (F003)	0.28	160	Methanoi (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichioro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- lsomers) (F003)	0.32	30

¹All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed In non-CWA/non-CWA equivalent/non-Class I SDWA systems.

B. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed In CWA/CWA-equivalent or Class I SDWA systems.

C. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

D002:

D. Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.

E. Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems.

Form A1 Page 2 of 2

POOR QU	JALITY ORI	GINAL	(121466-01
	LA	ND DISPOSAL NOTIFICATION AN	ND CERTIFICATION	(PHASE IV)
Generator N	lame: US De	epartment of Energy (Paducah Site)	Manifest Doc. No. :	01969456A JJK
Profile No.:	156	1236 (19-02-016)	State Manifest No.:	NA 6 4-4-19
This form is	s a continuation fro	om form A1 for a waste identified by more the	 han five USEPA waste co	ode/subcategory groups. This page by itself
IS NOT an	acceptable Land	Disposal Notification and Certification Form	•	te shipment (as defined by 40 CFR 261). For
a a a b waata	number identify	the corresponding subcategory (write in the	description from 40 CFR	268.40. or check NONE If the waste does
not have a	subcategory.). Als	so identify in column 5 how the waste must	be managed. Spent solve	ents are listed on Form A1, Page 2, F039
	(s) and didenying		autovez, et estera	
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

. Signature <u>107</u> Title <u>Vasti</u> Empinen

Form A2 Page 1 of 2

Page 3 of 7

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Date 2/19/19

POOR	QUALITY	ORIGINAL	(12	146-01
		LAND DISPOSAL NOTIFICATION	AND CERTIFICATION	I (PHASI	E IV)	7
Generator I	Name: U	S Department of Energy (Paducah Site)	Manifest Doc. No. :	0196	94	564 JJK
Profile No.:	1	5,4236 (19-02-016	State Manifest No.:		N	JA DU 4-1-19
This form i IS NOT an	is a continuation acceptable La	on from form A1 for a waste identified by more and Disposal Notification and Certification For	than five USEPA waste co	ode/subcat	egoŋ	y groups. This page by itself
Continue (For each v does not h	from form A1, vaste number, ave a subcate	Page 1) to identify ALL USEPA hazardous wa Identify the corresponding subcategory (write gory.). Also identify in column 5 how the was	astes that apply to this was in the description from 40 te must be managed. Spe la must be listed and atta	CFR 268.4 nt solvents	10, or are l	check NONE if the waste isted on Form A1, Page 2.
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I hereby certify that all information submitted in this and all associated documents is complete and accurate,	to the best of my knowledge and information.
Signature_Abric_Atch	
Title Waste Engineer	Date <u>2/19/19</u>

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Form A2 Page 2 of 2

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Page 4 of 7

121466-01

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator	Name:
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Profile No.:

US Department of Energy (Paducah Site)

4236

Manifest Doc. No. :

State Manifest No.:

4 -9-19 NР

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the LDR form.

19-02-016

CONSTITUENT	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	D. 557715-1	ST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOV	V MUST		WW (mg/l)	NWW (mg/kg)
	THIS	ONSTITUENT		1009(0.5)	uniess		CON	ISTITUE	-NT		unless
			GED?		noted			MANAG			noted
Acenaphthylene				0.059	3.4	2-Chloro-1.3-butadiene		- AND - A	<u></u>	0.057	0.281
Acenapthene	1		0.059	3.4	Chlorodibromomethane	1			0.057	15	
Acetone	- <u> </u>		0.28	160	Chloroethane	1			0.27	6.0	
Acetonitrile			5.6	381	bls(2-Chloroethoxy)methane	\square			0.036	7.2	
Acetophenone				0.010	9.7	bis(2-Chloroethyl)ether				0.033	6.0
2-Acetylaminofluorene	H			0.059	140	Chloroform				0.046	6.0
Acrolein				0.29	NA	bis(2-Chloroisopropyl)ether				0.055	7.2
Acylamide	++-			19	231	p-Chloro-m-cresol				0.018	14
Acrylonitrile	$\left \right $			0.24	84	2-Chloroethyl vinyl ether				0.0621	NA ¹
Aldicarb sulfone	$\left \right $			0.0561	0.28 ¹	Chloromethane/Methyl chloride	\square			0.19	30
	\vdash			0.004	0.066	2-Chloronaphthalene	<u>├</u>			0.055	5.6
Aldrin	\vdash			0.021	NA		\vdash			0.033	5.7
4-Aminobiphenyl				0.13		2-Chlorophenol 3-Chloropropylene	\vdash			0.044	30
Anlline	\			0.81	14		<u> </u>	<u>}</u>		0.059	3.4
Anthracene				0.059	3.4	Chrysene o-Cresol		+		0.059	5.6
Aramite	<u> </u>	 		0.36	NA	m-Cresol		+		0.77	5.6
alpha-(BHC)		<u> </u>		0.00014	0.066					0.77	5.6
beta-(BHC)		<u> </u>		0.00014	0.066	p-Cresol m-Cumenyl methylcarbamate		+		0.0561	1.4
delta-(BHC)		4		0.023	0.066					0.056	0.75 mg/l ¹
gamma-(BHC)		- <u> </u>		0.0017	0.066 1.4 ¹	Cyclohexanone				0.023	0.087
Barban		4-		0.056 ¹ 0.056 ¹	1.4	o,p'-DDD p,p'-DDD		-15-		0.023	0.087
Bendiocarb				0.0561	1.4	o,p'-DDE		1vi		0.023	0.087
Benomyl .		<u>-R</u>		0.056	10	p,p'-DDE		-120		0.031	0.087
Benzene				0.14	3,4	o,p'-DDT		$\neg \land$		0.0039	0.087
Benz(a)anthracene		1-	<u> </u>	0.0551	6.0 ¹	p,p'-DDT		-1-20		0.0039	0.087
Benzal chloride			3	0.055	6.8	Dibenz(a,h)anthracene		13	<u>;</u>	0.055	8.2
Benzo(b)fluoranthene ³		<u> </u>		0.11	6.8	Dibenz(a,e)pyrene		-1-	·	0.061	NA
Benzo(k)fluoranthene ³			- E	0.0055	1.8	1,2-Dibromo-3-chloropropane				0.11	15
Benzo (g,h,i)perylene				0.0055		1,2-Dibromomethane/					
Benzo(a)pyrene				0.061	3.4	Ethylene dibromide				0.028	15
Bromodichloromethane				0.35	15	Dibromomethane				0.11	15
Bromomethane/Methyl Bromide				0.11	15	m-Dichlorobenzene				0.036	6.0
4-Bromophenyl phenyl ether			-	0.055	15	o-Dichlorobenzene				0.088	6.0
n-Butyl alcohol			1	5.6	2.6	p-Dichlorobenzene				0.090	6.0
Butylate				0.0421	1.41	Dichlorodifluoromethane			·	0.23	7.2
Butyl benzyl phthalate				0.017	28	1,1-Dichloroethane			1	0.059	6.0
2-sec-Butyl-4,6-						4.0 Dicklessethere			T	0.21	6.0
dinitrophenol/Dinoseb				0.066	2.5	1,2-Dichloroethane					
Carbary				0.0061	0.141	1,1-Dichloroethylene				0.025	6.0
Carbenzadim				0.056	1.4'	trans-1,2-Dichloroethylene	I			0.054	30
Carbofuran			-	0.006 ¹	0.141	2,4-Dichlorophenol				0.044	14
Carbofuran phenol				0.0561	1.41	2.6-Dichlorophenol				0.044	14
Carbon disulfide				3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D			T	0.72	10
Carbon tetrachloride				0.057	6.0	1,2-Dichloropropane				0.85	18
Carbosulfan				0.0281	1.41	cis-1,3-Dichloropropylene				0.036	18
Chlordane (alpha and gamma isomers)				0.0033	0.26	trans-1,3-Dichloropropylene				0.036	18
Chloroaniline		0,46	16	Dieldrin				0.017	0.13		
	Chloroaniline			0.057	6.0	Dieldrin Diethyl phthalate				0.20	28

Form B1 Page 1 of 3

CONSTITUENT	HOV	VMU	ST		ww	NWW .	CONSTITUENT	НОУ	V MUST	Ē.	ww	NWW
	THIS		Li indi Statistica		(mg/l)	(mg/kg) -		THIS			(mg/l)	(mg/kg)
	CON					unless			ISTITU			'unless
	BEN	MAN	AGE	<u>973)</u>	0.10	noted NA	p-Dimethylaminoazobenzene	BE I	MANAG		0.13 ¹	noted NA
Chlorobenzilate 2,4-Dimethyl phenol	-			\rightarrow	0.10	14	Methylene chloride	1		>	0.089	30
Dimethyl phthalate					0.030	28	Methyl ethyl ketone				0.28	36
Di-n-butyl phthalate	11	-			0.057	28	Methyl isobutyl ketone	1			0.14	33
1,4-Dinitrobenzene	11				0.32	2.3	Methyl methacrylate	1.			0.14	160
4,6-Dinitro-o-cresol					0.28	160	Methyl methansulfonate				0.018	NA
2,4-Dinitrophenol					0.12	160	Methyl parathion	\square			0.014	4.6
2,4-Dinitrotoluene	\square				0.32	140	Metolcarb	<u> </u>			0.0561	1.4
2,6-Dinitrotoluene	_				0.55	28 28	Mexacarbate Molinate				0.0561	1.4 ¹ 1.4 ¹
DI-n-octyl phthalate DI-n-propylnitrosamine	++				0.017	14	Naphthalene				0.042	5.6
1,4-Dioxane				·····	12.0	170	2-Naphthylamine	-+			0.52	NA
Diphenylamine ³	+ +				0.92	131	o-Nitroaniline	$\left - \right $			0.271	141
Diphenylnitrosamine ³	+				0.92	13 ¹	p-Nitroaniline				0.028	28
1,2-Diphenylhydrazine					0,087	NA	Nitrobenzene				0.068	14
Disulfoton					0.017	6.2	5-Nitro-o-toluidine				0.32	28
Dithiocarbamates (total)					0.028	281	o-Nitrophenol				0.0281	13 ¹
Endosulfan I	1				0.023	0.066	p-Nitrophenol	ļ			0.12	29
Endosulfan II					0.029	0.13	N-Nitrosodlethylamine N-Nitrosodimethylamine				0,40	28 2.3 ¹
Endosulfan sulfate		 			0.029	0.13	N-Nitroso-di-n-butylamine				0.40	17
Endrin Endrin aldehyde		1-			0.025	0.13	N-Nitrosomethylethylamine		1		0.40	2.3
EPTC		1			0.0421	1.41	N-Nitrosomorpholine		1		0.40	2.3
Ethyl acetate		+			0.34	33	N-Nitrosopiperidine		1		0.013	35
Ethyl benzene		1			0.057	10	N-Nitrosopyrrolidine				0.013	35
Ethyl cyanide/Propanenitrile					0.24	360	Oxamyl				0.0561	0.281
Ethyl ether					0.12	160	Parathion				0.014	4.6
Bis(2-Ethylhexyl)phthalate			<u> </u>		0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)		12	<u>۱</u>	0.10	10
Ethyl methacrylate		K	2		0.14	160	Pebulate				0.0421	1.41
Ethylene oxide	ļ				0.12	NA	Pentachlorobenzene		-120		0.0551	10 ¹
Famphur		H	۔ _ د		0.017	15	PeCDDs (All Pentachiorodibenzo-p-dioxins)		Ka	\	0.000035	0.001
Fluoranthene		ŀ	1/2/		0.068	3.4	PeCDFs(All Pentachlorodibenzofurans)		t		0.000035	0.001
Fluorene		ł	4		0.059	3.4	Pentachloroethane			,	0.055	6.0
Formetanate hydrochloride					0.056	1.41	Pentachloronitrobenzene				0.055	4,8
Heptachlor			ļ		0.0012	0.066	Pentachlorophenol				0.089	7.4
Heptachlor epoxide			<u> </u>		0.016	0.066	Phenacetin Phenanthrene			·······	0.081	16 5.6
Hexachlorobenzene Hexachlorobutadiene					0.055	5.6	Phenol				0.039	6.2
Hexachlorocyclopentadiene			+-		0.057	2.4	Phorate				0.000	4.6
HxCDDs (All			+	·		-					0.055 ¹	28 ¹
Hexachrorodibenzo-p-dioxins) HxCDFs (Ali			+		0.000063	0.001	Phthalic acid			<u> </u>		
Hexachlorodibenzofurans)			\downarrow		0.000063	0.001	Phthalic anhydride			1	0.055	28 ¹
Hexachloroethane					0.055	30	Physostigmine Physostigmine salicylate				0.0561	1.4 ¹
Hexachloropropylene Indeno(1,2,3-c,d)pyrene					0.0055	3.4	Promecarb				0.056	1.4
Iodomethane			-+		0.19	65	Pronamide				0.093	1.5
Isobutyl alcohol					5.6	170	Propham			1	0.056	1.41
Isodrin			-+		0.021	0.066	Propoxur			Ì	0.0561	1.4 ¹
Isosafrole					0.081	2.6	Prosulfocarb				0.0421	1.4 ¹
Kepone					0.0011	0.13	Pyrene				0.067	8.2
Methacrylonitrile					0.24	84	Pyridine			-+	0.014	16
Methanol					5.6	0.75 mg/l ¹	Safrole				0.081	22
Methapyrilene				_	0.081	1.5 1.4 ¹	Silvex/2,4,5-TP				0.72	7.9 14
Methiocarb Methomyl				+	0.056	0.14 ¹	1,2,4,5-Tetrachlorobenzene TCDDs (All			+	0.000063	0.001
				+			Tetrachlorodibenzo-p-dioxins) TCDFs (All			-+	0.000063	
Methoxychlor 3-Methylcholanthrene				+	0.25	0.18 15	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane				0.000063	0.001 6.0
4,4'-Methylene bis(2-				+			1,1,2,2-Tetrachloroethane					
chloroaniline)	←				0.50	30		-			0.057	6.0

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121466-01

CONSTUUENT	HOW MU		WW. (mg/l)	NWW (mg/kg)	CONSTITUENT	THIS	/ MUST STITUI	和行為目示	ww (mg/l)	NWW (mg/kg) unless
	CONSTIT BEMANA	GED		unless noted		BEI	ANAG	ED?		noted
Tetrachloroethylene			₹0.056	6.0	INORGANIC CONSTITUENTS					
2,3,4,6-Tetrachlorophenol			0.030	7.4	Antimony	-		\rightarrow	1.9	2.1 mg/l TCLP
Thiodicarb	11		0.0191	1.4 ¹	Antimony				1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl	11		0.0561	1.4 ¹	Arsenic	Π			1.4	5.0 mg/l TCLP
Toluene	$\overline{ }$		0.080	10	Barium	Π			1.2	7.6 mg/l TCLP
Toxaphene			0.0095	2.6	Barium	\square			1.2	21 mg/l TCLP ⁴
Triallate			0.042 ¹	1.4 ¹	Beryllium				0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform			0.63	15	Beryllium				0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol			0.035	7.4	Cadmium				0,69	0.19 mg/l TCLP
1,2,4-Trichiorobenzene	1 K		0.055	19	Cadmium ,				0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane	4		0.054	6,0	Chromium (Total)		T		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	Ťi Ťi	5	0.054	6.0	Chromium (Total)				2.77	0.60 mg/l TCLP ⁴
Trichloroethylene	F	è	0.054	6.0	Cyanides (Total)		SS		1.2	590
Trichloromonofluoromethane			0.020	30	Cyanides (Amenable)		N		0.86	30 ¹
2,4,5-Trichlorophenol			0.18	7.4	Fluoride		6/1		35	NA ⁴
2,4,6-Trichlorophenol		1	0.035	7.4	Lead		10		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T			0.72	7.9	Lead				0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		1	0,85	30	Mercury (Nonwastewater from Retort)				NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		1.	0.057	30	Mercury (All others)				0.15	0.025 mg/l TCLP
Triethylamine		1	0.081 ¹	1.5 ¹	Nickel				3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate			0.11	0.101	Nickel				3.98	11 mg/l TCLP ⁴
Vernolate			0.042 ¹	6.0 ¹	Selenium				0.82	0.16 mg/l TCLP
Vinyl chloride			0.27	6.0	Selenium				0.82	5.7 mg/l TCLP ⁵
Xylenes - mixed isomers (sum of om and p-xylene	<		0.32	30	Silver				0.43	0.30 mg/l TCLP
			-		Silver				0.43	0,14 mg/l TCLP ⁴
					Sulfide				14	NA ²
	55	2			Thallium				1.4	0.078 mg/l TCLP ¹
		\sim	2		Thalllum			1	1.4	0.20 mg/l TCLP ⁴
			\uparrow		Vanadium		<u></u>		4.3 ²	1.6 mg/l TCLP ²
<								_	2.61	4.3 mg/l TCLP ²

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

121466-01

uniform HAZARDOUS 1. Generator ID No.	ImberKY 8890008982	2. Page 1 of 3	3. Emergen	ncy Response F	hone 11-8211	4. Manifest	Fracking Nu	mber		050-0039
WASTE MANIFEST						UL		461	2 77	K
5. Gener Ros Na Rive Mail Musicear Par				Site Address (il Gaseous		n mailing addres	s)			
5511 Hobbs Road, Kevil	, KY 42053			bbs Rd, K						
Generator's Phone:		Ĩ	orrito	000110,10		12000				
6. Transporter 1 Company Name CASI Transportation						U.S. EPAID N	lumber	CORDO	000538	9
						U.S. EPA ID N	umber			
7. Transporter 2 Company Name						U.S. EPAID N	umber			
8. Designated Facility Name and Site Address Energy Solutions Crive D	inneral Cita Trantmont E	anility				U.S. EPA ID N	lumber			
US I-80 Exit 49, Clive, L		deality						UTD98	259889	8
1-435-884-0155						1				-
Facility's Phone:		-		40 Contribu						
9a. 9b. U.S. DOT Description (including Proper HM and Packing Group (if any))	r Shipping Name, Hazard Class, ID Number,	r,		10. Containe No.	Type	11. Total Quantity	12. Unit Wt./Val.	13. V	Waste Codes	
^{1.} UN 2913, Waste, Radioactiv	ve material, surface contamin	nated objects	5					DOOS		
	Th-230, U-234, (D008, PCB			3	CM	1350	к			
Fissile Excepted										
	ve material, surface contamin				-	65		D003	DODE	D00
RQ (SCO-II), 7, Np-237, To-99,	n-230, 0-234, (D008, D00	9),14 MBq. F	Fissile	1	DM	28	к	BUUC		
3 Excepted UN 2913, Waste, Radioacti	ve material, surface contamin	nated objects	s					DOOS		
	Th-230, U-234, (D009),92 M			4	DM	928	к			
4.Excepted										
	ve material, surface contamin		S		-	132	ĸ	DODE	2000	D01
	Th-230, U-234, (D008, D01									
	TID: 0349660 nt of an RQ Release, call	Accumula 1-800-420	lation St 4-8802	2 tart Date: 2	DM 06/19/1	8 If unde	PCB S liverabl	tart Date e, return 9750-0	n to ger	
Truck: 1443 Trailer: 525 ERG # 162 In the eve	TID: 0349660 nt of an RQ Release, call t, See Attachment for Adu ON: I hereby declare that the contents of th respects in proper condition for transport as signment conform to the ismos of the attach	Accumula 1 1-800-424 ditional Info tis consignment are coording to applical ted EPA Acknowled	Aution St Aution St Auton fo re fully and able internal adgment of rator) or (b)	tart Date: 2 accurately desi ational and natio Consent.	Cribed above nal governme	8 If under Shipm by the proper sh intal regulations.	PCB S liverabl ent ID:	e, return 9750-0	n to ger 01-0008 sified, packa am the Prima	ged,
Truck: 1443 Trailer: 625 ERG # 162 In the even Exclusive Use Shipment 15. GENERATOR'S/OFFEROR'S CERTIFICATI markad and labeled/placarded, and are in all Exporter, I certify that the contents of this con I certify that the waste minimization statemen Cenerator's/Offerce's Printed/Typed Name Locustications and the statement	TID: 0349660 nt of an RQ Release, call t, See Attachment for Adu ON: I hereby declare that the contents of th respects in proper condition for transport as signment conform to the terms of the attach telemitted in 40 CFR 262.27(a) (if I am a lar behalf of FFANI	Accumuli 1 1-800-424 ditional Infr dis consignment an coording to applical coording to applical coording to applical med EPA Acknowlec ge quantity gener: Signa Signa A	lation Si 4-8802 fo re fully and able internal adgment of (rator) or (b) ature	accurately dess accurately dess ational and natio Consent.) (if I am a small	Cribed above mal governme e quantity gen	8 If under Shipm by the proper sh intal regulations. erator) is true.	PCB S liverabl ent ID: ipping name If export shi	e, return 9750-0 , and are clas prment and 1 a Mon	to ger 1-0008 isified, packa am the Prima th Day 1 /8	ged, ny
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IFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet) 21. Generator ID Number KY 8890008982	22. Page 2	23. Mani	lest Tracking Nu		0196946		
Generator's Name Four Rivers Nuclear Partnership, LLC 5511 Hobbs Road, Kevil, KY 42053	<u>I</u>	1					
Transporter Company Name CAST Transportati	ion		U.S. EPA ID		0R00000	5389	
Transporter Company Name			U.S. EPA ID	Number			
27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Conta No.	iners Type	29. Total Quantity	30. Unit Wt./Vol.	31. Wa	ste Codes	1
UN 2913, Waste, Radioactive material, surface contaminated objects (SCO-II), 7, Np-237, To-99, Th-230, U-234, (D009,	1	DM	111	ĸ	D006 0	8000	0009
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				+	i −−†		<u> </u>
Special HardTing Instructions and Additional Information Accumulation	Start Date:	02/18/	19				
ERG#162; In the event of an RQ Release, call 1-800-424-880 EXCLOSIVE USE SHIFMENT, See Attachment for Additional In			lf undeliv Shipmei		, return to 9760-01-1		erator
Tensporter Advowdedgment of Receipt of Materials bod/Typed Name Signalure				*	Month	Day	Year
Theraporter Acknowledgment of Receipt of Malarials ad/Typed Name Signature Signature Signature					1	1	1
ed/Typed Nama Signature					Month	Day	Year
Isotepanoy azerdous Weste Report Hanagement Hothod Codes fite., codes for hazardous waste treatment, disposal, and rec	cycling systems)						
H132	<u>_</u>			<u> </u>			
				1			

Additional Information Attachment, Page 3 of 3

Manifest Number: 019694615 JJK

Shipment ID Number: 9750-01-0006

Shipment Date: 6/18/2019

	UHWM Section	RFD	Container / WASTE ID	Barcode	Description	Accumulation Storage Date	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	Maximum Activity MBq	Net Wt (Ib)	Net Wt (Kg)
	9b.1	121546	121546-01	PAD18C40641	PCB/LEAD CABLE AND POTHEAD	06/27/18	90	1842	835.51	833.30	1039	471
	9b.1	121546	121546-02	PAD18C40861	POTHEADS	08/10/18	90	1948	883.59	833.30	1145	519
	9b.1	121546	121546-03	PAD18C40863	TRANSFORMER POTHEADS	07/25/18	90	1594	723.02	833.30	793	360
	9b.2	121543	121543-01	PAD18C40589	MISCELLANEOUS LIGHT BULBS - SMALL FLUORESCENT, INCANDESCENT, SODIUM	06/19/18	7.4	117	53.07	13.57	61	28
	9b.3	121678	121678-01	PAD18C41567	CRUSHED FLUORESCENT LIGHT BULBS	08/28/18	7.4	588	266.71	23.04	532	241
	9b.3	121678	121678-02	PAD18C41568	CRUSHED FLUORESCENT LIGHT BULBS	11/08/18	7.4	576	261.27	23.04	520	236
	9b.3	121678	121678-03	PAD18C40805	CRUSHED FLUORESCENT LIGHT BULBS	11/20/18	6.6	520	235.87	23.04	464	210
	9b.3	121678	121678-04	PAD19C42556	CRUSHED FLUORESCENT LIGHT BULBS	01/15/19	7.4	587	266.26	23.04	531	241
	9b.4	121665	121665-02	PAD18C40841	CIRCUIT BOARDS, FUSES, BULBS, CAPACITORS ETC.	10/30/18	6.5	200	90.72	11.92	144	65
	9b.4	121665	121665-03	PAD19C42416	CIRCUIT BOARDS, FUSES, BULBS, CAPACITORS ETC.	03/22/19	6	202	91.63	11.00	146	66
A-2	27a.1	121729	121729-05	PAD19C42058	CIRCUIT BOARDS, LIGHT STARTERS, FUSES, SMALL BULBS, CAPACITORS	02/18/19	7.4	300	136.08	13.57	244	111
Ľ,			Totals	11			326.1	8474	3844	2642	5619	2549

121546-01

121546-02

しいらん - 43 LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)	_ Manifest Doc. No. :	01969461535K
Profile No.:	9758-01-0006	State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

กลาง เ		CSUBICALEGION CSUBICALEGION CENTER FILESUEL AGEGORI DESCRIPTION JENOTAPPULMABLE SIMPLY ALEGAT	(e)N	TAR (1000, MUSE TRUE) WASHLETE MANYAETOR
	CONTRACTOR OF THE PARTY OF THE	DESCRIPTION	RON-	
1	D008	LEAD		A
3				A
4				<u> </u>

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A.	RESTRICTED WASTE REQUIRES TREATMENT
	This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.
	For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268,45."
B.1	RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
	"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this
	certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and
	maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 wilhout impermissible dilution of the prohibited waste. I am aware that there are
	significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
B.3	GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
	"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this
	certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information. I believe that the nonwastewater organic constituents have
	been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith
	efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.*
B.4	DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
	"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This
	decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties
	for submitting a false certification, including the possibility of fine and imprisonment."
C.	RESTRICTED WASTE SUBJECT TO A VARIANCE
	This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
	For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
D.	RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
	"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this
	certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete.
	I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."
Ε.	WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
	This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify	that all information submitted in thi	s and all associated documents is complete and accurate, to the best of my knowledge and information.

> Form A1 Page 1 of 2

121346-01 121546-02 LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

			STEEREARMENIASUANDAROS		
ອີດີບິນເປັນເອັນຢູ່ນໍາເປັນອີດອີດອີດອີດອີດອີດອີດອີດອີດອີດອີດອີດອີດອ		in Stephen	1000 (hrough: 2005 spent) solver Geonstituting, grid Angle	a a supportant State	ERM-
USHFAInaardonswasteood(s).	C Wastewarers	INCITVASIE VALERSON	A ASSOCIATECLUSEPA hazardone	Wastewaters	Nonvisionales
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0,080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated solls using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001;

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems.

B. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems.

C. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

D002:

D. Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.

E. Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems.

Form A1 Page 2 of 2

					121546	-01					
					121546						
					12154						
		LAND DISPO	SAL NOTIFICATI	ON AND CERTI	FICATION	(PHAS	> E IV	')			
Generator	Nome:	FRNP				•		-	0153	sk.	
•							<u> </u>			<u> </u>	-
Profile No.: <u>Q753-01-0006</u> State Manifest No.: <u>NA</u>											
This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself <u>IS NOT</u> an acceptable Land Disposal Notification and Certification Form.											
Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does											
not have a	subcategory	.). Also identify in	column 5 how the wast	e must be managed	 Spent solver 	nts are lis	ted o	on Form	A1, Page 2	2. F039	5
constituer	it(s) and unde	erlying hazardous o	constituent(s) if applicat	ole, must be listed a	nd attached.						I
	1 US (1	A NUT II	SUBGARDGORYDDESGRI	PHONEJENOLAPELO	ABLE SIMPLY	GHEICK N	ຈັງເຂົ		M MUSICIÈLE MINACEDO	NUER.	
	22 <u>142 44 16</u> 22 11/4 15 16 16 16 16 16 16 16 16 16 16 16 16 16	005 017(5)	N. N. S.	dellevitative set and			0 101715	- Carli	चेर मन्द्र0)/प्रमुख राष्ट्र-राष्ट्राइन् -	RMAI	
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Some

Title Waste Engineer

Date 6/6/19

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Form A2 Page 1 of 2

Profile No.: This form is a conti	FRNP			<u> </u>	(\O	101	SJOK
This form is a conti	Ψ/ \ ,	61 - 0000	Manifest Doc. No. : State Manifest No.:			NA	
	nuation from form A1 for a	-		ode/subc			This page by
	ble Land Disposal Notificati	on and Certification For	m.		-		
Continue (from forr For each waste nur	n A1, Page 1) to identify AL mber, identify the correspon	L USEPA hazardous wa ding subcategory (write	astes that apply to this was in the description from 40	te shipmo CFR 268	ent (a: .40. c	s defined by or check NC	y 40 CFR 261)NE if the was
loes not have a su	bcategory.). Also identify in and underlying hazardous	column 5 how the was	te must be managed. Spe	nt solven	ts are	listed on F	orm A1, Page
-039 constituent(s)			Alegoria				A STATE WAS
		AMEGORADESCRIPTION	HENOT APPLICATELE SIMPL	V (Annio K	રોશોરા≘	. DEMAN	AGEDQUENTIER
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Page 4 of 7

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				121546-01
				121546-02
	F039/UND	ERLYING HAZARDOUS	CONSTITUENT (UTS) (Phase IV)
Generator Name:	FRNP		Manifest Doc. No. :	019694615 JJK
Profile No.:	975	0-01-0000	State Manifest No.:	NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST		WW	NWW	CONSTITUENT	HOW	MUS	T	WW.	NWW	1
	THIS		(mg/l):	(mg/kg)		THIS			(mg/l) +-	(mg/kg) unless	101710
	CONSTITUE			unless noted		GONS BE MA				noted	
	DEIMANAGE		725-02-07-0	1.357636-184375-2876275						Long La Statistica	
Acenaphthylene	<u> </u>		0.059	3.4	2-Chloro-1,3-butadiene	<			0.057	0.281	·
Acenapthene			0.059	3.4	Chlorodibromomethane				0.057	15.	
Acetone			0.28	160	Chloroethane				0.27	6.0] :
Acetonitrile			5.6	381	bis(2-Chloroethoxy)methane	ļ			0.036	7.2	1.0 1
Acetophenone			0.010	9.7	bis(2-Chloroethyl)ether				0.033	6.0	1 2 2
2-Acetylaminofluorene			0.059	140	Chloroform				0.046	6.0	
Acrolein			0.29	NA	bls(2-Chloroisopropyl)ether				0.055	7.2	
Acylamide			19 ¹	231	p-Chloro-m-cresol				0.018	14	4.
Acrylonitrile	•		0.24	84	2-Chloroethyl vinyl ether				0,0621	NA	1
Aldicarb sulfone			0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride				0.19	30	· · ·
Aldrin		T	0,021	0.066	2-Chloronaphthalene				0.055	5.6	
4-Aminobiphenyl		1	0.13	NA	2-Chlorophenol				0,044	5.7]
Aniline		Γ	0.81	14	3-Chloropropylene				0.036	30	· ·
Anthracene			0.059	3.4	Chrysene				0.059	3.4] ·
Aramite			0.36	NA	o-Cresol			\neg	0.11	5.6	1 ·
alpha-(BHC)			0.00014	0.066	m-Cresol			1	0.77	5.6	1
beta-(BHC)			0.00014	0.066	p-Cresol			1	0.77	5.6	1
delta-(BHC)			0.023	0.066	m-Cumenyl methylcarbamate			1	0.0561	1.41	1
gamma-(BHC)			0.0017	0.066	Cvclohexanone			1	0,36	0.75 mg/l ¹	1
Barban			0.0561	1.41	o,p'-DDD				0.023	0.087	<u> 1</u> .
Bendiocarb			0.0561	1.41	p,p'-DDD				0.023	0.087	1
Benomyl			0.0561	1.41	o,p'-DDE				0.031	0.087	-
Benzene			0.14	10	p,p'-DDE		-+		0.031	0.087	1
Benz(a)anthracene			0.059	3.4	o,p'-DDT				0.0039	0.087	1
Benzal chloride			0.0551	6.0 ¹	p.p'-DDT		-+-		0.0039	0.087	-
Benzo(b)fluoranthene ³			0.11	6.8	Dibenz(a,h)anthracene				0.055	8.2	- ¹
Benzo(k)fluoranthene ³			0.11	6.8	Dibenz(a,e)pyrene			·	0.061	NA	- · .
Benzo (g,h,i)perylene			0.0055	1.8	1,2-Dibromo-3-chloropropane				0.11	15	4.
Benzo(a)pyrene			0.061	3,4	1,2-Dibromomethane/ Ethylene dibromide		\uparrow	S	0.028	15	-
			0.35	15	Dibromomethane				0,11	15	┨.:
Bromodichloromethane	·····		0.35						0,11		
Bromomethane/Methyl Bromide			0.11	15	m-Dichlorobenzene				0,036	6.0	
4-Bromophenyl phenyl ether			0.055	15	o-Dichlorobenzene				0.088	6.0	
n-Butyl alcohol			5.6	2.6	p-Dichlorobenzene				0.090	6.0	1
Butylate		•	0.0421	1.41	Dichlorodifluoromethane				0.23	7.2 ·	
Butyl benzyl phthalate			0.017	28	1,1-Dichloroethane				0.059	6,0	4
2-sec-Butyl-4,6- dinitrophenol/Dinoseb			0.066	2.5	1,2-Dichloroethane				0.21	6.0	
Carbaryl			0.0061	0.14 ¹	1,1-Dichloroethylene				0.025	6.0	1 : •
Carbenzadim			0.0561	1.4 ¹	trans-1,2-Dichloroethylene				0.054	30	1. ⁻
Carbofuran			0.0061	0.141	2,4-Dichlorophenol	1			0.044	14	1.
Carbofuran phenol			0.0561	1.4 ¹	2.6-Dichlorophenol				0.044	14	1.
Carbon disulfide	1		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D				0.72	10	1
Carbon tetrachloride	1		0.057	6.0	1,2-Dichloropropane				0.85	18]
Carbosulfan	1		0.0281	1.41	cis-1,3-Dichloropropylene	T			0.036	18	1
Chlordane (alpha and gamma isomers)			0.0033	0.26	trans-1,3-Dichloropropylene	1			0.036	18]
						1					1 1
p-Chloroaniline			0,46	16	Dieldrin	1			0.017	0.13	1

Form B1 Page 1 of 3

Page 5 of 7

121546-02 121546-02 121546-03

							6-03		
CONSTITUENT	HOW	MUST	D 2833	WW	NWW	CONSTITUENT	HOW MUST	ww.	NWW
	THIS			(mg/l)	(mg/kg)		THIS	(mg/l)	(mg/kg)
		STITUE	NT		unless		CONSTITUENT		unless
		ANAGI		 Transferrer Contractor Contractor Contr	noted		BE MANAGED?		noted
Chlorobenzilate	6			0.10	NA	p-Dimethylaminoazobenzene		0.13 ¹	NA
2,4-Dimethyl phenol	P			1 0.036	14	Methylene chloride		0.089	30
Dimethyl phthalate				0.047	28	Methyl ethyl ketone	<u> </u>	0.28	36
Di-n-butyl phthalate	+			0.057	28	Methyl isobutyl ketone		0.14	33
1,4-Dinitrobenzene				0.32	2.3	Methyl methacrylate		0.14	160
4,6-Dinitro-o-cresol	+			0.28	160	Methyl methansulfonate		0.018	NA
2,4-Dinitrophenol	+		+	0.12	160	Methyl parathion		0.018	
2.4-Dinitrotoluene				0.32	140	Metolcarb	· · · · · · · · · · · · · · · · · · ·	0.014	4.6
				0.55	28		· · · · · · · · · · · · · · · · · · ·		1.4
2,6-Dinitrotoluene				0.017	28	Mexacarbate		0.056	1.4
Di-n-octyl phthalate					14	Molinate		0.0421	1.41
Di-n-propyInitrosamine				0.40		Naphthalene		0.059	5.6
1,4-Dioxane				12.0	170	2-Naphthylamine		0.52	NA
Diphenylamine ³				0.92	131	o-Nitroaniline		0.271	141
Diphenyinitrosamine ³				0.92	13'	p-Nitroaniline		0.028	28 -
1,2-Diphenylhydrazine				0.087	NA	Nitrobenzene		0.068	14
Disulfoton				0.017	6.2	5-Nitro-o-toluidine		0.32	28
Dithiocarbamates (total)			L	0.028	281	o-Nitrophenol		0.0281	131
Endosulfan I	1		Γ	0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan II	1			0.029	0.13	N-Nitrosodiethylamine	·	0.40	28
Endosulfan sulfate				0.029	0.13	N-Nitrosodimethylamine		0.40	2.31
Endrin		1		0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin aldehyde		. 1		0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC		+		0.042	1.4'	N-Nitrosomorpholine		0.40	2.3
Ethyl acetate				0.34	33	N-Nitrosopiperidine		0.40	35
Ethyl benzene	<u> </u>			0.057	10	N-Nitrosopyrrolidine		0.013	35
	· · · · ·			0.057	360	Oxamyl			
Ethyl cyanide/Propanenitrile				0.12	160			0.0561	0.281
Ethyl ether						Parathion		0.014	4.6
Bis(2-Ethylhexyl)phthalate				0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)	х	0.10	10
Ethyl methacrylate				0.14	160	Pebulate		0.0421	1.4'
Ethylene oxide				0.12	NA	Pentachlorobenzene		0.0551	10'
Famphur				0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		1		0,068	3L.4	PeCDFs(All		0,000035	0.001
			•			Pentachlorodibenzofurans)			
luorene		1		0.059	3,4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride		1		0.0561	1.41	Pentachloronitrobenzene		0.055	4.8
leptachlor		I		0.0012	0.066	Pentachlorophenol		0.089	7.4
leptachlor epoxide				0.016	0.066	Phenacetin		0.081	16
lexachlorobenzene				0.055	10	Phenanthrene		0.059	5.6
lexachlorobutadiene				0.055	5.6	Phenol		0.039	6.2
lexachlorocyclopentadiene	1			0.057	2.4	Phorate		0.021	4.6
IxCDDs (All Iexachrorodibenzo-p-dioxins)				0,000063	0.001	Phthalic acid		0.055 ¹	281
IxCDFs (All				0,000063	0.001	Phthalic anhydride		0.055	28 ¹
lexachlorodibenzofurans)						-			
lexachloroethane				0.055	30	Physostigmine		0.0561	1.41
lexachloropropylene				0.035	30	Physostigmine salicylate		0.0561	1.4 ¹
ndeno(1,2,3-c,d)pyrene				0.0055	3.4	Promecarb		0.0561	1.4 ¹
odomethane				0.19	65	Pronamide		0.093	1.5
sobutyl alcohol				5.6	170	Propham		0.056 ¹	1.4'
sodrin				0.021	0.066	Propoxur		0.0561	1.41
sosafrole	1			0.081	2.6	Prosulfocarb		0.0421	1.41
epone	1			0.0011	0.13	Pyrene		0,067	8.2
lethacrylonitrile	1			0.24	84	Pyridine		0.014	16
	1			5.6	0.75 mg/l ¹	Safrole		0.081	22
lethanol				0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
lethanol Jethapyrilene				0.0561	1.4	1,2,4,5-Tetrachlorobenzene			
lethapyrilene				0.000		TCDDs (All		0.055	14
lethapyrilene lethiocarb	1			0.0281	0 141				
lethapyrilene lethiocarb lethomyl				0.028 ¹	0.14 ¹	Tetrachlorodibenzo-p-dioxins)			0.001
lethapyrilene lethiocarb lethomyl ethoxychlor				0.25	0.18	Tetrachlorodibenzo-p-dioxins) TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
lethapyrilene lethiocarb lethomyl						Tetrachlorodibenzo-p-dioxins) TCDFs (All			· · · ·

Page 6 of 7

...

121546-01 121546-02 121546-03

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/kg) unless noted	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/kg) unless noted
Tetrachloroethylene		0.056	6.0				
2,3,4,6-Tetrachlorophenol		0,030	7.4	Antimony	<	- 1.9	2.1 mg/l TCLP
Thiodicarb	1 1	0.0191	1.4 ¹	Antimony		1,9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barlum		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹ .	Beryllium		0.82	0.014 mg/
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmlum		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	· /	0.054	6.0	Chromium (Total)		2.77	0.60 mg/l TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA ⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/l⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- rifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/ TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
ris-(2,3- Dibromopropyl)phosphate		0.11	0,10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
/emolate		0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
/inyl chloride	1	0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
(ylenes – mixed isomers (sum) f om-, and p-xylene	$ \longrightarrow$	0.32	30	Silver		0.43	0.30 mg/l TCLP
				Silver		0.43	0.14 mg/l TCLP ⁴
			-	Sulfide		14	NA ²
		···		Thallium		1.4	0.078 mg/l TCLP ¹
				Thallium	1	1.4	0.20 mg/l TCLP ⁴
				Vanadium	1	4.3 ²	1.6 mg/l TCLP ²
			>	Zinc	t,	2.61	4.3 mg/l TCLP ²

1 T 2 N

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration Instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

121 Jac	121465-03,-02 121678-01,-02,-03,-04 Doog Grander 121678-01,-02,-03,-04	121543-01 0003,0006,0	008, 0009
D008 D009	کوروری کوروری LAND DISPOSAL NOTIFICATIO	N AND CERTIFICA	N
Generator Name		Manifest Doc. No. :	019694615 2016
Profile No.:	9750-01-0000	State Manifest No.:	NA

Profile No.:

ls this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌 Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 1. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

		s Subistications) المراجع المراجع المحركة المحركة المراجع المحركة المحركة المحركة المحركة المحركة المحركة المحركة المحركة المحركة	ieint.	
्राव्याः -	AN STERSONERS	DESCRIPTION	小的用	
1	D006	CADMIUM		A
2	D008	LEAD		<u>`</u> A
3	D009	MERCURY		A
4	D010	SELENIUM		A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🗌 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here: 🛛

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT

Α. This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this B.1 certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3	GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANIOG
	GOOD FAITH ANALY I CAL CERTIFICATION FOR INCIDENTIAL OF
	"I certify under penalty of law that I have personally examined and an infinited with the todahistic todahisti
	certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, reprint the the intervention of the second faith
	the second s
	been used by composition in units as accounted in 200 me including the possibility of fine and imprisonment."
	been treated by compusition in units as specified in 20042 rable in the occur analysis to submitting a false certification, including the possibility of fine and imprisonment."
- /	DEGUAD CTEDIZED WASTE BEOLIDES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This B.4 decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. C. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this D, certification that the waste complex with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penaltles for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E. This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Doma

Waste Engineer Title

> Form A1 Page 1 of 2

Page 1 of 7

Date 5/29/19

121729-05	121665-02-03	121678-01,-02,-03,-04	121548-01	
Dave	Doold Dould	Desg	Dass, Dask,	
Disce 8	Dang		Daug, Doog	
Des9	LAND DISPO	SAL NOTIFICATION AND CERTIFIC	ATION (PHASE IV)	
0000				

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLVENIEW.	TREATE CONTRACT STRATT ARDS 2		
FILM PRESENTED SOLVING ANTINETIC PRODUCT SOLVING ANTINETIC PRODUCT SECONDER() USE / VIET RING VESS (CODE)()	(19 <u>72)(</u> 101)	NGONTRON	් අමත්තියකාලය කොහොතියක. (ලෝදයාවල කාලිතියක් දින්න කොට කිරීමය කාලියාවල කාලිත්ති කොට කොට කොට කොට ආපත්තියකට කිලියු	maamani Seud Wadawaasu	ne Fanverslavela s
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nltropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5,6	Pyridine (F005)	0.014	16
Cresol (m- and p- lsomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class | SDWA systems. Β,

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C,

D002;

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

Page 2 of 7

1729-05	121665-02,03	121678-21,-02,-03,-80	121548-01
556	Duas, Doug,	121678-21,-02,-03,-BC	121548-01 Das3, Das6, Das8, Dos9
Bu	Doll		1238, 10009
98 e	LAND DISPOSAL NOT	IFICATION AND CERTIFICATION (F	PHASE IV)
Generator Name			019694615JJK
Profile No.:	9750-01-000	Constant State Manifest No.:	NA
This form is a co	ontinuation from form A1 for a waste lo	lentified by more than five USEPA waste code	
IS NOT an acce	ptable Land Disposal Notification and	Certification Form. A hazardous wastes that apply to this waste s	bipment (as defined by 40 CER 261)
h	her identify the corresponding subcat	terrony (write in the description from 40 CER 2t	58.40, of check NONE If the waste doe
the second se	-tanani) Alan Identify in column 5 bo	w the waste must be managed. Shent Solvents	s are listen on Form AT. Page 2, FUSS
constituent(s) ar	nd underlying hazardous constituent(s) if applicable, must be listed and attached.	a provemust marve.sm
		TAY DESCRIPTION AT A DAGE AND A D	HEALTHOUSE ALERANDY CHENY EXHIBITS
104	Silleconnalsy	Internation and the second	
5	D011	SILVER	
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33	/		
34			Lannad J.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature <u>Annia</u> Title <u>Waste Engineer</u> Hah

Date 5/29//9

Form A2 Page 1 of 2

Page 3 of 7

172	19-05	121665-02, -03	121678-01, -02, -03, -04	121548-01
200		121665-02, -03 Dash, Dao8)	121628-01,-02,-03,-04 Duog	121548-01 Das3, Dasta, Das8, Das9
600	8	Dall		Dus 8, Das 9
00	.7	LAND DISPOSAL NOT	IFICATION AND CERTIFICATION (PH)	ASE IV)
100	Senerator Nar	me: FRNP	Manifest Doc. No. :	19694615JJK
	Profile No.:	9750-01-0000	State Manifest No.:	NA
	This form is a	continuation from form A1 for a waste id	lentified by more than five USEPA waste code/sul	ocategory groups. This page by itse
1	IS NOT an ac Continue (fro For each was does not hav	cceptable Land Disposal Notification and m form A1, Page 1) to identify ALL USEF ste number, identify the corresponding su re a subcategory.). Also identify in column	Certification Form. PA hazardous wastes that apply to this waste ship bcategory (write in the description from 40 CFR 2 n 5 how the waste must be managed. Spent solv uent(s) if applicable, must be listed and attached.	ment (as defined by 40 CFR 261). 68.40, or check NONE if the waste ents are listed on Form A1, Page 2.
		्र व्यक्तविभूष	NIN AND SHARE THE WORLD WE WILL THE SHARE SHARE	
	den an		૮.સ્ટાગલ્બા વ્લગ્ય ૧૯૮૭ સ્ટાગસ્થા લાગ્ય ગુજરાત્ર મુખ્યત્વે કાર્યો છે. જિલ્લા સાથે આવેલી સાથે છે.	Man-Diamini Aromini Shikari -
		ANA CHAT CLOIDITE(CI)	5016517470F-30100	
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I hereby certify that all information	on submitted in	his and all associated	i documents is comple	ete and accurate, t	to the best of my	knowledge and information

Signature <u>forming</u> the <u>the second s</u>

Form A2 Page 2 of 2

Date 5729//9

21729-05	121665-02, -03	121628-01,-02,-0	3, 34 121548-01
Dasip	Davis, Davis,	Doog	DOO3, DOOG,
Daa8	12011		D008, D009
Durg	F039/UNDERLYING HAZAR	DOUS CONSTITUENT (UTS)	(Phase IV)
Dolo Generator Name:	FRNP	Manifest Doc. No. :	019694615JJK
Profile No.:	9757-01-0806	State Manifest No.:	NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUST	ww	NWW	CONSTITUENT	HOWMUST	(mg/l)	NWW > (mg/kg)
	THIS	(mg/l)	(mg/kg)		CONSTITUENT	an grant and	unless
	CONSTITUENT		unless		BEMANAGED?		noted.
	BEMANAGED?		HOLEU		Addition(10)(20)(20)(20)(20)(20)(20)(20)(20)(20)(2		
Acenaphthylene	K	0.059	3.4	2-Chloro-1,3-butadiene	<	0.057	0.28
Acenapthene		0.059	3.4	Chlorodibromomethane	4	0.057	15
Acetone	1	0.28	160	Chloroethane		0.27	6.0
Acetonitrile	1	5.6	381	bis(2-Chloroethoxy)methane		0.036	7.2
Acetophenone		0.010	9.7	bis(2-Chloroethyl)ether		0.033	6.0
2-Acetylaminofluorene	1	0.059	140	Chloroform		0.046	6.0
Acrolein		0,29	NA	bis(2-Chloroisopropyl)ether		0.055	7.2
Acvlamide		191	231	p-Chloro-m-cresol		0.018	14
Acrylonitrile		0.24	84	2-Chloroethyl vinyl ether		0.062 ¹	NA '
Acryloniulie			1	Chloromethane/Methyl		0.19	30
Aldicarb sulfone		0.0561	0.28 ¹	chloride			
Aldrin		0.021	0.066	2-Chloronaphthalene		0.055	5.6
4-Aminobiphenyl	1	0.13	NA	2-Chlorophenol		0.044	5.7
Anlline		0.81	14	3-Chloropropylene		0.036	30
Anthracene		0.059	3.4	Chrysene		0.059	3.4
Aramite		0.36	NA	o-Cresol		0.11	5.6
alpha-(BHC)	1	0.00014	0.066	m-Cresol		0.77	5.6
beta-(BHC)		0.00014	0.066	p-Cresol		0.77	5.6
delta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate		0.056 ¹	1.41
		0.0017	0.066	Cyclohexanone		0.36	0.75 mg/l
gamma-(BHC) Barban	<u> </u>	0.0561	1.41	o,p'-DDD		0.023	0.087
Bendiocarb		0.0561	1.4	p,p'-DDD		0.023	0.087
		0.0561	1.41	o,p'-DDE	,07	0.031	0.087
Benomyl		0.000	10	p,p'-DDE	N N	0.031	0.087
Benzene	<u></u>	0.059	3.4	o,p'-DDT		0.0039	0.087
Benz(a)anthracene		0.055	6.01	p,p'-DDT	N.	0.0039	0,087
Benzal chloride	<u> </u>		6.8	Dibenz(a,h)anthracene	1N	0.055	8.2
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo(k)fluoranthene ³	<u> </u>	0.11		1,2-Dibromo-3-chloropropane	in the second se	0.11	15
Benzo (g,h,i)perylene	2	0.0055	1.8	1,2-Dibromomethane/	<u>├</u>		
Benzo(a)pyrene	1 1	0.061	3.4	Ethylene dibromide		0.028	15
		0.35	15	Dibromomethane	1	0.11	15
Bromodichloromethane						0.000	0.0
Bromomethane/Methyl Bromide		0.11	15 .	m-Dichlorobenzene		0.036	6.0
4-Bromophenyl phenyl ether		0.055	15	o-Dichlorobenzene		0.088	6.0
	+	5.6	2.6	p-Dichlorobenzene		0.090	6.0
n-Butyl alcohol	+	0.0421	1.4	Dichlorodifluoromethane		0.23	7.2
Butylate	+	0.042	28	1,1-Dichloroethane		0.059	6.0
Butyl benzyl phthalate	+	0.017				0.24	6.0
2-sec-Butyl-4,6-		0,066	2.5	1,2-Dichloroethane		0.21	0.0
dinitrophenol/Dinoseb	·	0.006'	0.14'	1.1-Dichloroethylene		0,025	6.0
Carbaryl	+	0.0561	1.4	trans-1,2-Dichloroethylene	1	0.054	30
Carbenzadim		0.006	0.14	2,4-Dichlorophenol	1 1	0.044	14
Carbofuran	+	0.008	1.4	2.6-Dichlorophenol	+	0.044	14
Carbofuran phenol	+	0.000	4.8 mg/l	2,4-Dichlorophenoxyacetic	+	1	
Carbon disulfide		3.8	TCLP ¹	acid/2,4-D	<u> </u>	0.72	10
Carbon tetrachloride	11	0.057	6.0	1,2-Dichloropropane		0.85	18
Carbosulfan	+ /	0,0281	1.41	cis-1,3-Dichloropropylene		0.036	18
Chlordane (alpha and gamma	1/	1		trans-1,3-Dichloropropylene	1/	0.036	18
isomers)		0.0033	0.26				
p-Chloroaniline	11	0.46	16	Dieldrin		0.017	0.13
Chlorobenzene	V .	0.057	6.0	Diethyl phthalate	$\mathbb{V} \longrightarrow$	0.20	28

Form B1 Page 1 of 3

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DES 9 D	THIS	, Da	NT		NWW (mg/kg) unless nordd NA 14 28 28 160 160 160 180 28 28 14 28 28 14 170 13 ¹ NA 6.2 28 ¹ 0.0666 0.13 0.13	p-Dimethylaminoazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methacrylate Methyl parathlon Methyl parathlon Onlinate Naphthalene 2-Naphthylamine Nitrobenzene 5-Nitro-toluidine o-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine		JST TUE	<u>~8,</u> .nt	Das 6 Das 7 Das 7 Das 7 Das 7 Das 7 Das 7 Das 6 Das 7 Das 6 Das 7 Das 7 Das 6 Das 7 Das 7	NWX (mg, unle note NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹ 28
CONSTITUENT Chlorobenzilate 2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 1,4-Dioxane Dipnerylamine ³ Diphenylamine ³ Diphenylamine ³ Diphenylintrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan II Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacry	HOW THIS CONS	MUST	Initi	WWW (mg/l) 0.10 0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	(mg/kg) moted. NA 14 28 28 2.3 160 160 140 28 28 28 28 14 170 13 ¹ 13 ¹ 13 ¹ NA 6.2 28 0.066 0.13 0.13 0.13	CONSTITUENT. p-Dimethylaminoazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl nethacrylate Methyl methacrylate Methyl parathlon Metolcarb Metolcarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-toluidine o-Nitrophenol p-Nitrosodiethylamine N-Nitrosodiethylamine	HOW MU THIS CONSTI	JST TUE	<u>~8,</u> .nt	DAA 9 (mg/l)) 0.13' 0.089 0.28 0.14 0.014 0.056' 0.056' 0.056' 0.042' 0.059 0.52 0.27'	(mg) unle note NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
CONSTITUENT Chlorobenzilate 2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 1,4-Dioxane Dipnerylamine ³ Diphenylamine ³ Diphenylamine ³ Diphenylintrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan II Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacry	HOW	MUST. STITUE	NT	(mg/l) 0.10 0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	(mg/kg) moted. NA 14 28 28 2.3 160 160 140 28 28 28 28 14 170 13 ¹ 13 ¹ 13 ¹ NA 6.2 28 0.066 0.13 0.13 0.13	p-Dimethylaminoazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methacrylate Methyl parathlon Methyl parathlon Onlinate Naphthalene 2-Naphthylamine Nitrobenzene 5-Nitro-toluidine o-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine	HOW MU THIS CONSTI	JST TUE		0.13 ¹ 0.089 0.28 0.14 0.014 0.018 0.014 0.056 ¹ 0.056 ¹ 0.056 ³ 0.042 ¹ 0.059 0.52 0.27 ¹	(mg) unle note NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
Chlorobenzilate 2,4-Dimethyl phenol Dimethyl phthalate Di-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbarnates (total) Endosulfan II Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl denzene Ethyl benzene Ethyl benzene Ethyl benzene Ethyl benzene Ethyl benzene Ethyl benzene Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzo-purans)	THIS	STITUE	NT	(mg/l) 0.10 0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	(mg/kg) moted. NA 14 28 28 2.3 160 160 140 28 28 28 28 14 170 13 ¹ 13 ¹ 13 ¹ NA 6.2 28 0.066 0.13 0.13 0.13	p-Dimethylaminoazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methacrylate Methyl parathlon Methyl parathlon Onlinate Naphthalene 2-Naphthylamine Nitrobenzene 5-Nitro-toluidine o-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine	THIS CONSTI	TUE	NT	(mg/l) 0.13 ¹ 0.089 0.28 0.14 0.014 0.014 0.056 ¹ 0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	(mg) unle note NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene Di-n-octyl phthalate DI-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate	CONS			0.10 0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	Unless notedi NA 14 28 2.3 160 160 140 28 28 28 28 140 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13 0.13	Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl parathion Metoicarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluldine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine	CONSTI		· · · · · · · · · · ·	0.13' 0.089 0.28 0.14 0.14 0.018 0.014 0.056' 0.056' 0.056' 0.042' 0.059 0.52 0.27'	Unle NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene Di-n-octyl phthalate DI-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate				0.036 0.047 0.057 0.32 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.025	nored NA 14 28 2.3 160 160 140 28 28 131 131 133 0.066 0.13 0.13	Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl parathion Metoicarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluldine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine				0.13 ¹ 0.089 0.28 0.14 0.018 0.014 0.056 ¹ 0.056 ¹ 0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene Di-n-octyl phthalate DI-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate				0.036 0.047 0.057 0.32 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.025	14 28 28 2.3 160 160 140 28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl parathion Metoicarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluldine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine				0.089 0.28 0.14 0.018 0.018 0.056 ¹ 0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹ 1.4 ¹ 5.6 NA 14 ¹
2,4-Dimethyl phenol Dimethyl phthalate DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene Di-n-octyl phthalate DI-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl nethacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl nethacrylate				0.036 0.047 0.057 0.32 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.025	28 28 28 2.3 160 140 28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Methyl ethyl ketone Methyl isobutyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl parathlon Metolcarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol p-Nitrosodiethylamine N-Nitrosodiethylamine				0.28 0.14 0.018 0.014 0.056' 0.056' 0.042' 0.059 0.52 0.27'	36 33 160 NA 4.6 1.4 1.4 1.4 5.6 NA 14
Dimethyl phthalate Di-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl oenzene Ethyl oenzene Ethyl oenzene Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Ethyl n				0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	28 2.3 160 140 28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Methyl Isobutyl ketone Methyl methacrylate Methyl methansulfonate Methyl parathlon Metoicarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.14 0.14 0.018 0.014 0.056 ³ 0.042 ¹ 0.059 0.52 0.27 ³	33 160 NA 4.6 1.4 1.4 1.4 5.6 NA 14
DI-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-octyl phthalate Di-n-octyl phthalate Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbarnates (total) Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl denzene Ethyl benzene Ethyl benzene Ethyl benzene Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor poxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadlene Hexachlorocyclopentadlene HxCDFs (All Hexachlorodibenzo-p-dioxins)				0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.023 0.029 0.0028 0.025	2.3 160 160 140 28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Methyl methacrylate Methyl methansulfonate Methyl parathlon Metolcarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.14 0.018 0.014 0.056 ³ 0.056 ³ 0.042 ³ 0.059 0.52 0.27 ³	160 NA 4.6 1.4 1.4 1.4 5.6 NA 14
1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrobluene 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-protyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Disulfoton Endosulfan I Endosulfan II Endosulfan Sulfate Ethyl acetate Ethyl acetate Ethyl acetate Ethyl encoxide				0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.0028 0.025	160 160 140 28 14 170 13 ¹ 13 ¹ 13 ¹ 0.066 0.13 0.13 0.13	Methyl methansulfonate Methyl parathlon Metolcarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-toluidine o-Nitrophenol p-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.018 0.014 0.056 ³ 0.056 ³ 0.042 ³ 0.059 0.52 0.27 ³	NA 4.6 1.4 1.4 5.6 NA 14
2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl ether Filuorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene Hexachlorocyclopentadiene Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.0028 0.025	160 140 28 28 14 170 13 ¹ 13 ¹ 13 ¹ 0.066 0.13 0.13 0.13	Methyl parathlon Metolcarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine				0.014 0.056 ¹ 0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	4.6 1.4 1.4 1.4 5.6 NA 14
2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl oyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Hexachloroclopentadlene HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.32 0.55 0.017 0.40 12.0 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.0028 0.025	140 28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Metoicarb Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine				0.056 ¹ 0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	1.4 1.4 1.4 5.6 NA 14
2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl benzene Ethyl benzene Ethyl oganide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachloroclopentadiene Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.029 0.0028 0.025	28 28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Mexacarbate Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.056 ¹ 0.042 ¹ 0.059 0.52 0.27 ¹	1.4 1.4 5.6 NA 14
Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl acetate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Hotacry methacrylate Hotacry methacrylate Hotacry methacrylate Hotacry methacry methacry Hotacry methacry methacry Hotacry metha				0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.029 0.029 0.0028 0.025	28 14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Molinate Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-o-toluldine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.042 ¹ 0.059 0.52 0.27 ¹	1.4 5.6 NA 14
Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl opanenitrile Ethyl benzene Ethyl benzene Ethyl benzene Ethyl opanenitrile Ethyl enter Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor poxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadlene HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.40 12.0 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.029 0.0028 0.025	14 170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Naphthalene 2-Naphthylamine o-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine				0.059 0.52 0.27	5.6 NA 14 ¹
1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde ETYC Ethyl acetate Ethyl acetate Ethyl acetate Ethyl benzene Ethyl eher Bis(2-Ethylhexyl)phthalate Ethyl encene Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hachfors (All Hexachlorodibenzo-p-dioxins)				12.0 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.029 0.0028 0.025	170 13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	2-Naphthylamine o-Nitroaniline p-Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine			1	0.52 0.27 ¹	NA 14'
Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl oyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethyl nethacrylate Hetachlor epoxide Heptachlor Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachlorodibenzo-p-dioxins)				0.92 0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.029 0.0028 0.0028	13 ¹ 13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	o-Nitroaniline p-Nitroaniline Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodiethylamine			1	0.27	14'
DiphenyInitrosamine ³ 1,2-DiphenyIhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Formetanate hydrochloride Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocylopentadiene HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All				0.92 0.087 0.017 0.028 0.023 0.029 0.029 0.0028 0.0028	13 ¹ NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	p-Nitroaniline Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine			1		
1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluorene Formetanate hydrochloride Heptachlor epoxide Hexachlorobenzene Hexachlorocyclopentadlene Haxachlorocyclopentadlene HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All				0.087 0.017 0.028 0.023 0.029 0.029 0.0028 0.0028	NA 6.2 28 ¹ 0.066 0.13 0.13 0.13	Nitrobenzene 5-Nitro-o-toluidine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine			-1	10.020	
Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluorene Formetanate hydrochloride Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorocylopentadiene Hexachlorocylopentadiene Hexachlorocylopentadiene Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.017 0.028 0.023 0.029 0.029 0.029 0.0028 0.025	6.2 28 ¹ 0.066 0.13 0.13 0.13	5-Nitro-o-toluldine o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine			1	0.068	14
Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl benzene Ethyl oganide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadlene HxcDDs (All Hexachlorodibenzo-p-dioxins)				0.028 0.023 0.029 0.029 0.0028 0.0028	28 ¹ 0.066 0.13 0.13 0.13	o-Nitrophenol p-Nitrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine			1-	0.32	28
Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl ether Bis(2-Ethylhexyl)phthalate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadlene HxCDDs (All Hexachlorodibenzo-p-dioxins)				0.023 0.029 0.029 0.0028 0.0028	0.066 0.13 0.13 0.13	p-Nltrophenol N-Nitrosodiethylamine N-Nitrosodimethylamine			1	0.0281	13'
Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl benzene Ethyl benzene Ethyl enderPropanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadlene HxcDDs (All Hexachlorodibenzo-p-dioxins) HxcDFs (All				0.029 0.029 0.0028 0.025	0.13 0.13 0.13	N-Nitrosodiethylamine N-Nitrosodimethylamine			1	0.12	29
Endosulfan sulfate Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl acetate Ethyl cyanide/Propanenitrile Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All				0.029 0.0028 0.025	0.13 0.13	N-Nitrosodimethylamine	1		1	0.40	28
Endrin Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor epoxide Hexachlorobenzene Hexachlorobenzene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All				0.0028	0,13	At Alling and all as broked-maine	1		T	0.40	2.3
Endrin aldehyde EPTC Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobenzene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All				0.025		N-Nitroso-di-n-butylamine			1	0.40	17
EPTC Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)					0.13	N-Nitrosomethylethylamine				0.40	2.3
Ethyl acetate Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All				10.044	1.4	N-Nitrosomorpholine				0.40	2.3
Ethyl benzene Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All				0.34	33	N-Nitrosopiperidine				0.013	35
Ethyl cyanide/Propanenitrile Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.057	10	N-Nitrosopyrrolldine				0.013	35
Ethyl ether Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.24	360	Oxamyl				0.0561	0.2
Bis(2-Ethylhexyl)phthalate Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobenzene Hexachlorocyclopentadlene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.12	160	Parathion				0.014	4.6
Ethyl methacrylate Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)				0.10	10
Ethylene oxide Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobutadiene Hexachlorobutadiene Haxachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)				0.14	160	Pebulate				0.042'	1.4
Famphur Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		-01-		0.14	NA	Pentachlorobenzene		1		0.0551	10
Fluoranthene Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		23		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dloxins)	3	1		0.000035	0.0
Fluorene Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene HxcDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		N.		0.068	3L,4	PeCDFs(All Pentachlorodibenzofurans)	5/29/19			0.000035	0.0
Formetanate hydrochloride Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene HxcDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)						Pentachloroethane	- <u></u>			0.055	6.0
Heptachlor Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene HxcDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		5		0.059	3.4	Pentachloronitrobenzene				0.055	4.8
Heptachlor epoxide Hexachlorobenzene Hexachlorobutadiene HxcDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)			·	0.0561	0.066	Pentachlorophenol	3			0.089	7.4
Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (Ali Hexachrorodibenzo-p-dioxins) HxCDFs (Ali Hexachlorodibenzofurans)				0.0012	0.066	Phenacetin	<u>├ </u>			0.081	16
Hexachlorobutadiene Hexachlorocyclopentadiene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		_		0.016	10	Phenanthrene	1			0.059	5.6
Hexachlorocyclopentadlene HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		+		0.055	5.6	Phenol	+ +			0.039	6.2
HxCDDs (All Hexachrorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzofurans)		1		0.055	2.4	Phorate `	+			0.021	4.6
HxCDFs (All Hexachlorodibenzofurans)		1		0.000063	0.001	Phthalic acid				0.055 ¹	28
	"			0.000063	0.001	Phthalic anhydride				0.055	28
				0,055	30	Physostigmine				0.0561	1.4
Hexachloropropylene				0.035	30	Physostigmine salicylate				0.0561	1.4
Indeno(1,2,3-c,d)pyrene				0.0055	3.4	Promecarb				0.0561	1.4
Iodomethane				0.19	65	Pronamide				0.093	1.
isobutyl alcohol	-+-+-			5.6	170	Propham	<u> </u>			0.0561	1.4
Isodrin				0.021	0.066	Propoxur	+			0.0561	1.4
Isosafrole				0.081	2.6	Prosulfocarb	<u> </u>			0.0421	1.4
Kepone				0.0011	0.13	Pyrene	+			0.067	8.
Methacrylonitrile				0.24	84	Pyridine	+			0.014	16
Methanol				5.6	0.75 mg/l ¹	Safrole	+			0.081	7.9
Methapyrilene				0.081	1.5	Silvex/2,4,5-TP	+			0.72	
Methiocarb				0.0561	1.4'	1,2,4,5-Tetrachlorobenzene	<u> </u>			0.055	14
Methomyl	-11			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)	<u> </u>			0.000063	0.
Methoxychlor	-++			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)	<u> </u>			0.000063	0.
3-Methylcholanthrene				0.0055	15	1,1,1,2-Tetrachloroethane	1			0.057	6.
4,4'-Methylene bis(2-				0.0000		1,1,2,2-Tetrachloroethane				> 0.057	

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129-05	141662 02, 03	121678-01, -02, -03, -04	121548-01
Dad 9,	Dool, Doos	Dans	David David
Dalb	Pall		Pool, Bool

CONSTITUENT	HOW MUST THIS CONSTITUENT	ww. (mg/l)	NWW (mg/kg); unless	CONSTITUENT	HOW MUST THIS CONSTITUENT	WW (mg/l)	NWW (mg/kg):
	BE MANAGED?		noted		BE MANAGED?	5. K 19 K 19 K 20	noted
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony	←	- 1.9	2.1 mg/l TCLP
Thiodicarb	1	0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barlum		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0,69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane	27	0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	225	0.054	6.0	Chromium (Total)		2.77	0,60 mg/l TCLP ⁴
Trichloroethylene	5	0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)	<u> </u>	0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride	a	35	NA ⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead	cy.	0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead	N	0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)	12	NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/l
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Vernolate		0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0,82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum of o-,m-, and p-xylene	k >	→ 0.32	30	Silver		0.43	0.30 mg/l TCLP
			>	Silver		0.43	0.14 mg/l TCLP ⁴
			1	Sulfide		14	NA ²
	\$ 5/29/19			Thallium		1.4	0.078 mg/ TCLP ¹
/	P. VI			Thallium		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
K			>	Zinc	L	> 2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

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)006, K008,

Page 7 of 7

Four Rivers Nuclear Partnership, LLC (FRNP) and the U.S. Department of Energy (DOE) are co-generators pursuant to a Co-Generator agreement dated September 13, 2017. Under this agreement, FRNP is responsible for performing all Resource Conservation and Recovery Act (RCRA) generator activities on behalf of both FRNP and DOE for all activities under the scope of FRNP's Contract DE-EM0004895, including, but not limited to, characterizing waste, manifesting waste to off-site facilities, packaging and labeling waste for transport, and storing and managing waste, in accordance Please print with RCRA requirements. Transportation hereunder Is for DOE and the actual total transportation charges paid are to be reimbursed by the Government pursuant to Contract DE-EM0004895.

Ple	ase pri	int with RCRA requiremen			d the actual total t								1895.	2050-0039
UNIFORM HAZARDOUS 1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone 4. Manifest Tracking Number WASTE MANIFEST KY 8890008982 3. Emergency Response Phone 0.19694647 Ju 5. Generator's Name and Mailing Address Generator's Site Address (if different than mailing address)												JK		
	5. Ge						Generato	or's Site Addre	ess (if different the	an mailing addre	ISS)			- holden and decision
		Four Rivers Nucles			n behalf of FF	RNP			nalf of the F					
		5511 Hobbs Roa							eous Diffu					
		Senerator's Phone: 279-441-5025 5511 Hobbs Rd, Kevil, KY 42053 U. Transporter 1 Company Name U.S. EPA ID Number												
	0. 114	RSB LOGISTI									WARDI	ากกรุงกา	٦ .	
	7. Tra	ansporter 2 Company Nam								U.S. EPA ID			_::_)	
	8. De	signated Facility Name and	d Şite Address							U.S. EPA ID	Number			
		Waste Facility,	, 657 Gallah	ner Road, Kin	gston, TN	37783					TND98	21001	11:2	
		1-865-	-342-7609		-						UTD98			22/19
		ity's Phone:		Oblasia - Name (James			r	40.0			1			am 1 [
	9a. HM	9b. U.S. DOT Description and Packing Group (if a		Shipping Name, Hazar	o Class, ID Numb	er,		10. Con No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13.	. Waste Codes	
		1.1111 4009 140	te Churnant		118	10000		110.	Type		11.1101.			
NG NG	ka	^{1.} UN 1993, Was	ste, marnmau	ie liquius, n.o.s.	, (Nerosene	y, 3, PG III,	•	5	DM	789		D001		
RA		(D001)						U.		108	K			
GENERATOR		2. UN 3321, Was	te, Radioactiv	ve material low	specific act	ivity (1 SA_)	n							
0	RQ	7, Am-241, Np						1	DM	46	ĸ	D006	D007	8000
		Excepted					Jane							
		^{3.} UN 2912, Rad												
	RQ	241, Pu-238, F	² u-239, To-99	, Th-230, Liquid	d/Oxide, (P(CB), 1 MBq		2	DM	380	К			
		 Fissile Excepted ⁴ UN 3321, Radioactive material, low specific activity (LSA-II), 7, U-234. 												
				•	activity (LS	A-II), 7, U-	234,							
	X	Liquid/Oxide, 0	1.1 MBq, Fissi	ile Excepted				1	DM	12	ĸ			
	14. S	pecial Handling Instruction	s and Additional Info	ormation 6/21/14			t			and the second	- I			
		14. Special Handling Instructions and Additional Information Glou/14 Truck: 59816 Trailer 253254 TID: 349479 Accumulation Start Date: 08/21/18 PCB Start Date: 08/22/18												
		ERG # 128, 162 In the event of an RQ Release, call 1-800-424-8802 If undeliverable, return to generator												
		Exclusive Use	Shipment, S	See Attachme	ent for Ada	litional Inf	o			Shinne	ant ID-	DSSL-1	0 007	
	15.	GENERATOR'S/OFFEROM marked and labeled/placar	R'S CERTIFICATIO ded. and are in all re	N: I hereby declare the espects in proper condition	at the contents of the transport at the source of the transport of the tra	this consignment according to appl	t are fully a licable inter	nd accurately mational and n	described above ational governm	by the proper si ental regulations	hipping name	e, and are cla	ssified, pack	aged,
	1	Exporter, I certify that the c	contents of this consi	ignment conform to the	terms of the attac	ched EPA Acknow	vledgment	of Consent.			n n expert en			
		I certify that the waste mini			2.27 (a) (if i am a i		nerator) or	(0) (if i am a s	mail quantity ger	nerator) is true.		Мо	nth Day	Year
11	X	eoina P		behal C	of FRA		Re	ine	her				821	119
Ē	16. In	ternational Shipments	Import to			Export from	110	Port of	entry/exit:			10	0	
IN	Trans	sporter signature (for expor		0.0.	,		0.3		aving U.S.;					
		ansporter Acknowledgment		ials										
TRANSPORTER	Trans	porter 1 Printed/Typed Nan	ne man 1		,	Sig	gnature	MA				Mor	th Day	Year
SPC	T		17, ChAC	Ohrn	MAN			$\Gamma(\Phi)$	·	-			32/	17
AN	Trans	sporter 2 Printed/Typed Nar	ne			51 <u>;</u> 	gnalure	V				Mõi	hth Dáy	r
E		iscrepancy												
IÎ		Discrepancy Indication Spa			<u> </u>	~~~~~,		- 7	EC	EIV	En			
	100.1	Discrepancy moleaton opa	Quan	tity	🛄 Туре		L	Residue		Partial Re		l	Full Rej	ection
							Ma	anifest Referer	AUG	2 2 2019				
l≥	18b. A	Alternate Facility (or Genera	ator)			1 11-14	1110			U.S. EPA ID	Number			
CE								Ĕ	3Y:	TAW	alling	on	AIS	
FA	Facilit	ty's Phone:									langer	nga w		
18b. Alternate Facility (or Generator) US EPA ID Number Facility's Phone: BY: 18b. Signature of Alternate Facility (or Generator) Month 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) Month 1. 2. 3. 4.										Year				
UN SN	40.11			Orders II a moder for b			.1		<u>\</u>					1
ES	19. H	azardous Waste Report Ma	anagement Method (Codes (i.e., codes for h	azardous waste ti	realment, dispos	al, and rec	ycling systems	5)	4.				
	1					0.				,				
	20. D	esignated Facility Owner or	r Operator: Certifical	tion of receipt of hazard	tous materials cov	vered by the mar	nifest excer	ot as noted in l	tem 18a	I				
		ed/Typed Name	A 1 .				gnature	11	Λ	. /		Ma	nth Day	Year
4	-	Tiffand (Clark				IA.	8-1	1º1	1			812	2 19
EP.	A Form	1 8700-22 (Rev /12-17)	Previous editions	are obsolete.			\square	DE	SIGNATED	FACILITY	TO EPA	's e-MAI	VIFEST	SYSTEM
						6								

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EM000489	sponsible for peri 35, including, but : A requirements, Tr	not limited to, characterizing w	ion and Recovery Act (RCRA) g vaste, manifesting waste to off DOE and the actual total trans	generator activitie f-site facilities, page portation charges	s on behali ckaging and s paid are to	of both FRNP a l labeling waste o he reimbursed	nd DOE for all for transport, by the Gover	activities under and storing and nment pursuan	the scope of d managing w t to Contract נוט נ	FRNP's Cont Aste, in acco DE-EM00048	tract DE- Irdance	o. 2050-
UNIFORM HA WASTE MA	ZARDUUS	Generator ID Number KY (3890008982	3		ency Response 1-270-44	1-6214		L963	1umber 3461	69.	JK
	vers Nuclear obbs Road		RNP) on behalf of FRI		FF Pa	s Site Address I RNP on be aducah Ga 511 Hobbs	half of th iseous D	e FRNP iffusion Pla il, KY 420	ant 53			
6. Transporter 1 Company Name U.S. EPA ID Number W/AR000012005												
8. Designaled Fa	8. Designaled Facility Name and Site Address U.S. EPA ID Number											
Waste Facility's Phone:	1-435-5	nt Facility, 657 G 184-0155	allaher Rd., King	tson, TN 3	37763			I TI	VD9821	109142		
	DOT Description king Group (if any		ame, Hazard Class, ID Numbe	er,	ŀ	10. Contair No.	iers Type	11. Total Quantity	12. Unit Wt./Vol.	13	3. Waste Co	des
1	2, Hazardo D022)	us waste, liquid, n.o	.s., (lead, chloroforr	n), 9 , PG II	8,	5	СМ ФМ- 1994-	4355	ĸ	0008	p022	
2.		us waste, liquid, n.o	.s., (lead, cadmium)), 9 , PG III,	(D008	, 2	DM	233	ĸ	0008 0022	0008 0039	001
3. RQ UN291			ecific activity (LSA-I le, 23 MBq, Fissile		, Np-	1	DM	109	ĸ			
	32, Hazardo 1, (F001, F0	•	.s., (Trichloroethlen	e, vinyl chla	oride), 9	1	СМ	351	к	D043 U228	F001	FOC
15. GENERAT marked and Exporter, I I certify tha	OR'S/OFFEROR d labeled/placard certify that the co	'S CERTIFICATION: I hereby ed, and are in all respects in p nitents of this consignment con sization statement identified in ed Name	tachment for Add declare that the contents of t roper condition for transport a form to the terms of the attac 40 CFR 262.27(a) (if I am a la HP of FRN	his consignment a according to applie hed EPA Acknowl arge quantity gen Sig	are fully an cable interr ledgment o	national and nati f Consent.	onal governm	ental regulation	shipping nan	ne, and are c hipment and	lassified, pa	imary ay
16. International Transporter sign	Shipments nature (for exports	Import to U.S.		Export from U	J.S.	Port of en Date leavi					/7 /(
Transporter 1 Pri	Acknowledgment of inted/Typed Nami inted/Typed Nami	45. Rol	BER5		nature	izing X	16			K	29/	ay O
18. Discrepancy						· · · · · · · · · · · · · · · · · · ·						
	y Indication Spac		Туре		Ma	Residue	Number:		CEI	VE	Full F	Rejectior
Facility's Phone:								SE				
18c. Signature o 19. Hazardous V	of Alternate Facilit Waste Report Mai		* codes for hazardous waste to	realment, disposa	al, and recy	cling systems)		БҮ:	\$1 M		Month	Day
	Facility Owner or	2.	ipt of hazardous materials co	3.	ifest evcon	t as noted in Iter	n 18a	4.				
Printed/Typed			ipror nazaruous materiais co		nature		1100	. /			Month [Day

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Ple	ase pri	int or type.				Form	Approved.	OMB No. 2	2050-0039				
Î	UNIF	FORM HAZARDOUS WASTE MANIFEST (Continuation Sheet) 21. Generator ID Number	22. Page 2	23. Manif	est Tracking Nur		94669.	IJK					
	24. G	24. Generator's Name Four Rivers Nuclear Partnership, LLC, on behalf of FRNP 5511 Hobbs Road, Kevil, KY 42053											
	25. 1	Fransporter Company Name RSB LOGISTICS Inc	•		U.S. EPA ID N	lumber	WARD	000120	35				
	26. 1	Fransporter Company Name			U.S. EPAID	Number							
	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Conta No.	iners Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes						
	×	UN3321, Radioactive material, low specific activity (LSA-II), 7, U-234, Liquid/Oxide, 33 MBq, Fissile Excepted	2	DM	28	к							
	RC	UN 1993, Waste, Flammable liquids, n.o.s, (Kerosene), 3, PG III, (D001)	1	DM	141	к	0001						
	RC	UN1993, Waste, Flammable liquids, n.o.s., (Diesel Fuel), 3, PG III, (D001, D018)	11	DM	1801	к	D001	D018					
GENERATOR -	RC	Du18)	1	DM	82	к	001	D018					
GEN	RC	UN2912, Waste, Radioactive material, low specific activity (LSA-I), 7, (D004, D006), Am-241, Pu-238, Pu-239, K-40, Th-230, Liquid/Oxide, 1 MBq, Fissile Excepted	2	DM	242	к	D004 D010	D006	8000				
	Х	UN2912, Radioactive material, low specific activity (LSA-I), 7, Am-241, Pu-238, Pu-239, K-40, Th-230, Liquid/Oxide, 178 MBq, Fissile Excepted	11	DM	2143	к							
	RG	UN2912, Waste, Radioactive material, low specific activity (LSA-I), 7,	2	СМ	2673	к	D006	D008					
	RG	NA3082, Hazardous waste, liquid, n.o.s., (lead, cadmium), 9 , PG III, (D006, D008)	1	DM	11	к	0006	D008					
	×	NA3082, Hazardous waste, liquid, n.o.s., (Trichloroethylene), 9 , PG III	2	DM	8	к	D043	F001	F002				
	32.5	pecial Handling Instructions and Additional Information Accumulation Str	art Flores M			l							
		ERG # 128, 162, 171 In the event of an RQ Release, call 1-8 EXCLUSIVE USE SHIPMENT, See Attachment for Additional	lf undel Shipme		e, returi DSSI-1	-	nerator						
TER	33. T Print	ransporter Acknowledgment of Receipt of Materials ed/Typed Name Signature				Мо	nth Day	Year					
SPOR	34 T	ransporterAcknowledgment of Receipt of Materials											
TRANSPORTER	Print	ed/Typed Name Signature			· <u></u>		Mo	nth Day	Year				
DESIGNATED FACUITY	35. C	Discrepancy			. L	. <u></u> ł							
GNATEL	36.1	lazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and re	cycling systems)										
DESI	2		 1			· 1							
EP	A Forn	n 8700-22A (Rev. 12-17) Previous editions are obsolete.	DES		D FACILITY	TO EP/	A's e-MAI	VIFEST	SYSTEM				

PCB and Additional Information Attachment, Page 3 of 3

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มีสมรรมสุขาวจะสรรมสุของครามสุขาวราชา) จะจะ อย่างสาขาวจะรับการสาขางกระจะ จะเทศเหลือครายรายสาขาง (Asis Di

Manifest Number: 019694669JJK

Shipment ID Number: DSSI-19-096

Shipment Date: 9/10/2019

				Shipment Date:	9/10/2019						T	Maximum
UHWM	RFD	Container /	Barcode	Description	PCB Date to Storage	PCB Date Storage	NET VOLUME (f13)	GROSS WT (Ib)	Gross Wt (Kg)	NET Wt (1b)	NET Wt (Kg)	Activity MBq
Section		WASTE ID	DAD40040001	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/09/19	N/A	44.11	2382	1080	2237	1015	N/A
9b.1	121856	121856-01	PAD19043001	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/09/19	N/A	44.11	2368	1074	2223	1008	N/A
9b.1	121856	121856-02	PAD 19C43002	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/10/19	N/A	44.11	2338	1060	2282	1035	N/A
9b.1	121856	121856-03		TRANSFORMER OIL FROM C-537 SWITCHYARD	07/10/19	N/A	40.1	2148	974	2003	909	N/A
9b.1	121856	121856-04		TRANSFORMER OIL FROM C-537 SWITCHYARD	07/22/19	N/A	22.72	1002	454	857	389	N/A
9b.1	121856	121856-05		USED OIL FROM MOBILE EQUIPMENT	04/09/19	N/A	4	396	180	340	154	N/A
9b.2	121444	121444-11		USED OIL FROM MOBILE EQUIPMENT	04/09/19	N/A	2.5	229	104	173	78	N/A
9b.2	121444	121444-16		PCBLIGHT	N/A	09/10/18	7.4	296	134	240	109	23
9b.3	121625	121625-01	PAD18C41054	BALLASISITIONISI ON MERCINICI CITALET	10/22/18	N/A	13,367	1240	562	774	351	N/A
9b.4	121584	121584-01		TCE SYSTEMS LIQUD		N/A	0.67	33	15	29	13	15
27b.1	121717	121717-01		USED OIL FROM WAP #2 IN C-310	N/A		0.67	38	17	33	15	18
27b.1	121717	121717-02		USED OIL FROM WAP #2 IN C-310	N/A	N/A			166	311	141	N/A
27b.2	121687	121687-03	PAD19C42401	KEROSENE DRAINED FROM TORPEDO HEATERS	03/07/19	N/A	6.68	367			156	N/A
27b.2	121752	121752-01		DIESEL FUEL	02/20/19	N/A	6,59	401	182	345	162	N/A
27b.3 27b.3	121752	121752-01		3 DIESEL FUEL	03/21/19	N/A	7.27	413	187	357	162	N/A
27b.3 27b.3	121752	121752-02		3 DIESEL FUEL	03/23/19	N/A	6.73	410	186	354	164	N/A
	121752	121752-04		DIESEL FUEL	03/26/19	N/A	6.73	418	190	362	165	N/A
27b.3 27b.3	121752	121752-04		1 DIESEL FUEL	03/26/19	N/A	6.73	420	191	364	105	N/A
27b.3 27b.3	121752	121752-06		2 DIESEL FUEL	03/26/19	N/A	6.73	432	196	376 362	164	N/A
27b.3	121752	121752-07		3 DIESEL FUEL	03/27/19	N/A	6.73	41B	190	362	170	N/A
27b.3 27b.3	121752	121752-08		7 DIESEL FUEL	04/02/19	N/A	6.015	431	195	375	165	N/A
27b.3	121752	121752-09		5 DIESEL FUEL	04/12/19	N/A	6.86	420	191	384	151	N/A
27b.3 27b.3	121752			9 DIESEL FUEL	04/22/19	N/A	6.42	388	176	332	172	N/A
27b.3	121752			4 DIESEL FUEL	05/18/19	N/A	7.4	435	197	180	82	N/A
27b.3 27b.4	121752			4 GASOLINE	02/25/19	N/A	2.53	236	107	475	215	15
27b.4 27b.5	121755			2 ETHYLENE GLYCOL (ANTIFREEZE)	02/25/19	N/A	7.4	531	241	58	26	2
27b.5 27b.5	121755			9 ETHYLENE GLYCOL (ANTIFREEZE)	05/13/19	N/A	1.21	114	52 250	416	189	- 14
27b.5 27b.6	121797			3 UNUSED SHELL TURBO 320 OIL	N/A	N/A	7.4	552		396	180	13
27b.6	121797	121797-02		4 UNUSED SHELL TURBO 320 OIL	N/A	N/A	7.4	532	241 233	378	171	12
27b.6	121798			15 UNUSED WELCH VACUUM OIL	N/A	N/A	7.4	514		396	180	13
27b.6	121798			16 UNUSED WELCH VACUUM OIL	N/A	N/A	7.4	532	241 287	496	225	16
27b.6	121801			44 UNUSED WINTREX-GLYCOL	N/A	N/A	7.4	632 658	298	522	237	17
27b.6	121801			18 UNUSED WINTREX-GLYCOL	N/A	N/A	7.4	584	265	448	203	15
27b.6	121802		PAD19C4274	45 UNUSED CC WET (OUT OF DATE)	N/A	N/A	7.4		203	497	225	16
27b.6	121802	-		46 UNUSED CC WET (OUT OF DATE)	N/A	N/A	7.4	598			202	23
	121851			10 WATER DRAINED FROM THE C-310 TOPS PURGE	N/A	N/A	7.4	502	228	446	202	
27b.6	121851			WATER DRAINED FROM THE C-310 TOPS PURGE	E N/A	N/A	7.4	512	232	456	207	24
27b.6				WATER DRAINED FROM THE C-310 TOPS PURGI	E N/A	N/A	7.4	330	150	274	124	14
27b.6	121851 121809			 200 FT STACK - REPACKAGED FROM 121848-01 15 LIQUIDS FROM C-400 IRA GLYCOL 	04/23/19	N/A	44.11	2944	1335	2944	1335	96 96
27b.7				16 LIQUIDS FROM C-400 IRA GLYCOL	04/23/19	N/A	44.11	2948	1337	2948	1337	
27b.7	121809			17 LUBE OIL C-400 IRA	04/23/19	N/A	7.4	80	36	24	11	N/A
27b.8 [.]					06/12/19	N/A	0.13	15	7	6	3	N/A
27b.9	12186				06/12/19	N/A	0.13	19	9	10	5	N/A
27b.9	12186	8 121868-0	2 PAD19C428	36 TCE WATER-C400 IRA OUTSIDE			493.1	30,256	13,724	26,842	12,175	442

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

NEXTRONOMENTAL AND AND ADDRESS OF A DESCRIPTION OF A

121584-01 DSSI-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	FRNP	Manifest Doc. No. :	0196946695510
Profile No.:	PAD-WD-0422-R7-V2	State Manifest No.:	NA

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	- see and - 1	응답되는 전에 가격하는 이미를 가격해 물건이 있는 것이 있 같은 것이 있는 것이 있는 것이 같은 것이 같은 것이 같은 것이 있는 것		
	ALL ALL DEPARTMENT	비목(무귀박)(0)	Contra	
1	D043	Vinyl Chloride		A
2	F001	Spent Halogenated Solvents Used in Degreasing		Α
3	F002	Spent Halogenated Solvents	\square	A
4	U228	Trichloroethylene	\square	A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🗌 If no UHCs are present in the waste upon its initial generation check here: To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT A.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this B.3 certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
- "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This **B.4** decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- RESTRICTED WASTE SUBJECT TO A VARIANCE C.
- This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.
- "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."
- WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.
 - This waste is a newly identified waste that is not currently subject to any 40 CER-Part 268 restrictions.

/						
I hereby certify	thatal	information submitted in th	is and all associated	d documents is complete and	l accurate, to the best of my	knowledge and information.
Signature	1_	KI.IV		Waste Engineer	Date	2/08/2015
	/		Ň			/ /
		l	U	Form A1 Page 1 of 2		

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

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and Alarma Contribution and a second s			ารากกุกการสาว (การกุกการสาว		มโตรง (การรักษา) เป็นตระทั่ง
	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Acetone (F003) Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
n-Butanol (n-butyl alcohol) (F003)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon disulfide (F005)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Carbon tetrachloride (F001) Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
	0.11	5.6	Pyridine (F005)	0.014	16
o-Cresol (F004) Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachioroethylene (F001, F002)	0.056	6.0
	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
Cyclohexanone (F003) o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
ethylene glycol, monoethyl ether	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl acetate (F003) Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyi Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. А.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems.

В, High TOC ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

		ATION AND CERTIFICATION			110-1-1-
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ile No.:	PAD-WD-0422-R7-V2	State Manifest No.:	NIA_	-	
e an ta a andimi	uction from form A1 for a waste identifu	ed by more than five USEPA waste co	de/subcate	gory g	roups. This page by its
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h waste number.	identify the corresponding subcallegor	y (write at the description home to other	I		Form A1 Bogs 2 E03
have a subcateg	identify the corresponding subcategor ory.). Also identify in column 5 how the nderlying hazardous constituent(s) if an STAR STAR STAR STAR STAR STAR STAR STAR STAR STAR STAR STAR STAR	pplicable, must be listed and attached.			
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rator Name:	FRNP	Manifest Doc. No. :	0196946695JK
	PAD-WD-0422-R7-V2	State Manifest No.:	NIA
īle No.: s form is a confinu	etion from form A1 for a waste identifie	d by more than five USEPA waste co	de/subcategory groups. This page by
<u>NOT</u> an acceptabl	e Land Disposal Notification and Certin	cation i onn.	e shipment (as defined by 40 CFR 26
ntinue (from form	e Land Disposal Notification and Certific A1, Page 1) to identify ALL USEPA haz ber, identify the corresponding subcate	ardous wastes that apply to this wast	CFR 268.40, or check NONE if the wa
es not have a sub	per, identify the corresponding subcate category.). Also identify in column 5 hc	w the waste must be managed. Sper	it solvents are listed on Form A1, Pag
)39 constituent(s) a	ategory.). Also identify in column 5 ho and underlying hazardous constituent(s Provession of the state of the state of the state of the state of the state of the state of the state of the state state of the state) if applicable, must be listed and attac	
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Page 2 of 2

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Page 4 of 7

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:

FRNP

Manifest Doc. No. :

019694669JJK

Profile No.:

PAD-WD-0422-R7-V2

State Manifest No .:

NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

	HOWMUS			NWW	HCONSTITUENT	HOW/MUST			NWW
CONSTITUENT	THIS		ime//)	(mg/kg)		THIS		(mg/l)	(mg/kg)
	CONSTITU	ENIT		unless		CONSTITUEN			unless
	BEMANAG	ED?		noted		BEMANAGED			noted
	Superior States and State	時刻望	+ 0.059	3.4	2-Chloro-1,3-butadiene	K		0.057	0.28 ¹
Acenaphthylene	←		0.059	3.4	Chlorodibromomethane			0.057	15
cenapthene			0.059	160	Chloroethane			0.27	6.0
Acetone			5.6	38'	bis(2-Chloroethoxy)methane			0.036	7.2
Acetonitrile	ļ		0.010	9.7	bis(2-Chloroethyl)ether			0.033	6.0
Acetophenone		+	0.059	140	Chloroform			0.046	6.0
2-Acetylaminofluorene		-+	0.29	NA	bis(2-Chloroisopropyl)ether			0.055	7.2
Acrolein		+	191	231	p-Chloro-m-cresol			0.018	14
Acylamide			0.24	84	2-Chloroethyl vinyl ether			0.0621	NA1
Acrylonitrile					Chloromethane/Methyl		1	0.19	30
Aldicarb sulfone			0.0561	0.28 ¹	chloride				
	<u> </u>		0.021	0.066	2-Chloronaphthalene		$ \rightarrow $	0.055	5.6
Aldrin			0.13	NA	2-Chlorophenol		$ \rightarrow $	0.044	5.7
4-Aminobiphenyl			0.81	14	3-Chloropropylene			0.036	30
Aniline	+		0.059	3.4	Chrysene			0.059	3.4
Anthracene	+		0.36	NA	o-Cresol			0.11	5.6
Aramite			0.00014	0.066	m-Cresol			0.77	5.6
alpha-(BHC)		+-	0.00014	0.066	p-Cresol			0.77	5.6
beta-(BHC)			0.023	0.066	m-Cumenyl methylcarbamate			0.0561	1.41
delta-(BHC)			0.0017	0.066	Cyclohexanone			0.36	0.75 mg/
gamma-(BHC)		 	0.0561	1.4	o,p'-DDD			0.023	0.087
Barban		ta-	0.0561	1.4	p,p'-DDD		7	0.023	0.087
Bendiocarb	2	12-	0,0561	1.4'	o,p'-DDE	N a		0.031	0.087
Benomyl		0-	0.14	10	p,p'-DDE	a'		0.031	0.087
Benzene	k	d	0.059	3.4	o,p'-DDT			0.0039	0.087
Benz(a)anthracene	f	<u>v</u>	0.0551	6.01	p,p'-DDT			0.0039	0.087
Benzal chloride	↓∤		0.035	6.8	Dibenz(a,h)anthracene			0.055	8.2
Benzo(b)fluoranthene ³			0.11	6.8	Dibenz(a,e)pyrene			0.061	NA
Benzo(k)fluoranthene ³			0.0055	1.8	1,2-Dibromo-3-chloropropane			0.11	15
Benzo (g,h,i)perylene	<u> </u>		0,0055		1,2-Dibromomethane/			0.028	15
Benzo(a)pyrene			0.061	3.4	Ethylene dibromide			0.026	
			0.25	15	Dibromomethane			0.11	15
Bromodichloromethane			0.35					0.036	6,0
Bromomethane/Methyl			0.11	15	m-Dichlorobenzene				
Bromide			0.055	15	o-Dichlorobenzene			0.088	6.0
4-Bromophenyl phenyl ether			5.6	2.6	p-Dichlorobenzene			0.090	6.0
n-Butyl alcohol				1.4	Dichlorodifluoromethane			0.23	7.2
Butylate	/		0.042	28	1,1-Dichloroethane			0.059	6,0
Butyl benzyl phthalate			0.017	20		1-1		0.04	6.0
2-sec-Butyl-4,6-			0.000	2.5	1,2-Dichloroethane			0.21	
dinitrophenol/Dinoseb	_ 		0.066	0.14	1.1-Dichloroethylene			0.025	6.0
Carbaryl				1.4	trans-1,2-Dichloroethylene			0.054	30
Carbenzadim			0.0561	0.14	2,4-Dichlorophenol			0.044	14
Carbofuran			0.0061	1.4	2.6-Dichlorophenol			0.044	14
Carbofuran phenol			0.0561		2,4-Dichlorophenoxyacetic	+ 1			
Carbon disulfide	11		3.8	4.8 mg/l TCLP ¹	acid/2,4-D			0.72	10
Carbon tetrachloride			0.057	6.0	1,2-Dichloropropane	<u> </u>		0.85	18
Carbosulfan	+1		0.028 ¹	1.41	cis-1,3-Dichloropropylene			0.036	
Chlordane (alpha and gamma	1		0.0033	0.26	trans-1,3-Dichloropropylene			0.036	18
isomers)				16	Dieldrin			0.017	0.13
p-Chioroaniline	1 1 .		0.46	6.0	Diethyl phthalate	- NZ		0.20	28

Form B1 Page 1 of 3

Chlorobenzilate Chlorobenzila				0.10 0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92	28 28 2.3 160 160 140	p-Dimethylamincazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methansulfonate Methyl parathion Metolcarb Mexacarbate Molinate	SONS BE M/				0.13 ¹ 0.089 0.28 0.14 0.14 0.018 0.014 0.056 ¹ 0.056 ¹	unless noted NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹
Chlorobenzilate 2,4-Dimethyl phenol Dimethyl phthalate Di-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitroco-cresol 2,4-Dinitrotoluene 2,4-Dinitrotoluene Di-n-orctyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC	and a second second second			0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92	NA 14 28 28 2.3 160 160 140 28 28 28 14	p-Dimethylaminoazobenzene Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methansulfonate Methyl parathion Metolcarb Mexacarbate Molinate					0.13 ¹ 0.089 0.28 0.14 0.14 0.018 0.018 0.014 0.056 ¹	NA 30 36 33 160 NA 4.6 1.4 ¹ 1.4 ¹
2.4-Dimethyl phenol Dimethyl phthalate Di-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrotoluene 2,4-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.036 0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92	14 28 2.3 160 160 140 28 28 14	Methylene chloride Methyl ethyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methansulfonate Methyl parathion Metolcarb Mexacarbate Molinate					0.28 0.14 0.14 0.018 0.018 0.014 0.056 ¹	36 33 160 NA 4.6 1.4 ¹ 1.4 ¹
Dimethyl phthalate DI-n-butyl phthalate I,4-Dinitrobenzene 4,6-Dinitrobenzene 2,4-Dinitroblene 2,4-Dinitrotoluene DI-n-octyl phthalate DI-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.047 0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92	28 28 2.3 160 160 140 28 28 28 14	Methyl ethyl ketone Methyl isobutyl ketone Methyl methacrylate Methyl methansulfonate Methyl parathion Metolcarb Mexacarbate Molinate					0.14 0.14 0.018 0.014 0.056 ¹ 0.056 ¹	33 160 NA 4.6 1.4 ¹ 1.4 ¹
Di-n-butyl phthalate 1,4-Dinitrobenzene 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan 1 Endosulfan 11 Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.057 0.32 0.28 0.12 0.32 0.55 0.017 0.40 12.0 0.92	28 2.3 160 160 140 28 28 28 14	Methyl methacrylate Methyl methansulfonate Methyl parathion Metolcarb Mexacarbate Molinate					0.14 0.018 0.014 0.056 ¹ 0.056 ¹	160 NA 4.6 1.4 ¹ 1.4 ¹
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4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,4-Dinitrotoluene 2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan Sulfate Endosulfan sulfate Endrin				0.12 0.32 0.55 0.017 0.40 12.0 0.92	160 140 28 28 14	Methyl parathion Metolcarb Mexacarbate Molinate					0.014 0.056 ¹ 0.056 ¹	4.6 1.4 ¹ 1.4 ¹
2,4-Dinitrotoluene 2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.32 0.55 0.017 0.40 12.0 0.92	140 28 28 14	Metolcarb Mexacarbate Molinate				1	0.056 ¹	1.41
2,6-Dinitrotoluene Di-n-octyl phthalate Di-n-propylnitrosamine 1,4-Dioxane Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan I Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.55 0.017 0.40 12.0 0.92	28 28 14	Mexacarbate Molinate						
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Di-n-propyinitrosamine 1,4-Dioxane Diphenyiamine ³ Diphenyinitrosamine ³ 1,2-Diphenyihydrazine Disulfoton Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.40 12.0 0.92	14	Marktholone						1.41
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Diphenylamine ³ Diphenylnitrosamine ³ 1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan 1 Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC			F			2-Naphthylamine					0.52 0.27 ¹	NA 141
DiphenyInitrosamine ³ 1,2-DiphenyIhydrazine Disulfoton Dithiocarbamates (total) Endosulfan 1 Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				10.00	13'	o-Nitroaniline			-+		0.028	28
1,2-Diphenylhydrazine Disulfoton Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.92	13'	p-Nitroaniline			+		0.068	14
Dithiocarbamates (total) Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.087	NA	Nitrobenzene 5-Nitro-o-toluidine			+		0.32	28
Endosulfan I Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC			_	0.017	6.2 28 ¹	o-Nitrophenol			T		0.0281	13'
Endosulfan II Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.028	0.066	p-Nitrophenol			T		0.12	29
Endosulfan sulfate Endrin Endrin aldehyde EPTC				0.029	0.13	N-Nitrosodiethylamine			F		0.40	28
Endrin Endrin aldehyde EPTC				0.029	0.13	N-Nitrosodimethylamine			+-		0.40	2.3 ¹
Endrin aldehyde EPTC				0.0028	0.13	N-Nitroso-di-n-butylamine					0.40	17 2.3
EPTC				0.025	0.13	N-Nitrosomethylethylamine			+		0.40	2.3
				0.042'	1.41	N-Nitrosomorpholine			+-		0.013	35
Ethyl acetate		-+		0.34	33	N-Nitrosopiperidine N-Nitrosopyrrolidine			 		0.013	35
Ethyl benzene				0.057	10 360	Oxamyl			<u> </u>		0.0561	0.281
Ethyl cyanide/Propanenitrile		4	8	0.24	160	Parathion			a		0.014	4.6
Ethyl ether		\$10	<u> </u>			Total PCBs (sum of all PCB		Su	8		0.10	10
Bis(2-Ethylhexyl)phthalate		10		0.28	28	isomers or all Arociors)		2	<u>6</u>			1
Ethyl methacrylate		-+*		0.14	160	Pebulate			X		0.042 ¹ 0.055 ¹	1.4 ¹ 10 ¹
Ethylene oxide		\top		0.12	NA	Pentachlorobenzene					0.055	
		T		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		1			0.000035	0.001
Famphur						PecDFs(All		-+-			0.000005	0.001
Fluoranthene				0.068	3L.4	Pentachlorodibenzofurans)	ļ				0.000035	
				0.059	3.4	Pentachloroethane		T			0.055	6.0
Fluorene				0.0561	1.4	Pentachloronitrobenzene					0.055	4.8
Formetanate hydrochioride Heptachior				0.0012	0.066	Pentachlorophenol					0.089	7.4
Heptachlor epoxide		1		0.016	0.066	Phenacetin					0,081	16 5.6
Hexachlorobenzene				0.055	10	Phenanthrene					0.059	6.2
Hexachlorobutadiene				0.055	5.6	Phenol		—			0.039	4.6
Hexachlorocyclopentadlene				0.057	2.4	Phorate	<u> </u>	1				
HxCDDs (All				0.000063	0.001	Phthalic acid		1			0.055 ¹	28 ¹
Hexachrorodibenzo-p-dioxins)								1			0.055	28 ¹
HxCDFs (All				0.000063	0.001	Phthalic anhydride						
Hexachlorodibenzofurans) Hexachloroethane	├			0.055	30	Physostigmine					0.056	1.4
Hexachloropropylene	├─ - / -			0.035	30	Physostigmine salicylate					0.0561	1.4
Indeno(1,2,3-c,d)pyrene				0.0055	3.4	Promecarb	┼─-┦				0.0561	1.4 ¹ 1.5
Iodomethane				0.19	65	Pronamide	+				0.093	1.4
Isobutyl alcohol				5.6	170	Propham	+ +				0.0561	1.4
Isodrin				0.021	0.066	Propoxur Prosulfocarb	+				0.0421	1.4'
Isosafrole				0.081	2.6	Prosunocarb	+ +				0.067	8.2
Kepone	⊢ ┨ ──			0.0011	84	Pyridine					0.014	16
Methacrylonitrile	+			5.6	0.75 mg/l ¹	Safrole					0.081	22
Methanol	+-1			0.081	1.5	Slivex/2,4,5-TP	T				0.72	7.9
Methapyrilene Methiocarb	++			0.0561	1.41	1,2,4,5-Tetrachlorobenzene	+				0.055	14
Methomyl	1			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)	⊥				0.000063	0.001
Methoxychlor	1			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)	1				0.000063	0.001
3-Methylcholanthrene	11.			0.0055	15	1,1,1,2-Tetrachloroethane				~	0.057	
4,4'-Methylene bis(2- chloroaniline)				→ 0.50	30	1,1,2,2-Tetrachloroethane	Ť			\rightarrow	0.057	6.0

Form B1 Page 2 of 3

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CONSTITUENT.	HOW MUST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST THIS	WW (mg/l):	NWW (mg/kg)
	THIS ICONSTITUENT BE MANAGED?		uniess noted		CONSTITUENT BE MANAGED?		unless noted
Tetrachloroethylene	<	0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony	<>	1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene	20	0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane	40	0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	0	0,054	6.0	Chromium (Total)		2.77	0.60 mg/l. TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)	50	1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)	E d'	0.86	30 ¹
2,4,5-Trichlorophenol	+	0.18	7.4	Fluoride	p.	35	NA ⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead .		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic	+	0.72	7.9	Lead		0.69	0.75 mg/l TCLP
acid/2,4,5-T 1,2,3-Trichloropropane	+ /	0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2-		0.057	30	Mercury (All others)		0.15	0.025 mg/ TCLP
trifluoroethane Triethylamine	+ /	0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2.3-	1	0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Dibromopropyl)phosphate	1	0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyi chloride	1	0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xvienes - mixed isomers (sum	¥;	0.32	30	Silver		0.43	0.30 mg/l TCLP
of o-,m-, and p-xylene				Silver		0.43	0.14 mg/l
			1	Sulfide		14	NA ²
	M3 19	F		Thallium		1.4	0.078 mg TCLP ¹
	99-19	-		Thallium		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
				Zinc	¥:	2.61	4.3 mg/l TCLP ²

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. ² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon

Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state. 5

> Form B1 Page 3 of 3

121810-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	FRNP	_ Manifest Doc. No. :	019694669JJK
Profile No.:	PAD-WD-0868-R2-V4	_ State Manifest No.:	NIA
		Nen westowst	or Mustowater

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater I Wastewater I
 Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the

)SSI - 19-096

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 of N 201. For each waste code, having the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

		SUBGASTERING SUGACIANTS TRANSPORTED TO A CONTRACT SUBJECT OF THE SUGACIANTS SUBJECT OF THE SUGACIANTS SUBJECT O	ાતક	novente de la versite de la companya de la company La companya de la comp
	APASHECOULS)	The second s	analeti.	
1	D006	Cadmium	\square	А
2	D008	Lead	\square	A
3				
4				

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
 B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste compiles with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and compilete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that	all information	submitted in this and	ail associated do	cuments is complete and a	accurate, to the best	of my kn	oyvledg	e and information.
Signature	H: (U.V.	Title	Waste Engineer	Date_	OS,	107	2019
$\frac{1}{7}$,	,	
	t			Form A1 Page 1 of 2				

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

Huni Uneugh HUESEPAN Selvero			<u>ທີ່ສະຖະສະຫຼາກສາຫຼະຣາທິເດກະກະຫຣັດ</u> - Fathe ປະເທດເຊຣ 2005 ຮຽດກ. ເວລາຊັດກະພະນະມະນາກໍຣາ ຄະດີສາກໃຫຼ	ີ ກາວກັງກັບເຖິງໄດ້ເກັນ ເພື່ອງເດັ່ນແກ່ນເຮົ	en stario Nali
Fubi dhengh Fubsa an salvad constituents and then statistical FSFF antizarious weater (2014)	WEGATION	Navyetevies	CESTING USER ATTOMS	- Wasiowiles - S.	HINVERGURIG
Acetone (F003)	0,28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0,28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chiorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5,6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5,6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- lsomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. A,

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

		TIFICATION AND CERTIFICATION	
Generator Name:	FRNP	Manifest Doc. No. :	019694669JJK
Profile No.:		State Manifest No.:	NIA
This form is a contin	uation from form A1 for a waste io	dentified by more than five USEPA waste co	ode/subcategory groups. This page by itsel
IS NOT an accentat	he Land Disposal Notification and	Certification Form.	
		PA hazardous wastes that apply to this was tegory (write in the description from 40 CFF	
mat have a subactor	ion() Also idenfify in column 5 h0	w the waste must be managed. Spent solve	
111	- Jarlying horordous constituent(s	s) if applicable must be listed and allached.	
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I hereby certify that 3/10 formation submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Waste Engineer Title

08/07/2019 Date ____

Form A2 Page 1 of 2

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۰,

enerator Name:	FRNP	Manifest Doc. No. :	019694669550				
		State Manifest No.:	NIA				
ofile No.:	uction from form A1 for a waste ider	tified by more than five USEPA waste co					
ontinue (from form or each waste num	ber, identify the corresponding subc	hazardous wastes that apply to this wast ategory (write in the description from 40 (b how the waste must be managed. Sper it(s) if applicable, must be listed and attac distinguished was a similar to the similar of the similar becomen and the manual of the similar of the simi	CFR 268.40, of check NONE II life was				
NAVAN NAVEL	(40(0))S (5))	DESCAUPTION					
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Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:

FRNP

Manifest Doc. No. :

019694669550

Profile No.:

State Manifest No.:

NIA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST	WW	NWW	CONSTITUENT	HOW MUST	WW (mg/l)	(mg/kg)
	THIS	((mg/l))	(mg/kg) unless		CONSTITUENT	101907	unless
	BEMANAGED		noted		BE MANAGED?		noted
		22月1日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日			<i< td=""><td>0.057</td><td>0.28¹</td></i<>	0.057	0.28 ¹
Acenaphthylene	<	0.059	3.4	2-Chloro-1,3-butadiene		0.057	15
Acenapthene		0.059	3.4	Chlorodibromomethane	f	0.057	6.0
Acetone		0.28	160	Chloroethane		0.27	7.2
Acetonitrile	· · · ·	5.6	381	bis(2-Chioroethoxy)methane bis(2-Chioroethyl)ether		0.033	6.0
Acetophenone		0.010	9.7	Chloroform		0.046	6.0
2-Acetylaminofluorene		0.059	140 NA	bls(2-Chioroisopropyl)ether	 	0.055	7.2
Acrolein	ļ	0.29 19 ¹	23 ¹	p-Chloro-m-cresol		0.018	14
Acylamide			84	2-Chloroethyl vinyl ether		0.0621	NA ¹
Acrylonitrile	↓↓	0.24		Chloromethane/Methyl	[
Aldicarb sulfone		0.0561	0.281	chloride		0.19	30
Aldrin		0.021	0.066	2-Chloronaphthalene	 	0.055	5.6
4-Aminobiphenyl		0.13	NA	2-Chlorophenol	 	0.044	5.7
Aniline		0.81	14	3-Chloropropylene	 	0.036	30
Anthracene		0.059	3.4	Chrysene		0.059	3.4
Aramite		0.36	NA	o-Cresol		0.11	5.6
alpha-(BHC)		0.00014	0.066	m-Cresol	 	0.77	5.6
beta-(BHC)		0.00014	0.066	p-Cresol		0.77	5.6
delta-(BHC)		0.023	0,066	m-Cumenyl methylcarbamate		0.0561	1.41
gamma-(BHC)		0,0017	0.066	Cyclohexanone		0.36	0.75 mg/l ¹
Barban		0.0561	1.41	o,p'-DDD		0.023	0.087
Bendiocarb		0.0561	1.41	p,p'-DDD		0.023	0.087
Benomyl		0.0561	1.41	o,p'-DDE		0.031	0.087
Benzene		0.14	10	p,p'-DDE		0.031	0.087
Benz(a)anthracene		0.059	3.4	o,p'-DDT		0.0039	0.087
Benzal chloride		0.0551	6.0 ¹	p,p'-DDT		0.0039	0.087.
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(k)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo (g,h,i)perylene		0.0055	1.8	1,2-Dibromo-3-chloropropane		0.11	15
Benzo(a)pyrene		0.061	3.4	1,2-Dibromomethane/ Ethylene dibromide		0.028	15
Bromodichloromethane		0.35	15	Dibromomethane		0.11	15
Bromomethane/Methyl		0.11	15	m-Dichlorobenzene		0.036	6.0
Bromide 4-Bromophenyl phenyl ether	+	0.055	15	o-Dichlorobenzene		0.088	6.0
n-Butyl alcohol	+	5.6	2.6	p-Dichlorobenzene		0.090	6.0
Butylate	+	0.0421	1.4	Dichlorodifluoromethane		0.23	7.2
Butyl benzyl phthalate	+	0.017	28	1.1-Dichloroethane	1	0.059	6.0
2-sec-Butyl-4,6-	+			1,2-Dichloroethane		0.21	6.0
dinitrophenol/Dinoseb	<u> </u>	0.066	2.5	•	├/	0.025	6.0
Carbaryl	<u> </u>	0.0061	0.14	1,1-Dichloroethylene	├/		30
Carbenzadim	<u> </u>	0.0561	1.4	trans-1,2-Dichloroethylene	├- 	0.054	14
Carbofuran		0.0061	0.14	2,4-Dichlorophenol	├-/	0.044	14
Carbofuran phenol		0.0561	1.41	2.6-Dichlorophenol	- 	1	1
Carbon disulfide		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D	ļ.	0.72	10
Carbon tetrachloride		0.057	6.0	1,2-Dichloropropane		0.85	18
Carbosulfan		0.028 ¹	1.41	cis-1,3-Dichloropropylene	+1	0.036	18
Chlordane (alpha and gamma isomers)		0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
p-Chloroaniline	1	0.46	16	Dieldrin		0.017	0.13
Chlorobenzene	¥	> 0.057	6.0	Diethyl phthalate	×	0.20	28

Form B1 Page 1 of 3

CONSTITUENT	HOW MU THIS	SIT	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	THIS	(mg/l)	NWW (mg/kg)
	CONSTIT	UENT	(ingin	unless		CONSTITUENT		uniess
	BE MANA			noted		BE MANAGED?		noted NA
Chlorobenzilate			0.10	NA				30
2,4-Dimethyl phenol	_		0.036	14 28	Methylene chloride Methyl ethyl ketone			36
Dimethyl phthalate			0.047	28	Methyl isobutyl ketone			33
Di-n-butyl phthalate			0.037	2.3	Methyl methacrylate	1	0.14	160
1,4-Dinitrobenzene			0.32	160	Methyl methansulfonate			NA
4,6-Dinitro-o-cresol 2,4-Dinitrophenol			0.12	160	Methyl parathion			4.6
2.4-Dinitrotoluene			0.32	140	Metolcarb			1.41
2.6-Dinitrotoluene			0.55	28	Mexacarbate		0.056 ¹ 0.042 ¹	1.4 ¹ 1.4 ¹
Di-n-octyl phthalate			0.017	28	Molinate		0.042	5.6
Di-n-propylnitrosamine			0.40	14	Naphthalene	[]	0.52	NA
1,4-Dioxane			12.0	170	2-Naphthylamine		0.271	141
Diphenylamine ³			0.92	13 ¹ 13 ¹	o-Nitroaniline p-Nitroaniline		0.028	28
Diphenylnitrosamine ³			0.92	NA	Nitrobenzene		0.068	14
1,2-Diphenylhydrazine			0.087	6.2	5-Nitro-o-toluidine		0.32	28
Disulfoton			0.017	281	o-Nitrophenol		0.0281	13 ¹
Dithiocarbamates (total) Endosulfan I			0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan I			0.029	0.13	N-Nitrosodiethylamine		0.40	28
Endosulfan sulfate			0.029	0.13	N-Nitrosodimethylamine		0.40	2.3 ¹
Endrin			0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin aldehyde			0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3 2.3
EPTC			0.0421	1.41	N-Nitrosomorpholine			35
Ethyl acetate	· .		0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl benzene			0.057	10	N-Nitrosopyrrolidine		0.013	0.281
Ethyl cyanide/Propanenitrile			0,24	360	Oxamyl		0.036	4.6
Ethyl ether			0.12	160	Parathion Total PCBs (sum of all PCB			
Bis(2-Ethylhexyl)phthalate		1	0.28	28	isomers or all Aroclors)		0.10	10
		1	0.14	160	Pebulate		0.0421	1.41
Ethyl methacrylate Ethylene oxide			0,12	NA	Pentachlorobenzene		0.0551	10 ¹
		1	0.017	15	PeCDDs (All		0.000035	0.001
Famphur		L	0.017	ļ	Pentachlorodibenzo-p-dioxins)			
Fluoranthene		1	0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)	1 1	0,000035	0.001
			0.059	3.4	Pentachloroethane		0.055	6.0
			0.0561	1.4	Pentachloronitrobenzene		0.055	4.8
Formetanate hydrochloride Heptachlor			0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide			0.016	0.066	Phenacetin		0.081	16
Hexachlorobenzene			0.055	10	Phenanthrene		0.059	5.6
Hexachlorobutadiene			0.055	5.6	Phenol		0.039	6.2
Hexachlorocyclopentadiene			0.057	2.4	Phorate	+	0.021	4.6
HxCDDs (All Hexachrorodibenzo-p-dioxins)			0.000063	0.001	Phthalic acid	<u> </u>	0.0551	281
HxCDFs (All Hexachlorodibenzofurans)			0.000063	0.001	Phthalic anhydride		0.055	281
Hexachloroethane	+		0.055	30	Physostigmine		0.0561	1.4
Hexachioropropylene			0.035	30	Physostigmine salicylate	<u> </u>	0.0561	1.41
Indeno(1,2,3-c,d)pyrene			0.0055	3.4	Promecarb	+	0.0561	1.4 ¹ 1.5
lodomethane			0.19	65	Pronamide	+ +	0.093	1.5
Isobutyl alcohol			5.6	170	Propham		0.0561	1.4
Isodrin			0.021	0.066	Propoxur	+ +	0.042	1.4
Isosafrole	↓ 		0.081	2.6 0.13	Prosulfocarb Pyrene	+	0.042	8.2
Kepone	+		0.0011	84	Pyridine		0.014	16
Methacrylonitrile	+		5.6	0.75 mg/l ¹	Safrole	+	0.081	22
Methanol	+		0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methapyrilene	++		0,0561	1.4	1,2,4,5-Tetrachlorobenzene		0.055	14
Methiocarb Methomyl	+1		0.0281	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor	+1		0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
3-Methylcholanthrene			0,0055	15	1,1,1,2-Tetrachloroethane		0.057	6.0
	1.				1,1,2,2-Tetrachloroethane	N/ ~	0.057	6.0

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST THIS CONSTITUENT	WW (mg/l)	NWW (mg/kg) unless
	CONSTITUENT BE:MANAGED?		unless noted		BE MANAGED?	1000 1000 1000 1000 1000 1000 1000 100	noted
Tetrachioroethylene	<	0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1. 4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.60 mg/l TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0,86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/l TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.10 ¹	Nickel		3,98	11 mg/l TCLP ⁴
Vernolate		0.042 ¹	6.0 ¹	Selenium	<u> </u>	0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum of om-, and p-xylene		0.32	30	Silver		0.43	0.30 mg/l TCLP
OI 0-,ITP, and p-xylone				Silver		0.43	0.14 mg/l TCLP ⁴
	1			Sulfide		14	NA ²
				Thallium		1.4	0.078 mg/ TCLP ¹
	1			Thallium		1.4	0.20 mg/l TCLP ⁴
	1			Vanadium		4.3 ²	1.6 mg/l TCLP ²
	*	>		Zinc	¥	▶ 2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

121755-01	D35I-19-096
•	LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP) Manifest Doc. N	o.: 019679667032
Profile No.:	PAD - WD - 0838 - V.5 State Manifest N	NO.: N/A

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268,48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	194117 	SDEATERNY ISANGER MERSONE SERVICE (SERVICE) AND	07(1) 	과 (月19년 전) 전 (月19년 전) (현종)(日 (日 (南19년 년 - 201 (南19년 년 - 11년 년 - 11년 년 - 11년 - 11년 (肖肖군)(현종)
1	D004	CADMIUM		A
2	D006	NON-WASTEWATER EXHIBITING THE CHARACTERISTIC		A
		NON-WASTEWATER EXHIBITING THE CHARACTERISTIC		. A
3	D008	SELENIUM	M	A
4	D010	SELEINIUM		

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to

refer to those state citations instead of the 40 CFR citations. RESTRICTED WASTE REQUIRES TREATMENT

Α. This waste must be treated to the applicable treatment standards set forth In 40 CFR Part 268.40.

- For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this B,1 certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this **B.3** certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, i believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This **B.4** decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. C. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this D. certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete.
 - I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS

E. This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associ	ated documents is complete and accurate, to the	e best of my knowledge and information.
I hereby certify that all information submitted in this and an access		5/22/10
Signature Aonia Alena Title	Waste Engineer	Date
Signature		· · · · ·

Form A1 Page 1 of 2

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		Soundantente			
ជាចំណូត កម្រាំមើមជំរំសូក្រមាននៃទៅកម្ម។ ក្មេតប្រកួតគេ ភ្នំពេះអំពោះនេះសេមីដែល ពីភ្លឺភ្នំភ្នំ ក្រសួរក្មណ៍នេះសេមភូមិមេសែខ្មែរ	- Quartent	misienthard	i yuu dagan duni sisti Silon aagkan sadari asgan a Gyrt (duni sadari asgan a Witt (duni sadari Vada aab (sa	Turennin Fride	re Mainwerthaveirie
and a state of the second s	<u>Mersidenfelte</u>	Worner (PULICE)		and Plate at the second se	0.75 (TCLP) ³
Acetone (F003)	0.28	160.	Methanol (F003)	5.6	0.75 (1061)-
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
Duburd (a bubil clopbal) (5002)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
n-Butanol (n-butyl alcohol) (F003)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon disulfide (F005)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Carbon tetrachloride (F001) Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
	0,11	5.6	Pyridine (F005)	· 0.014	16
p-Cresol (F004) Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
Cyclohexanone (F003) p-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
ethylene glycol, monoethyl ether	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl acetate (F003) Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020 、	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class | SDWA systems. Α,

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. В.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D,

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

CP3-WM-0437-F04 FR1

Generator Name:	FRNP

Manifest Doc. No. :

019694669556

This page by itself

Profile No.:

State Manifest No.:

NIA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. The page	.,
This form is a continuous of home of herification and Certification Form.	
IS NOT an acceptable Land Disposal Notification and Certification Form.	261), For
IS NOT an acceptable Land Disposal Notification and Continuation wastes that apply to this waste shipment (as defined by 40 CFR	

Continue (from form A1, Page 1) to identify ALL OSEPA nazardous wastes that apply to this waste supment (as denited by 40 or (201), 10 each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2, F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	homa	litah.
Title	Waste Engineer	

Date 8/23/19

Form A2 Page 1 of 2

Generator Name:

FRNP

Manifest Doc. No. :

State Manifest No.:

019694669JJK

NIA

Profile No .:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268,40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Date 8/23/19 Signature Waste Engineer Title

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	FRNP	_ Manifest Doc. No. :	019694669JK
Generator Name:		State Manifest No.:	A)(A
Profile No.:		_ Glate Marilest No	

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST			NWW	CONSTITUENT		www. mg//)	NWW Ima/Rai)
A THE REAL PROPERTY OF A DESCRIPTION OF A	THIS		(mg/l),	(mg/kg)		CONSTITUENTED		(mg/kg). juniess
	CONSTITUEN	T		uniese		BE MANAGED?		noted
	BEIMANAGED	17		noted			0.057	0.28
Acenaphthylene	SEACE AD DE NYLLIS COM		0.059	3,4	2-Chloro-1,3-butadiene		0.057	15
Acenaphene	<u>`</u>	-1	0.059	3,4	Chlorodibromomethane		0.037	6.0
Acetone		-//	0.28	160	Chioroethane		0.036	7.2
Acetonitrile			5.6	38'	bis(2-Chloroethoxy)methane		0.033	6.0
Acetophenone		11	0.010	9.7	bis(2-Chloroethyl)ether		0.035	6.0
2-Acetylaminofluorene		-11	0.059	140	Chloroform		0.055	7.2
Acrolein		11	0.29	NA	bis(2-Chloroisopropyl)ether		0.018	· 14
Acviamide			19 ¹	231	p-Chloro-m-cresol		0.0621	NA'
Acrylonitrile	-		0.24	84	2-Chloroethyl vinyl ether			
		T	0.056 ¹	0.28 ¹	Chloromethane/Methyl		0.19	30
Aldicarb sulfone							0.055	5.6
Aldrin			0.021	0.066	2-Chloronaphthalene		0.044	5.7
4-Aminobiphenyl			0.13	NA	2-Chlorophenol 3-Chloropropylene		0.036	30
Aniline			0.81	14			0.059	3.4
Anthracene			0.059	3.4	Chrysene o-Cresol		0,11	5.6
Aramite			0.36	NA		A	0.77	5.6
alpha-(BHC)			0,00014	0.066	m-Cresol	A	0.77	5.6
beta-(BHC)			0.00014	0.066	p-Cresol m-Cumenyl methylcarbamate	<u> </u>	0.0561	1.41
delta-(BHC)			0.023	0.066	Cyclohexanone		0,36	0.75 mg/l1
gamma-(BHC)	Q.		0.0017	0.066	o,p'-DDD		0.023	0.087
Barban	<u> </u>		0.0561	1.4	p,p'-DDD		0.023	0.087
Bendiocarb	N		0.0561	1.4	o,p'-DDE		0.031	0.087
Benomyl	N		0.0561	1.41	p,p'-DDE		0.031	0.087
Benzene	N N		0.14	10			0.0039	0,087
Benz(a)anthracene	0		0.059	3.4	o,p'-DDT		0.0039	0.087
Benzal chloride	.4		0.0551	6.0 ¹	p,p'-DDT		0.055	8.2
Benzo(b)fluoranthene ³	51		0.11	6.8	Dibenz(a,h)anthracene		0.061	NA
Benzo(k)fluoranthene ³			0.11	6.8	Dibenz(a,e)pyrene 1,2-Dibromo-3-chloropropane		0.11	15
Benzo (g,h,i)perylene			0.0055	1.8	1,2-Dibromo-3-chioropropane			
	· /		0.061	3.4			0.028	15
Benzo(a)pyrene					Ethylene dibromide Dibromomethane		0.11	15
Bromodichloromethane			0.35	15				0.0
Bromomethane/Methyl			0.11	15	m-Dichlorobenzene		0.036	6.0
Bromide					o-Dichlorobenzene		0.088	6.0
4-Bromophenyl phenyl ether			0.055	15	p-Dichlorobenzene		0.090	6.0
n-Butyl alcohol			5.6	2.6	Dichlorodifluoromethane		0.23	7.2
Butylate			0.042	1.4	1,1-Dichloroethane		0.059	6.0
Butyl benzyl phthalate			0.017	28				6.0
2-sec-Butvi-4,6-				25	1,2-Dichloroethane		0.21	0.0
dinitrophenol/Dinoseb	1		0.066	2.5 0.14 ¹	1,1-Dichloroethylene		0.025	6.0
Carbaryi			0.0061	1.4	trans-1,2-Dichloroethylene	1	0.054	30
Carbenzadim	<u></u>		0.0561		2.4-Dichlorophenol		0.044	14
Carbofuran	1		0.0061	0.141	2,4-Dichlorophenol		0.044	14
Carbofuran phenol	·		0.0561	1.4	2,4-Dichlorophenoxyacetic			10
	1 /		3,8	4.8 mg/i TCLP ¹	acid/2,4-D		0.72	10
Carbon disulfide	1/						0,85	18
Carbon tetrachloride			0.057	6.0	1,2-Dichloropropane			18
Carbosulfan	+/		0.0281	1.41	cis-1,3-Dichloropropylene		0.036	
Chlordane (alpha and gamma					trans-1,3-Dichloropropylene	1	0.036	18
	11		0.0033	0.26			0.017	0.13
Isomers) p-Chloroaniline	+/		0.46	16	Dieldrin		0.017	28
Chlorobenzene	\mathbf{V}		0.057	6.0	Diethyl phthalate		0.20	20

Form B1 Page 1 of 3

CONSTITUENT	HOW MI	IST		WW (mg/l)	NWW (mg/kg)		THIS			(mg/l)	NWW (mg/kg)
	LCONSTI	TUEN	T		unless			STUTUEN			unless 7 (noted
	BEMAN	AGED	12:52		noted	p-Dimethylaminoazobenzene	BEIM	ANAGEL	RESIST		NA
Chlorobenzilate	<			0.10		Methylene chloride				0,089	30
2,4-Dimethyl phenol				0.036		Methyl ethyl ketone					36
Dimethyl phthalate				0.047		Methyl Isobutyl ketone					33
DI-n-butyl phthaiate				0.32	2.3	Methyl methacrylate					160
1,4-Dinitrobenzene 4,6-Dinitro-o-cresol			-++	0.28	160	Methyl methansulfonate					NA
2,4-Dinitrophenol			-11	0,12	160	Methyl parathion				0.014 0.056 ¹	4.6 1.4'
2,4-Dinitrotoluene				0.32	140	Metolcarb				0.056	1.4
2,6-Dinitrotoluene			\Box	0.55	28	Mexacarbate				0.0421	1.41
Di-n-octyl phthalate				0.017	28	Molinate			-+-+	0.059	5.6
DI-n-propyInitrosamine				0,40	14 170	Naphthalene 2-Naphthylamine			++	0.52	NA
1,4-Dioxane			+	12.0	131	o-Nitroaniline			++	0.27 ¹	141
Diphenyiamine ³			\vdash	0.92	13	p-Nitroaniline				0.028	28
Diphenyinitrosamine ³			$\left - \right $	0.92	NA	Nitrobenzene				0,068	14
1,2-Diphenylhydrazine				0.007	6.2	5-Nitro-o-toluidine				0.32	28
Disulfoton Dithiocarbamates (total)				0.028	281	o-Nitrophenol			$\mid \mid \mid$	0.028	131
Endosulfan i				0.023	0.066	p-Nitrophenol			$ \vdash $	0.12	29 28
Endosulfan II				0.029	0.13	N-Nitrosodiethylamine				0.40	28 2.3 ¹
Endosulfan sulfate				0.029	0.13	N-Nitrosodimethylamine				0.40	17
Endrin				0.0028	0.13	N-Nitroso-di-n-butylamine				0.40	2.3
Endrin aldehyde				0.025	0.13 1.4 ¹	N-Nitrosomethylethylamine		+		0.40	2.3
EPTC		-+		0.042	33	N-Nitrosopiperidine				0.013	35
Ethyl acetate		-84-		0.34 0.057	10	N-Nitrosopyrrolidine		5		0.013	35
Ethyl benzene		X		0.057	360	Oxamyl		V		0.0561	0.28 ¹
Ethyl cyanide/Propanenitrile		St.		0.24	160	Parathion		A.Y		0.014	4.6
Ethyl ether		X				Total PCBs (sum of all PCB		N		0,10	10
Bis(2-Ethylhexyl)phthalate				0.28	28	isomers or all Arociors)		<u> </u>			1.41
Ethyl methacrylate	1			0.14	160	Pebulate	ļ	-4		0.0421	1.4
Ethylene oxide	U C	1		0.12	NA	Pentachlorobenzene					
		T		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		4		0.000035	0.001
Famphur		1				PecDFs(All					0.004
Fluoranthene		1		0.068	3L.4	Pentachlorodibenzofurans)				0,000035	0.001
		 		0.059	3.4	Pentachloroethane	1			0.055	6.0
Fluorene				0.0561	1.41	Pentachloronitrobenzene				0.055	4.8
Formetanate hydrochloride				0.0012	0,066	Pentachlorophenol				0.089	7.4
Heptachlor Heptachlor epoxide	++			0.016	0.066	Phenacetin				0.081	16
Hexachlorobenzene				0.055	10	Phenanthrene				0.059	5.6 6.2
Hexachlorobutadiene	+			0.055	5,6	Phenol				0.039	4.6
Hexachlorocyclopentadiene				0.057	2.4	Phorate					
HxCDDs (All				0.000063	0.001	Phthalic acid				0.0551	28 ¹
Hexachrorodibenzo-p-dioxins)					+		+			0.055	281
HxCDFs (All				0.000063	0.001	Phthalic anhydride				0.055	
Hexachlorodibenzofurans)	+			0.055	30	Physostigmine				0,0561	1.4'
Hexachloroethane Hexachloropropylene	+			0.035	30	Physostigmine salicylate				0.056	1.4
Indeno(1,2,3-c,d)pyrene	+			0.0055	3.4	Promecarb	<u> </u>			0.0561	1.41
Iodomethane	+			0.19	65	Pronamide	┿			0.093	1.5
Isobutyl alcohol				5.6	170	Propham	+	1		0.0561	1.4
Isodrin				0.021	0.066	Propoxur Prosulfocarb	+	1		0.0421	1.4
Isosafrole		-		0.081	2.6		+	 		0.042	8.2
Kepone	$\downarrow \downarrow _$			0.0011	0.13	Pyrene Pyridine	+			0.014	16
Methacrylonitrile	+			0.24	0.75 mg/l ¹	Safrole	+ +			0.081	22
Methanol	++			0.081	1.5	Silvex/2,4,5-TP	+ +			0.72	7.9
Methapyrilene	++			0.0561	1.4	1,2,4,5-Tetrachlorobenzene	± 1			0.055	14
Methlocarb	++					TCDDs (All	TT			0,000063	0.001
Methomyl	11			0,0281	0.14 ¹	Tetrachlorodibenzo-p-dloxins)	$\downarrow \downarrow$				
	11			0.05	0.18	TCDFs (All				0,000063	0.001
Methoxychior				0.25		Tetrachlorodibenzo-furans)	++			0.057	6.0
3-Methylcholanthrene				0.0055	15	1,1,1,2-Tetrachloroethane	++				
4,4'-Methylene bis(2-				0.50	30	1,1,2,2-Tetrachloroethane	11		~	0.057	6.0
4,4'-Wetriviene Dist2-			~	. U.DU	100	[],],Z,Z ⁻ [C(do(lot 000 line) 0	1				1

Form B1 Page 2 of 3

CONSTITUENT		ww	NWW	GONSTITUENT	A STATE OF A	WW (mg/l)	NWW (mg/kg)
	THIS CONSTITUENT BE MANAGED?		(mg/kg) Unless noted		THIS CONSTITUENT BEMANAGED?	Wigh States	uniess noteda
Tetrachloroethylene		0.056	6.0				
2,3,4,6-Tetrachlorophenol	/	0.030	7.4	Antimony	<	1.9	2.1 mg/l TCLP
Thiodicarb	/	0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl	· /	0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol	ST.	0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene	27	0.055	19	Cadmium	R	0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane	N.	0.054	6.0	Chromium (Total)	X	2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	3	·0.054	6,0	Chromium (Total)	X	2.77	0.60 mg/l TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)	4	1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)	4	0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride	1 1	35	NA ⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichioro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/l TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Vernolate		0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride	1/	0.27	6.0	Selenium		0.82	5.7 mg/l TCLP
Xylenes – mixed isomers (sum of o-,m-, and p-xylene	<u> </u>	0.32	30	Silver		0.43	0.30 mg/l TCLP
			\geq	Silver	· ·	0.43	0.14 mg/l TCLP ⁴
	- 119			Sulfide		14	NA ²
	cs 8123/19			Thallium		1.4	0.078 mg/l TCLP ¹
				Thallium		1.4	0.20 mg/l- TCLP ⁴
				Vanadium	· · ·	4.3 ²	1.6 mg/l TCLP ²
K			$ \longrightarrow $	Zinc	$\not \stackrel{\hspace{0.1cm} {}^{\hspace{-0.1cm} {}} {}^{\hspace{-0.1cm} {}^{\hspace{-0.1cm} {}^{\hspace{-0.1cm} {}^{\hspace{-0.1cm} {}^{\hspace{-0.1cm} {}}}}}}}}}}}}}}}}}}}}}}}}}} }}}} }} } } }$	2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. 1

Not an underlying hazardous constituent requiring treatment in a D001-D043 waste. 2

These compounds are regulated by the sum of their concentration instead of as individual constituents. 3

These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon 4 adoption by the state.

Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state. 5

> Form B1 Page 3 of 3

DSSI-19-096

121687-03

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)	Manifest Doc. No. :	01969466955K
Profile No.:	PAD-WO-0711-RI-U5	State Manifest No.:	NIA

ls this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🖾 Wastewater 🗌 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

			র্বাধীয় ও এই মানু বিজেনের হয়। মন্দ্রীয়া ব্যাহার আর্থনার সময় মন্দ্রীয় দিনের বিশিক্ষি হয়। বিজেনের মানু বিশ্বনির্বাদিনের ব্যানি বিশ্বনির্বাদ	kj⊑ L	
		Wrofs ille generations			
	1	D001	HI TOC TREATMENT	<u> </u>	A
	2	<			
·	3				>
	4				

To Identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the waste must be waste must be managed to comply with the waste must be managed to comply with the waste must be waste must be managed to comply with the waste must be wa	e land
disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authority will be de	rized by
disposal regulations (40 GFR 200.7). Please understand that if you enter the total the form	emed to
EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be de	
refer to those state citations instead of the 40 CFR citations.	

RESTRICTED WASTE REQUIRES TREATMENT A.

	ndards set forth in 40 CFR Part 268.40

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

B,1 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS **B.3**

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D. "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E. This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information. _____Date___<u>8/14/19</u> Title

Signature

Waste Engineer

Form A1 Page 1 of 2

12100/-03

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

កំណើមកើតត្រូវ (។លើក ទីត្រាំងកាទី ២៥ពី) សារា មកតាម សារី ម៉ែលីកីនីម៉ាន់សំនេះ ស្នោះដែរសំនេះ សារី ម៉ែលីកីនីម៉ាន់ម៉ែន់[]; ស្នោះដែរសំនេះ សារីម៉ាន់ សារីនីម៉ាស់អ៊ី[];];	くらん くじ シューショング やきやいしゃく	사람 회사가 드러운 것이 많이 못했다. 지수가 다	៣៩ នាន់ខ្មែរប្រវាអូមិត ទាស់ ដែល។ ចាប់។ អាមហត្ថ ហ៊ុត ភូនាំ កំណត់ សំណាំ និសាម (រកសំណាក សំណាក់ សំណាំ ខ្មែរបា	이 없는 것은 것을 잘 알려요. 이렇게 잘 들었다. 것은 것을 가지 않는 것을 했다.	
USTERNATION (CONTRACTOR OF STREET)	Vilecten efficies	Pertonacowije		wiegen weiten	to white the
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	. 10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or ((WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10 -
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30 -

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. A.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C,

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

12100	/-03
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Generator Name:	FRNP	Manifest Doc. No. :	019694669JK
Drafila No.:		State Manifest No.:	NIA

Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature 8/11/19 Date Waste Engineer Title

Form A2 Page 1 of 2

12100/-03

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694669570
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Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

State Manifest No .:

A

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

-	Α.	AL A	
Signature	_ Ama	Atan	\$11/14
Title	Waste Engineer	Date	0//4//7

Form A2 Page 2 of 2

12100/	1-03
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F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name: FRNP

Manifest Doc. No. :

0196946695510

and the second second second

NIA

Profile No.:

State Manifest No.:

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUST		WW (mg/l)	NWW (mg/kg))	CONSTITUENT	HOWMUST		WW/ mc/D	NWW (mg/kg)
	THIS CONSTITUE	NT	annana.	unless		CONSTITUE			unless
	BEMANAG			noted		BEMANAGE	D7		noted
Acenaphthylene		201325.4N	0.059	3.4	2-Chloro-1,3-butadiene	<		0.057	0.281
Acenapithene	<u> </u>	/	0.059	3.4	Chlorodibromomethane			0.057	15
Acetone			0.28	160	Chloroethane			0.27	6.0
Acetonitrile			5.6	38 ¹	bis(2-Chloroethoxy)methane			0.036	7.2
Acetophenone			0.010	9.7	bis(2-Chloroethyl)ether			0.033	6.0
2-Acetylaminofluorene			0.059	140	Chloroform			0.046	6.0
Acrolein			0.29	NA	bis(2-Chloroisopropyl)ether			0.055	7.2
Acylamide			19 ¹	23 ¹	p-Chloro-m-cresol			0.018	14 NA1
Acrylonitrile			0.24	84	2-Chloroethyl vinyl ether		 	0.0621	INA
Aldicarb sulfone			0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride			0.19	30
			0.021	0.066	2-Chloronaphthalene		T	0.055	5.6
Aldrin 4-Aminobiphenyl	+	-1	0.13	NA	2-Chlorophenol			0.044	5.7
Aniline	+		0.81	14	3-Chloropropylene		1	0.036	30
Anthracene	+	1-	0.059	3.4	Chrysene			0.059	3.4
Anthracene	+	+	0.36	NA	o-Cresol			0.11	5.6
alpha-(BHC)		1	0.00014	0.066	m-Cresol			0.77	5.6
beta-(BHC)		1	0.00014	0.066	p-Cresol			0.77	5.6
delta-(BHC)			0.023	0,066	m-Cumenyl methylcarbamate			0.0561	1.4 ¹
gamma-(BHC)			0.0017	0.066	Cyclohexanone			0.36	0.75 mg/l ¹
Barban			0.0561	1.41	o,p'-DDD			0.023	0.087
Bendiocarb	+		0.0561	1.41	p,p'-DDD			0.023	0.087
Benomyl	+		0.0561	1.4 ¹	o,p'-DDE			0.031	0.087
Benzene	1		0.14	10	p,p'-DDE			0.031	0.087
Benz(a)anthracene	1		0.059	3.4	o,p'-DDT			0.0039	0.087
Benzal chloride	1		0.0551	6.0 ¹	p,p'-DDT			0.0039	0.087
Benzo(b)fluoranthene ³	1		0.11	6.8	Dibenz(a,h)anthracene	<u> </u>		0.055	8.2
Benzo(k)fluoranthene ³			0.11	6.8	Dibenz(a,e)pyrene			0.061	NA
Benzo (g,h,i)perylene			0.0055	1.8	1,2-Dibromo-3-chloropropane			0.11	15
Benzo(a)pyrene			0.061	3.4	1,2-Dibromomethane/ Ethylene dibromide			0.028	15
	+		0.35	15	Dibromomethane	1		0,11	15
Bromodichloromethane	+					1 1		0.036	6,0
Bromomethane/Methyl Bromide			0.11	15	m-Dichlorobenzene	ļ			
4-Bromophenyl phenyl ether			0.055	15	o-Dichlorobenzene	<i>-</i>		0.088	6.0 6.0
n-Butyl alcohol			5.6	2.6	p-Dichlorobenzene			0.090	7.2
Butylate			0.0421	1.4 ¹	Dichlorodifluoromethane	<u>↓</u>		0.23	6.0
Butyl benzyl phthalate			0.017	28	1,1-Dichloroethane	+			1
2-sec-Butyl-4,6-			0.066	2.5	1,2-Dichloroethane			0.21	6.0
dinitrophenol/Dinoseb	+		0.0061	0.141	1,1-Dichloroethylene			0.025	6.0
Carbaryl Carbenzadim	+		0.056	1.4	trans-1,2-Dichloroethylene			0.054	30
Carbofuran	+		0.006	0.141	2,4-Dichlorophenol			0.044	14
Carbofuran phenol	+		0.0561	1.41	2.6-Dichlorophenol			0.044	14
Carbon disulfide	1		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D			0.72	10
Carbon tetrachloride	+		0,057	6.0	1,2-Dichloropropane	11		0.85	18
	+		0.0281	1.41	cis-1,3-Dichloropropylene	+1		0.036	18
Carbosulfan Chlordane (alpha and gamma	+1				trans-1,3-Dichloropropylene	11		0.036	18
isomers)			0.0033	0.26		-+		0.017	0.13
p-Chioroaniline		<u>.</u>	0.46	16	Dieldrin Diethul abthalata	V	~	0.017	28
Chlorobenzene	¥		→ 0.057	6.0	Diethyl phthalate		\rightarrow	0,20	

Form B1 Page 1 of 3

	how Mi This	IST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST	. WW (mg/l)	NWW (mg/kg)
	CONSTI BEMAN		11917	unless. noted		CONSTITUENT BE MANAGED?		unless. noted
Chlorobenzilate			0.10	NA	p-Dimethylaminoazobenzene		0.13 ¹	NA
2,4-Dimethyl phenol		/	0.036	14	Methylene chloride		0.089	30
Dimethyl phthalate	1		0.047	28	Methyl ethyl ketone		0.28	36
Di-n-butyl phthalate			0.057	28	Methyl isobutyl ketone		0.14	33 160
1,4-Dinitrobenzene	1		0.32	2.3	Methyl methacrylate		0.018	NA
4,6-Dinitro-o-cresol	+		0.28	160 160	Methyl methansulfonate		0.014	4.6
2,4-Dinitrophenol			0.12	140	Metolcarb		0.0561	1.41
2,4-Dinitrotoluene			0.55	28	Mexacarbate		0.0561	1.4 ¹
2,6-Dinitrotoluene Di-n-octyl phthalate			0.017	28	Molinate		0,0421	1.4
Di-n-propyInitrosamine			0.40	14	Naphthalene		0.059	5.6
.4-Dioxane			12.0	170	2-Naphthylamine	A	0.52	NA
Diphenylamine ³			0.92	13 ¹	o-Nitroanillne		0.271	14'
Diphenylnitrosamine ³			0.92	13 ¹	p-Nitroaniline		0.028	28 14
1,2-Diphenylhydrazine			0.087	NA	Nitrobenzene		0.068	28
Disulfoton			0.017	6.2 28 ¹	5-Nitro-o-toluidine		0.0281	13'
Dithiocarbamates (total)			0.028	0.066	p-Nitrophenol		0.12	29
Endosulfan I			0.023	0.000	N-Nitrosodiethylamine		0.40	28
Endosulfan II Endosulfan sulfate			0.029	0.13	N-Nitrosodimethylamine		0.40	2,3 ¹
Endrin			0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin aldehyde			0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC			0.0421	1.41	N-Nitrosomorpholine		0.40	2:3
Ethyl acetate			0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl benzene			0.057	10	N-Nitrosopyrrolidine		0.013	35 0.28 ¹
Ethyl cyanide/Propanenitrile			0.24	360	Oxamyl		0.056 ¹ 0.014	4.6
Ethyl ether			0.12	160	Parathion			1
Bis(2-Ethylhexyl)phthalate			0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)		0.10	10
Ethyl methacrylate			0.14	160	Pebulate		0.0421	1.4 ¹
Ethylene oxide)		0.12	NA	Pentachlorobenzene		0.055	+
Famphur			0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0,001
Fluoranthene		1	0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene			0.059	3.4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride			0.0561	1.41	Pentachloronitrobenzene		0.055	4.8
Heptachlor			0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide			0.016	0.066	- Phenacetin		0.081	16
Hexachlorobenzene			0.055	10	Phenanthrene		0.059	5.6
Hexachlorobutadiene			0.055	5.6	Phenol		0.039	6,2
Hexachlorocyclopentadiene			0.057	2.4	Phorate		0.021	4.6
HxCDDs (All Hexachrorodibenzo-p-dioxins)			0.000063	0.001	Phthalic acid		0.0551	28 ¹
HxCDFs (All Hexachlorodibenzofurans)			0.000063	0.001	Phthalic anhydride		0.055	28 ¹
Hexachloroethane			0.055	30	Physostigmine		0.0561	1.41
Hexachloropropylene			0.035	30	Physostigmine sallcylate	-	0.056	1.41
Indeno(1,2,3-c,d)pyrene			0.0055	3.4	Promecarb		0.0561	1.41
Iodomethane			0.19	65	Pronamide		0.093	1.5
Isobutyl alcohol			5.6	170	Propham Propoxur	+	0.0561	1.4
Isodrin	ļ		0.021	0.066	Propoxur	+	0.042	1.4
Isosafrole		_	0.081	0.13	Pyrene		0.067	8.2
Kepone Methacrylonitrile			0.24	84	Pyridine		0.014	16
Methacrylonitrile			5.6	0.75 mg/l ¹	Safrole		0.081	22
Methapyrilene			0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methiocarb			0.0561	1.4 ¹	1,2,4,5-Tetrachlorobenzene		0.055	14
Methomyl			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
-	+		0.0055	15	1,1,1,2-Tetrachloroethane		0.057	6.0
3-Methylcholanthrene								6.0
4,4'-Methylene bis(2- chloroaniline)	1		- 0.50	30	1,1,2,2-Tetrachloroethane		0.057	10.0

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	BE M/	ANAGI	ED?		noted	INORGANIC	BEM	ANAGEI	17 17		noted
Tetrachloroethylene			\rightarrow	0.056	6.0	CONSTITUENTS				1.0	2.1 mg/l
2,3,4,6-Tetrachlorophenol	<u> </u>			0.030	7.4	Antimony	< _		-1	1.9	TCLP
Thiodicarb	\bot			0.0191	1.41	Antimony			\dashv	1.9	TCLP ⁴ 5.0 mg/l
Thiophanate-methyl	\square			0.0561	1.41	Arsenic			\downarrow	1.4	TCLP 7.6 mg/l
Toluene				0.080	10	Barium			\perp	1.2	TCLP
Toxaphene				0.0095	2.6	Barium			\perp	1.2	21 mg/l TCLP ⁴
Triallate				0.042 ¹	1.4 ¹	Beryllium			Ľ	0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform				0.63	15	Beryllium				0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol				0.035	7.4	Cadmium				0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		\uparrow		0.055	19	Cadmium				0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		1		0.054	6.0	Chromium (Total)		.		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		1		0.054	6.0	Chromium (Total)				2.77	0.60 mg/l TCLP ⁴
Trichloroethylene				0.054	6.0	Cyanides (Total)				1.2	590
Trichloromonofluoromethane				0.020	30	Cyanides (Amenable)				0.86	30 ¹
2,4,5-Trichlorophenol				0.18	7.4	Fluoride				35	NA ⁴
2,4,6-Trichlorophenol				0.035	7.4	Lead		.		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T			1	0.72	7.9	Lead				0.69	0.75 mg/l⁴ TCLP
1,2,3-Trichloropropane			1	0.85	30	Mercury (Nonwastewater from Retort)				NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane				0.057	30	Mercury (All others)				0.15	0.025 mg/l TCLP
Triethylamine			1	0.081 ¹	1.5 ¹	Nickel		Τ		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate			-	0.11	0.10 ¹	Nickel				3.98	11 mg/l TCLP⁴
Vernolate				0.042 ¹	6.0 ¹	Selenium				0.82	0.16 mg/l TCLP
Vinyl chloride				0.27	6.0	Selenium	17			0.82	5.7 mg/l TCLP⁵
Xylenes - mixed isomers (sum	~ -			0.32 .	30	Silver				0.43	0.30 mg/l TCLP
of o-,m-, and p-xylene						Silver	\square			0.43	0.14 mg/l TCLP ⁴
					1	Sulfide				14	NA ²
					1	Thallium	$\uparrow \uparrow$			1.4	0.078 mg/l TCLP ¹
						Thallium	11-			1.4	0.20 mg/l TCLP ⁴
						Vanadium	1/			4.3 ²	1.6 mg/l TCLP ²
					>	Zinc	K		;	2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

 2 Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

DSSI-19-096

121753-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)
Profile No.:	PAD-WD-0711-R1-V5

Manifest Doc. No. :

019694669JJK

NIA

State Manifest No.:

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌 1. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	2 US 172	an ann ann ann ann ann ann ann ann ann	(191 <u>6)</u> (191 <u>6)</u>	
		MISTRY FILM	NO US	一個也等に同時に同意的な
1	D001	HI TOC TREATMENT		A
2	D018	Benzene		
3	<			
4				<u> </u>

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT A.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS **B.3**

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D. "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or Imprisonment." WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS

E. This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Waste Engineer_____Date____5/14/19 i otah Title 1 our Signature

> Form A1 Page 1 of 2

A-74

121/00-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

ગળેલ (દ્વારાભુદ્ધ) ત્રિમાદ લુભ્યને કરવા પ્રથમ તે તેને શિહ્યાલ છે. તે તે પ્રથમ નક્ષ્મલેલ લગ દેશલું પ્રતિદાસ હોવ્યુક વિશ્વાસ વિશ્વ છે.	ji sanii	alistentiard	rinanti yürüldeli şayıtı ovutus Timisti yaşır, örül open səlaqı (örəf ilmini spötti olu tasanı (örəf ilmini spötti olu yaşısı gəndiğ)				
Chentonia da de centres de la compañía de	Toll Cowards		White (and the district of the second states)	ajikanewanaz	<u> ស្រុកលុខស្វេសម្នាស់គ</u>		
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³		
Benzene (F005)	0.14	. 10	Methylene chloride (F001, F002)	0.089	30		
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36		
Carbon disulfide (F005)	3.8	4.8 (TCLP)3	Methyl isobutyl ketone (F003)	0.14	33		
Carbon tetrachloride (F001)	0.057	6,0	Nitrobenzene (F004)	0,068	14		
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN		
p-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16		
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0		
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10		
o-Dichlorobenzene (F002)	0,088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0		
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0		
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0		
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30		
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30		
isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30		

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated solls using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β,

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class | SWDA systems. E.

Form A1 Page 2 of 2

121/00-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

01969466955R Manifest Doc. No. : Generator Name: FRNP

NIA

Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

State Manifest No.:

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2, F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

8/16/19 Signature Date Waste Engineer Title

Form A2 Page 1 of 2 121/00-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name: FRNP

Manifest Doc. No. :

State Manifest No .:

01969466955K

NIA

Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	bomi Atch	Date	8/11./19
Title	Waste Engineer	Date	

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name: FRNP	Manifest Doc. No. :	19694669JJK
Generator Name: FRNP		110-
Profile No.:	State Manifest No.:	NIR

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUS			NWW (mg/kg)	CONSTITUENT	HOW MUS		WW (mg/i)	, NWW (mg/Kg)
	CONSTITU	JENT		unless		CONSTITU	ENT		unless
	BE MANA	GED?		noted		BEMANAG	JED /		noted
Acenaphthylene	(0.059	3.4	2-Chloro-1,3-butadiene	←		0.057	0.28 ¹
Acenapthene	<u> </u>		0.059	3.4	Chlorodibromomethane			0.057	15
Acetone			0,28	160	Chloroethane			0.27	6.0
Acetonitrile			5.6	38 ¹	bis(2-Chloroethoxy)methane			0.036	7.2
Acetophenone		1	0.010	9.7	bis(2-Chloroethyl)ether			0.033	6.0
2-Acetylaminofluorene			0.059	140	Chloroform			0.046	6.0
Acrolein			0.29	NA	bis(2-Chloroisopropyl)ether			0.055	7.2
Acylamide			19 ¹	231	p-Chioro-m-cresol			0.018	14
Acrylonitrile			0.24	84	2-Chioroethyl vinyl ether			0.0621	NA ¹
Aldicarb sulfone			0.056 ¹	0.28 ¹	Chloromethane/Methyl			0.19	30
				0.066	chloride 2-Chloronaphthalene			0.055	5.6
Aldrin			0.021	NA	2-Chlorophenol			0.044	5.7
4-Aminobiphenyl			0.13	14	3-Chloropropylene			0.036	30
Aniline			0.81	3,4	Chrysene			0.059	3.4
Anthracene			0.36	NA	o-Cresol			0.11	5.6
Aramite			0.00014	0.066	m-Cresol	+		0.77	5.6
alpha-(BHC)			0.00014	0.066	p-Cresol			0.77	5.6
beta-(BHC)			0.00014	0.066	m-Cumenyl methylcarbamate	+	1	0.0561	1.41
delta-(BHC)			0.023	0.066	Cyclohexanone	<u> </u>	1	0.36	0.75 mg/l ¹
gamma-(BHC)	ļ		0.0561	1.41	o,p'-DDD	1	1	0,023	0,087
Barban	ļ		0.0561	1.4	p,p'-DDD		1	0.023	0,087
Bendiocarb		 	0.0561	1.4	0,p'-DDE			0.031	0.087
Benomyl		<u> </u>	0.14	10	p,p'-DDE			0.031	0.087
Benzene			0.059	3.4	o,p'-DDT	11		0.0039	0.087
Benz(a)anthracene	<i> </i>		0.0551	6.01	p,p'-DDT	11		0.0039	0.087
Benzal chloride Benzo(b)fluoranthene ³	 		0.11	6.8	Dibenz(a,h)anthracene	1		0.055	8.2
Benzo(k)fluoranthene ³	├ <i>├</i> -		0.11	6.8	Dibenz(a,e)pyrene			0.061	NA
Benzo (g,h,i)perylene	-		0.0055	1.8	1,2-Dibromo-3-chloropropane			0.11	15
Denzo (g,n,i)perylene	f-				1.2-Dibromomethane/			0.028	15
Benzo(a)pyrene			0.061	3.4	Ethylene dibromide				
Bromodichloromethane			0.35	15	Dibromomethane			0.11	15
Bromomethane/Methyl			0.11	15	m-Dichlorobenzene			0.036	6.0
Bromide						·		0.088	6.0
4-Bromophenyl phenyl ether			0.055	15	o-Dichlorobenzene	<u> </u>		0.088	6.0
n-Butyl alcohol			5.6	2.6	p-Dichlorobenzene	+		0.090	7.2
Butylate	L		0.042	1.41	Dichlorodifluoromethane			0.059	6.0
Butyl benzyl phthalate			0.017	28	1,1-Dichloroethane	+			
2-sec-Butyl-4,6-			0.000	25	1,2-Dichloroethane			0.21	6,0
dinitrophenol/Dinoseb	↓ _/		0.066	2.5 0.14 ¹	1,1-Dichloroethylene	+		0.025	6.0
Carbaryl	↓ ↓ ↓		0.0061	1.41	trans-1,2-Dichloroethylene	+		0.054	30
Carbenzadim			0.0061	0.14	2,4-Dichlorophenol	+/		0.044	14
Carbofuran	+		0.0561	1.4 ¹	2.6-Dichlorophenol	+		0.044	14
Carbofuran phenol	+		0.000	4.8 mg/l	2,4-Dichlorophenoxyacetic	+			
Carbon disulfide			3.8	4.8 mg/l TCLP ¹	acid/2,4-D	↓./		0.72	10
Carbon tetrachloride			0.057	6.0	1,2-Dichloropropane			0.85	18
Carbosulfan	11		0.0281	1.4 ¹	cis-1,3-Dichloropropylene	11		0.036	18
Chlordane (alpha and gamma	1/		0.0033	0.26	trans-1,3-Dichloropropylene			0.036	18
isomers)	<u> </u>		0.46	16	Dieldrin	+/		0.017	0.13
p-Chloroanillne	11								

Form B1 Page 1 of 3

121/00-01

CONSTITUENT	HOW MUST THIS CONSTITUENT BEMANAGED?	WW (mg/l)	NWW (mg/kg) unless noted		HOW MUST THIS CONSTITUENT BEMANAGED?		NWW (mg/kg) unless noted
Chlorobenzilate	COLONIACIA SI COLORIS	0.10	NA	p-Dimethylaminoazobenzene	<	0.13 ¹	NA
,4-Dimethyl phenol		0.036	14	Methylene chloride		0.089	30
Dimethyl phthalate		0.047	28	Methyl ethyl ketone		0.28	36
Di-n-butyl phthalate		0.057	28	Methyl isobutyl ketone		0.14	33
.4-Dinitrobenzene		0.32	2.3	Methyl methacrylate		0.14	160
,6-Dinitro-o-cresol		0.28	160	Methyl methansulfonate		0.018	NA 4.6
,4-Dinitrophenol		0,12	160	Methyl parathion		0.014	4.0 1.4 ¹
,4-Dinitrotoluene		0.32	140	Metolcarb Mexacarbate		0.0561	1.4
,6-Dinitrotoluene		0.55	28			0.030	1.4
Di-n-octyl phthalate		0.017	28 14	Molinate r		0.059	5.6
0i-n-propylnitrosamine		0.40	170	2-Naphthylamine		0.52	NA
,4-Dioxane		0.92	13'	o-Nitroaniline		0.271	141
Diphenylamine ³ Diphenylnitrosamine ³		0,92	131	p-Nltroanlline		0.028	28
		0.087	NA	Nitrobenzene		0.068	14
,2-Diphenylhydrazine		0.017	6.2	5-Nitro-o-toluidine		0.32	28
Dithiocarbamates (total)		0.028	281	o-Nitrophenol		0.0281	13 ¹
indosulfan l		0.023	0.066	p-Nitrophenol		0.12	29
ndosulfan li		0.029	0.13	N-Nitrosodiethylamine		0.40	28
ndosulfan sulfate		0.029	0.13	N-Nitrosodimethylamine		0.40	2.31
Indrin		0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
ndrin aldehyde		0.025	0.13	N-Nitrosomethylethylamine	ļ	0.40	2.3
PTC		0.042 ¹	1.41	N-Nitrosomorpholine		0.40	2.3
Ethyl acetate		0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl benzene	A	0.057	10	N-Nitrosopyrrolidine		0.013	35
Ethyl cyanide/Propanenitrile		0.24	360	Oxamyl		0.0561	0.281
Ethyl ether		0.12	160	Parathion		0.014	4.6
Bis(2-Ethylhexyl)phthalate		0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)		0.10	10
Ethyl methacrylate		0.14	160	Pebulate		0.0421	1.4 ¹ 10 ¹
Ethylene oxide		0.12	NA	Pentachlorobenzene		0.065	10
Famphur		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene		0.059	3.4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride		0.0561	1.4 ¹	Pentachloronitrobenzene	L	0.055	4.8
Heptachlor		0,0012	0.066	Pentachlorophenol		0.089	7.4
leptachlor epoxide		0.016	0.066	Phenacetin		0.081	16
lexachlorobenzene		0.055	10	Phenanthrene		0.059	5.6 6.2
lexachiorobutadiene		0.055	5.6	Phenol	<u>├</u>	0.039	4.6
lexachiorocyclopentadiene		0.057	2.4	Phorate	<u>├</u>		
HxCDDs (All Hexachrorodibenzo-p-dioxins)		0.000063	0.001	Phthalic acid		0.0551	28 ¹
HxCDFs (All Hexachlorodibenzofurans)		0.000063	0.001	Phthalic anhydride	<u> </u>	0.055	281
lexachloroethane		0.055	30	Physostigmine	+	0.056	1.4
lexachloropropylene		0.035	30	Physostigmine salicylate		0.0561	1.4
ndeno(1,2,3-c,d)pyrene		0.0055	3.4	Promecarb Pronamide	+	0.093	1.5
odomethane		0.19	65 170	Propham	+	0.056	1.4
sobutyl alcohol		5.6	0.066	Proposur	<u>+</u>	0.0561	1.4
sodrin		0.021	2.6	Prosulfocarb	+	0.0421	1.41
sosafroie		0.001	0.13	Pyrene	1-1	0.067	8.2
Kepone Nothean/anitrile		0.24	84	Pyridine	+ /	0.014	16
Methacrylonitrile	<u>-</u>	5.6	0.75 mg/l ¹	Safrole		0.081	22
Vethanol	+	0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methapyrilene Methiocarb		0.0561	1.4	1,2,4,5-Tetrachlorobenzene		0.055	14
Methomyl		0.0281	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor		0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
-		0.0055	15	1,1,1,2-Tetrachloroethane	11	0.057	6.0
3-Methylcholanthrene				1,1,2,2-Tetrachloroethane	11 .		
4,4'-Methylene bis(2-		0.50	30	······································	+ '	→ 0.057	6.0

Form B1 Page 2 of 3

CONSTITUENT	THIS	WW (mg/I)	NWW (mg/kg):	CONSTITUENT	HOW N	NUST. LITUENT		ww (mg(l)	NWW (mg/kg) unless
	CONSTITUENT BE MANAGED?		unless noted		BEMA	NAGED	2.4		noted
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS					
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony	<		1	1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony				1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic				1.4	5.0 mg/l TCLP
Toluene	A	0.080	10	Barium				1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium				1.2	21 mg/l TCLP⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium				0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium				0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium				0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium				0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)				2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)				2.77	0.60 mg/l TCLP⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)				1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)				0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride				35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		Τ		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic		0.72	7.9	Lead				0.69	0,75 mg/l⁴ TCLP
acid/2,4,5-T 1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		1		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2-		0.057	30	Mercury (All others)		Τ		0.15	0.025 mg/ TCLP
trifluoroethane Triethylamine		0.081 ¹	1.5 ¹	Nickel				3,98	5.0 mg/l TCLP
Tris-(2,3-		0.11	0.10 ¹	Nickei				3,98	11 mg/l TCLP⁴
Dibromopropyi)phosphate Vernolate		0.042 ¹	6.0 ¹	Selenium	TT			0,82	0.16 mg/l TCLP
Vinyl chloride		0.27	6,0	Selenium				0.82	5.7 mg/l TCLP ³
Xylenes - mixed isomers (sum	A	0.32	30	Silver		- <u> </u>		0,43	0.30 mg/l TCLP
of o-,m-, and p-xylene			>	Silver				0.43	0.14 mg/l TCLP ⁴
			1	Sulfide	11			14	NA ²
		F	1	Thallium	11	:		1.4	0.078 mg TCLP ¹
. /				Thallium	11			1.4	0.20 mg/l TCLP ⁴
		+	-	Vanadium	1			4.3 ²	1.6 mg/l TCLP ²
4			<u> </u>	Zinc	K		\rightarrow	2.61	4.3 mg/l TCLP ²
	L	Ļ		These constituents are not const	ituanta ti	hot requi	ro fr	eatment in F	

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

 ² Not an underlying hazardous constituents in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.
 ⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. 5 This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

121856-05

PAD-WD-0868-R2-V7

DSSI-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)	Manifest Doc. No. :	019694669JJR
Profile No.:	PAD-WD-0868-R2-V6	State Manifest No.:	NIA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌

Is this waste a non-wastewater of wastewater in too to the 2002) onset of the network of the intervention of the control of the

	c-usia2/c		india.	
	187674 (cholous) AVA Selfa (cholous) Shiri	orestory (Child)	Ranta	이 비안에 바라 데이지 아이지 귀 430 년 ~~ 19
1	D008	Lead		A
2	D022	Chloroform	\square	A
3	D039	Tetrachloroethylene		A
4	<			

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- C. RESTRICTED WASTE SUBJECT TO A VARIANCE This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
 - For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

- "I certify under penalty of law I personally have examined and am famillar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."
- E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
- This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature_	ons-	Ash_	 Title	Waste Engineer	_ Date	8/24/19	

Form A1 Page 1 of 2

FAD-WD-U000-K2-V/

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLAVENTEWA	MENREANMENTSTANDARDS:		
000 01:200:01 2:00 2:00 2:00 2:00 2:00 2	The duit	nistatelite	Hulin Antoipil Hulis spont Sectoral constituents (Interfution Sectoral Constituents (Interfution) Sectoral Lister Autoconclous Wetter Facility	Winnewaters	ที่ได้
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	. 5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0,11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
p-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class | SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

- Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.
- Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

FAD-WD-U000-K2-V/

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP
-----------------	------

Manifest Doc. No. :

State Manifest No .:

0196946695510

NIA

Profile No .:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

8724/19 Signature Date Title _ Waste Engineer

Form A2 Page 1 of 2

Generator Name:	FRNP	Manifest Doc. No. :	019694669550
			\ [A

Profile No.:

TAU-WU-U000-K2-V/

State Manifest No .:

NIH

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information. 8/24/19 Signature m Date Waste Engineer Title

> Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

TAU-WU-U000-K2-V/

Generator Name:

FRNP

___ Manifest Doc. No. :

0196946695510

Profile No.:

State Manifest No.:

NIA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the LDR form.

ONSTITUENT	HOW MUST	WW.	NWW .	CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)
	THIS	(mg/l)	(mg/kg)		CONSTITUENT	- ungay	unless
	CONSTITUENT		unless		BE MANAGED?		noted
	BE:MANAGED?		noted		には、「「「「「「」」」というない。	- 0.057	0.28 ¹
Acenaphthylene		0.059	3.4	2-Chloro-1,3-butadiene	<	0.057	15
cenapthene		0.059	3.4	Chlorodibromomethane		1 0.057	6.0
cetone		0.28	160	Chloroethane		0.036	7.2
cetonitrile		5.6	381	bis(2-Chloroethoxy)methane		0.038	6.0
Acetophenone		0.010	9.7	bis(2-Chloroethyl)ether			6.0
-Acetylaminofluorene		0.059	140	Chloroform		0.046	7.2
crolein		0.29	NA	bis(2-Chloroisopropyl)ether	ļ {	0.055	14
		19'	231	p-Chloro-m-cresol	ļ		NA 1
crylonitrile		0.24	84	2-Chloroethyl vinyl ether		0.0621	
Aldicarb sulfone		0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride		0.19	30
		0.021	0.066	2-Chloronaphthalene		0.055	5.6
Aldrin Aminobioboovi	·	0.13	NA	2-Chlorophenol		0.044	5.7
-Aminobiphenyl		0.81	14	3-Chloropropylene		0.036	30
Aniline		0.059	3.4	Chrysene		0.059	3.4
Anthracene		0.36	NA	o-Cresol		0.11	5.6
Aramite		0.00014	0.066	m-Cresol	N N	0.77	5.6
lpha-(BHC)		0.00014	0.066	p-Cresol	Y	0.77	5.6
peta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate	a	0.056	1.41
telta-(BHC)		0.023	0.066	Cyclohexanone	01	0.36	0.75 mg/
gamma-(BHC)		0.056	1.41	o,p'-DDD	1	0.023	0.087
Barban		0.0561	1.4	p,p'-DDD	4	0.023	0.087
Bendiocarb		0.056	1.4	o,p'-DDE		0.031	0.087
Benomyl		0.050	10	p,p'-DDE	5	0.031	0.087
Benzene	A	0.059	3.4	0,p'-DDT	2	0.0039	0.087
3enz(a)anthracene			6.01	p,p'-DDT		0.0039	0.087
Benzal chloride		0.055		Dibenz(a,h)anthracene		0.055	8.2
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo(k)fluoranthene ³		0.11	6.8	1,2-Dibromo-3-chloropropane	+	0.11	15
Benzo (g,h,i)perylene		0.0055	1.8	1.2-Dibromomethane/			
Benzo(a)pyrene		0.061	3.4	Ethylene dibromide	ļļ	0.028	15
Bromodichloromethane		0.35	15	Dibromomethane		0.11	
Bromomethane/Methyl Bromide		0.11	15	m-Dichlorobenzene		0.036	6.0
4-Bromophenyl phenyl ether		0.055	15	o-Dichlorobenzene		0.088	6.0
n-Butyl alcohol		5.6	2.6	p-Dichlorobenzene		0.090	6.0
Butylate	1	0.0421	1.4 ¹	Dichlorodifluoromethane		0.23	7.2
Butyl benzyl phthalate		0.017	28	1,1-Dichloroethane		0.059	6.0
2-sec-Butyl-4,6-		0.066	2.5	1,2-Dichloroethane		0.21	6.0
dinitrophenol/Dinoseb	+	0.0061	0.14	1,1-Dichloroethylene		0.025	6.0
Carbaryl	+	0.0561	1.4	trans-1,2-Dichloroethylene		0.054	30
Carbenzadim		0.0061	0.141	2,4-Dichlorophenol		0.044	14
Carbofuran	+	0.0561	1.4	2,6-Dichlorophenol		0.044	14
Carbofuran phenol Carbon disulfide		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
Carbon tetrachloride		0.057	6.0	1,2-Dichloropropane		0.85	18
		0.0281	1.41	cis-1,3-Dichloropropylene		0.036	18
Carbosulfan Chlordane (alpha and gamma		0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
isomers)		and the second se	16	Dieldrin		0.017	0.13
p-Chloroaniline	1	0.46	6.0	Diethyl phthalate	1	> 0.20	28

Form B1 Page 1 of 3

	HOW N THIS CONS		E.	WW (mg/l):	NWW (mg/kg) unless	CONSTITUENT	HOW MUST THIS CONSTITUENT	(mg/l)	NWW (mg/kg unless
	BE MA				noted		BE MANAGED?	The second s	noted
chlorobenzilate		1742P2-dereve		0.10	NA	p-Dimethylaminoazobenzene	<	0.13 ¹ 0.089	<u>NA</u> 30
,4-Dimethyl phenol				0.036	14	Methylene chloride		0.089	36
Dimethyl phthalate				0.047	28	Methyl ethyl ketone Methyl isobutyl ketone		0.14	33
Di-n-butyl phthalate				0.057	28 2.3	Methyl methacrylate		0.14	160
,4-Dinitrobenzene				0.32	160	Methyl methansulfonate		0.018	NA
,6-Dinitro-o-cresol				0.20	160	Methyl parathion		0.014	4.6
4-Dinitrophenol			-+	0.32	140	Metolcarb		0.0561	1.41
2.6-Dinitrotoluene				0.55	28	Mexacarbate		0.0561	1.4
Di-n-octyl phthalate				0.017	28	Molinate		0.042 ¹ 0.059	1.4 ¹ 5.6
Di-n-propylnitrosamine				0.40	14	Naphthalene		0.059	NA
,4-Dioxane				12.0	170	2-Naphthylamine		0.32	141
Diphenylamine ³				0.92	131	o-Nitroaniline		0.028	28
DiphenyInitrosamine				0.92	13 ¹ NA	Nitrobenzene		0.068	14
,2-Diphenylhydrazine				0.007	6.2	5-Nitro-o-toluidine		0.32	28
Disulfoton Dithiocarbamates (total)			+	0.017	281	o-Nitrophenol		0.0281	131
Endosulfan (1	0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan II			1	0.029	0.13	N-Nitrosodiethylamine		0.40	28
Endosulfan sulfate				0.029	0.13	N-Nitrosodimethylamine		0.40	2.3 ¹ 17
Endrin				0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	2.3
Endrin aldehyde				0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC				0.0421	1.41	N-Nitrosomorpholine		0.013	35
Ethyl acetate				0.34	33	N-Nitrosopiperidine N-Nitrosopyrrolidine		0.013	35
Ethyl benzene				0.057	10			0.0561	0.281
Ethyl cyanide/Propanenitrile				0.24	360 160	Oxamyl Parathion		0.014	4.6
Ethyl ether Bis(2-Ethylhexyl)phthalate				0.12	28	Total PCBs (sum of all PCB isomers or all Aroclors)	A	0.10	10
					160	Pebulate		0.0421	1:41
Ethyl methacrylate		-10	<u> </u>	0.14	NA	Pentachlorobenzene		0.0551	101
Ethylene oxide Famphur		500		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		N is		0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
· · ·		10		0.059	3.4	Pentachloroethane		0.055	6.0
Fluorene Formetanate hydrochloride				0.0561	1.4	Pentachloronitrobenzene		0.055	4.8
Heptachlor		+-		0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide				0.016	0.066	Phenacetin		0.081	16
Hexachlorobenzene		1		0.055	10	Phenanthrene		0.059	5.6 6.2
Hexachlorobutadiene				0.055	5.6	Phenol		0.039	4.6
Hexachlorocyclopentadiene		ļ		0.057	2.4	Phorate			28 ¹
HxCDDs (All Hexachrorodibenzo-p-dioxins)				0.000063	0.001	Phthalic acid		0.0551	ļ <u> </u>
HxCDFs (All Hexachlorodibenzofurans)				0.000063	0.001	Phthalic anhydride		0.055 0.056 ¹	28 ¹
Hexachloroethane				0.055	30	Physostigmine Physostigmine salicylate	-	0.0561	1.4
Hexachloropropylene	-			0.035	30 3.4	Promecarb		0.0561	1.4
Indeno(1,2,3-c,d)pyrene	┝──┼			0.0055	65	Pronamide		0.093	1.5
lodomethane	├┼-			5.6	170	Propham		0.056'	1.4
Isobutyl alcohol Isodrin				0.021	0.066	Propoxur		0.0561	1.41
Isosafrole	-			0.081	2.6	Prosulfocarb		0.0421	1.41
Kepone				0.0011	0.13	Pyrene	•	0.067	8.2
Methacrylonitrile				0.24	84	Pyridine		0.014	16
Methanol				5.6	0.75 mg/l ¹	Safrole	_ <u>_</u>	0.081	22 7.9
Methapyrilene				0.081	1.5	Silvex/2,4,5-TP		0.72	14
Methiocarb	-			0.056 ¹ 0.028 ¹	1.4 ¹ 0.14 ¹	1,2,4,5-Tetrachlorobenzene TCDDs (All		0.000063	0.00
Methomyl				0.25	0.14	Tetrachlorodibenzo-p-dioxins) TCDFs (All		0.000063	0.00
Methoxychlor	11					Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane		0.057	6.0
3-Methylcholanthrene	1			0.0055	15	1,1,1,2-Tetrachioroethane			

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST THIS	WW (mg/l)	NWW (mg/kg) upless	CONSTITUENT	HOW MUST THIS CONSTITUENT	WW (mg/l)	NWW (mg/kg) unless
	CONSTITUENT BE MANAGED?		noted		BE MANAGED?	and the second	noted
Tetrachloroethylene	A	0.056	6.0	INORGANIC CONSTITUENTS			0.1 mg/l
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP 7.6 mg/l
Toluene		0.080	10	Barium		1.2	TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.0421	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium	Α	0.69	0.19 mg/i TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)	A	2.77	0.60 mg/l TCLP ⁴
Trichloroethylene	A	0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic	-	0.72	7.9	Lead		0.69	0.75 mg/l ⁴ TCLP
acid/2,4,5-T 1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2-		0.057	30	Mercury (All others)		0.15	0.025 mg/ TCLP
trifluoroethane Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.10 ¹	Nickel	А	3.98	11 mg/l TCLP ⁴
Vernolate		0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum	1	0.32	30	Silver		0.43	0.30 mg/l TCLP
of o-,m-, and p-xylene				Silver		0.43	0.14 mg/l TCLP ⁴
			1	Sulfide		14	NA ²
		1		Thallium		1.4	0.078 mg/ TCLP ¹
	8.29.19			Thallium		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
			\rightarrow	Zinc	A	2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

These compounds are regulated by the sum of their concentration instead of as individual constituents. 3

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 In unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

DSSI-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)	Manifest Doc. No. :	019694665510
Profile No.:	PAD-WD-0868-R2-V6	State Manifest No.:	NIA

ls this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🏳 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	С., (78) П.4 - 11 Туру (лария) - 11 Туру (лария)	A SULVATER OF SUCCESSION OF SUCCESSION SUCCE		
1	D006	Cadmium		A
2	D008	Lead		A
3	D018	Benzene	\square	А
4	D022	Chloroform	\square	Α

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🔀 If no UHCs are present in the waste upon its initial generation check here: \Box

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS **B**,3 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D. "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature

Title

Form A1 Page 1 of 2

A-88

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

n The familie of the second s				โกรสสาราไร	
វត្តមក្នុងពេលនឹងលេខីដែរ នេះទាំង៧ទោះ រទាំង ស្រាតនៃក្នុងសារ បានដែរសារសារ		โหลกมีคารีกับยากสะ		AVID SOUTH CORE	
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
	0.057	6.0	Nitrobenzene (F004)	0.068	14
Carbon tetrachioride (F001) Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
Cyclohexanone (F003) o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

- Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.
- High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) Greater than or equal to 10% total organic carbon. C.

D002:

- Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.
- Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E,

Form A1 Page 2 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694669	JJR
Constator Hame			a) (A + a) (,
Profile No.:		State Manifest No.:		
	time from form A1 for a waste identified by more that	an five USEPA waste co	de/subcategory groups. In	is page by it

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature 8/20 110 Date Waste Engineer Title

Form A2 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP	Manifest Doc. No. :	0196946693512
Generator Name:	FRINP	indimost Determent	

Profile No .:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

State Manifest No .:

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

	1.	dit			
	JV. U . = = =	a felo	Date	8/26/19	
Title	Waste Engineer		Date _		

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694669 32
Profile No.:		State Manifest No.:	NIA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWML	UST		WW	Children and Children and Children and	CONSTITUENT	HOW		T. A.	(mg/l)	NWW (mg/kg)
	THIS	進陸		(mg/l).	(mg/kg);		CONS		ENT		unless
	CONSTI				unless		BEM				noted
	BE MAN	AGE	D		noted		の事業の				0.28 ¹
Acenaphthylene	<u> </u>		~	0.059	3.4	2-Chloro-1,3-butadiene	\leftarrow			0.057	
Acenapthene			- 1	0.059	3.4	Chlorodibromomethane				0.057	15
Acetone			1	0.28	160	Chloroethane				0.27	6.0 7.2
Acetonitrile			.	5.6	38'	bis(2-Chloroethoxy)methane	ļ			0.036	6.0
Acetophenone				0.010	9.7	bis(2-Chloroethyl)ether	ļ			0.033	6.0
2-Acetylaminofluorene				0.059	140	Chloroform				0.046	7.2
Acrolein			T	0.29	NA	bis(2-Chloroisopropyl)ether	ļ			0.055	14
Acylamide				19 ¹	231	p-Chloro-m-cresol				0.018	NA ¹
Acrylonitrile				0.24	84	2-Chloroethyl vinyl ether	ļ			0.002	
		•	1	0.056 ¹	0.28 ¹	Chloromethane/Methyl				0.19	30
Aldicarb sulfone						chloride				0.055	5.6
Aldrin			\square	0.021	0.066	2-Chioronaphthalene	+			0.044	5.7
4-Aminobiphenyl				0.13	NA	2-Chlorophenol	 			0.036	30
Aniline			ļ	0.81	14	3-Chloropropylene	 			0.059	3.4
Anthracene				0,059	3,4	Chrysene				0.035	5.6
Aramite				0.36	NA	o-Cresol				0.77	5.6
alpha-(BHC)				0.00014	0.066	m-Cresol	_			0.77	5.6
beta-(BHC)		T		0.00014	0.066	p-Cresol	_			the second s	1.4
delta-(BHC)		T		0.023	0.066	m-Cumenyl methylcarbamate	_			0.056	0.75 mg/l ¹
gamma-(BHC)		T		0.0017	0.066	Cyclohexanone	ļ	N)	1-01		0.087
Barban			۵	0.0561	1.41	o,p'-DDD	<u> </u>	the.	1 A	0.023	0.087
Bendiocarb			17	0.0561	1.41	p,p'-DDD	<u> </u>	<u>\</u>	<u>'</u>	0.023	0.087
Benomyl	5		1	0.0561	1.41	o,p'-DDE			q'	0.031	
Benzene	20		(0.14	10	p,p'-DDE			<u> </u>	0.031	0.087
Benz(a)anthracene	4	11	r <u> </u>	0.059	3.4	o,p'-DDT	1			0.0039	0.087
Benzal chloride		1.1		0.0551	6.0 ¹	p,p'-DDT	L			0.0039	0.087
Benzo(b)fluoranthene ³		Po		0.11	6.8	Dibenz(a,h)anthracene				0.055	8.2
Benzo(k)fluoranthene ³		1		0.11	6.8	Dibenz(a,e)pyrene				0.061	NA
Benzo (g,h,i)perylene		1		0.0055	1.8	1,2-Dibromo-3-chloropropane				0,11	15
						1,2-Dibromomethane/	1			0.028	15
Benzo(a)pyrene				0.061	3.4	Ethylene dibromide					
Bromodichloromethane				0.35	15	Dibromomethane				0.11	15
Bromomethane/Methyl					45	m-Dichlorobenzene				0.036	6,0
Bromide				0.11	15						
4-Bromophenyl phenyl ether				0.055	15	o-Dichlorobenzene		1		0.088	6.0
n-Butyl alcohol	+			5.6	2.6	p-Dichlorobenzene				0.090	6.0
Butylate	<u>├</u>			0.0421	1.41	Dichlorodifluoromethane		L		0.23	7.2
Butyl benzyl phthalate	+			0.017	28	1,1-Dichloroethane	1			0.059	6.0
2-sec-Butyl-4,6-				1		4.2 Dichleregihano				0.21	6.0
2-sec-Butyl-4,6- dinitrophenol/Dinoseb				0.066	2.5	1,2-Dichloroethane					
	+			0.0061	0.14	1,1-Dichloroethylene	T			0.025	6.0
Carbaryl Carbenzadim	+ +			0.056	1.4'	trans-1,2-Dichloroethylene				0.054	30
	+-+			0.0061	0.141	2,4-Dichlorophenol				0.044	14
Carbofuran	+			0.0561	1.41	2.6-Dichlorophenol	\Box			0.044	14
Carbofuran phenol	+-+				4.8 mg/	2,4-Dichlorophenoxyacetic	TT			0.72	10
Carbon disulfide				3.8	TCLP	acid/2,4-D					
Carbon tetrachloride	+/			0.057	6.0	1,2-Dichloropropane				0.85	18
	++			0.0281	1.41	cis-1,3-Dichloropropylene				0.036	18
Carbosulfan	+						TT			0.036	18
Chlordane (alpha and gamma				0.0033	0.26	trans-1,3-Dichloropropylene					
isomers)	+}			0.46	16	Dieldrin	T			0.017	0.13
p-Chloroaniline				0.057	6.0	Diethyl phthalate	N			0.20	28
Chlorobenzene	¥			0.001	10.0	1					

Form B1 Page 1 of 3 A

CONSTITUENT	HOW M	IUST		ww	NWW	CONSTITUENT	HOW MUST THIS	WW: (mg/l):	NWW (mg/kg)
	THIS			(mg/l)	(mg/kg) unless		CONSTITUENT	101801	unless
	CONST BEMA				noted		BEMANAGED?		noted
chlorobenzilate				0.10	NA	p-Dimethylaminoazobenzene		0.131	NA
,4-Dimethyl phenol				0.036	14	Methylene chloride		0.089	30 36
imethyl phthalate				0.047	28	Methyl ethyl ketone		0.28	33
Di-n-butyl phthalate				0.057	28	Methyl isobutyl ketone		0.14	160
4-Dinitrobenzene				0.32	2.3	Methyl methacrylate Methyl methansulfonate		0.018	NA
,6-Dinitro-o-cresol				0.28	160 160	Methyl parathion		0.014	4.6
4-Dinitrophenol				0.12	140	Metolcarb		0.056 ¹	1.41
4-Dinitrotoluene				0.55	28	Mexacarbate		0.0561	1.41
.,6-Dinitrotoluene Di-n-octyl phthalate				0.017	28	Molinate		0.042 ¹	1.41
Di-n-octyl phinalate Di-n-propylnitrosamine				0.40	14	Naphthalene		0.059	5.6
,4-Dioxane				12.0	170	2-Naphthylamine		0.52 0.27 ¹	NA 14 ¹
)iphenylamine ³				0.92	131	o-Nitroanlline		0.27	28 ·
Diphenylnitrosamine ³				0.92	131	p-Nitroaniline		0.028	14
2-Diphenylhydrazine				0.087	NA	Nitrobenzene 5-Nitro-o-toluidine		0.32	28
Disulfoton				0.017	6.2 28 ¹	o-Nitrophenol		0.0281	131
Othiocarbamates (total)				0.028	0.066	p-Nitrophenol		0.12	29
ndosulfan l				0.023	0.000	N-Nitrosodiethylamine		0.40	28
Endosulfan II				0.029	0.13	N-Nitrosodimethylamine		0.40	2.3 ¹
Endosulfan sulfate			1	0.023	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin Endrin aldehyde			1	0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC			1	0.0421	1.41	N-Nitrosomorpholine		0.40	2.3 35
Ethyl acetate				0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl benzene			N	0.057	10	N-Nitrosopyrrolidine		0.013	0.281
Ethyl cyanide/Propanenitrile		(.]	0.24	360	Oxamyl		0.058	4.6
Ethyl ether		5		0.12	160	Parathion			
Bis(2-Ethylhexyl)phthalate		2	Ņ	0.28	28	Total PCBs (sum of all PCB isomers or all Arociors)	A	0.10 0.042 ¹	10 1.4 ¹
Ethyl methacrylate		1	Un	0.14	160	Pebulate		0,042	101
Ethylene oxide			~	0.12	NA	Pentachlorobenzene		1	
Famphur				0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		T		0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene				0.059	3.4	Pentachloroethane		0.055	6.0 4.8
Formetanate hydrochloride		1		0.0561	1.41	Pentachloronitrobenzene		0.089	7.4
Heptachlor		T		0.0012	0.066	Pentachlorophenol		0.089	16
Heptachlor epoxide				0.016	0.066	Phenacetin		0.059	5.6
Hexachlorobenzene		1		0.055	10	Phenanthrene Phenol		0.039	6,2
Hexachlorobutadiene	L	<u> </u>		0.055	5.6	Phonate		0.021	4.6
Hexachlorocyclopentadiene		<u> </u>		0.057	2.4			0.055 ¹	281
HxCDDs (All Hexachrorodibenzo-p-dioxins)				0.000063	0.001	Phthalic acid	<u>.</u>		28 ¹
HxCDFs (All				0.000063	0.001	Phthalic anhydride		0.055	
Hexachlorodibenzofurans) Hexachloroethane	++			0.055	30	Physostigmine		0.0561	1.4
Hexachloropropylene	+-+			0.035	30	Physostigmine salicylate		0.0561	1.4
Indeno(1,2,3-c,d)pyrene	++			0.0055	3.4	Promecarb		0.056 ¹ 0.093	1.4 ¹ 1.5
Iodomethane	+			0,19	65	Pronamide		0.093	1.5
Isobutyl alcohol				5.6	170	Propham		0.0561	1.4
Isodrin				0.021	0.066	Propoxur		0.0421	1.4
Isosafrole	1			0.081	2.6	Prosulfocarb Pyrene		0.067	8.2
Kepone	+ + -			0.0011	0.13 84	Pyridine		0.014	16
Methacrylonitrile	+			0.24 5.6	0.75 mg/l ¹			0.081	22
Methanol	+			0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methapyrilene	+ +			0.0561	1.4	1,2,4,5-Tetrachlorobenzene		0.055	14
Methiocarb Methomyl	+			0.038	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor	+/			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
				0.0055	15	1,1,1,2-Tetrachloroethane		0,057	6.0
3-Methylcholanthrene	 							0.057	6.0
4,4'-Methylene bis(2-	N/			> 0.50	30	1,1,2,2-Tetrachloroethane	1	0.001	10.0

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THIS	ww (mg/l)	NWW (mg/kg)	CONSTITUENT	ROW MUST THIS	WW (mg/l)	NWW (mg/kg)) unliess
CONSTITUENT BEIMANAGED7		unless noted		BE MANAGED?		noted
	0.056	6.0	CONSTITUENTS			
	0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
	0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
	0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
	0.080	10	Barium		1.2	7.6 mg/l TCLP
	0.0095	2.6	Barium		1.2	21 mg/l TCLP⁴
	0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
	0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
	0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
	0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
	0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
	0.054	6.0	Chromium (Total)	A	2.77	0.60 mg/l TCLP ⁴
A	0.054	6.0	Cyanides (Total)		1.2	590
	0.020	30	Cyanides (Amenable)		0.86	30 ¹
	0.18	7.4	Fluoride		35	NA ⁴ :
	0.035	7.4	Lead		0.69	0.37 mg/l
	0.72	7.9	Lead		0.69	0.75 mg/l⁴ TCLP
	0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
	0.057	30	Mercury (All others)		0.15	0.025 mg/l TCLP
	0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
	0.11	0.10 ¹	Nickel	A	3.98	·11 mg/l TCLP ⁴
	0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
	0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
	0.32	30	Silver		0.43	0.30 mg/l TCLP
			Silver		0.43	0.14 mg/l TCLP ⁴
			Sulfide		14	NA ²
105			Thallium		1.4	0.078 mg/ TCLP ¹
M 1-19			Thallium		1.4	0.20 mg/l TCLP ⁴
8:0			Vanadium		4.3 ²	1.6 mg/l TCLP ²
		+	Zinc	Α,	2.61	4.3 mg/l TCLP ²
	THIS CONSTITUENT BEIMANAGED7	THIS (Ing/I) CONSTITUENT 0.056 0.030 0.0191 0.0561 0.030 0.0561 0.080 0.0095 0.042 ¹ 0.63 0.035 0.055 0.054 0.054 0.054 A 0.054 0.020 0.18 0.035 0.72 0.85 0.057 0.081 ¹ 0.11 0.042 ¹ 0.27	THIS CONSTITUENT (mg/l) (mg/kg) unless noted BE MANAGED7 0.056 6.0 0.030 7.4 0.0191 1.4 ¹ 0.0561 1.4 ¹ 0.0095 2.6 0.0095 2.6 0.042 ¹ 1.4 ¹ 0.0095 2.6 0.042 ¹ 1.4 ¹ 0.035 7.4 0.051 19 0.042 ¹ 1.4 ¹ 0.051 19 0.055 19 0.055 19 0.054 6.0 0.020 30 0.018 7.4 0.020 30 0.020 30 0.18 7.4 0.020 30 0.18 7.4 0.020 30 0.18 7.4 0.020 30 0.18 7.4 0.021 0.035 7.4 0.72 0.025 30 0.057 30 0.0257 30 0.027 6.0 0.021 0.011 0.10 ¹ 0.10 ¹ 0.021 6.0 ¹ 0.27 6.0 0.	THIS Img/h Img/kg noted 0.056 6.0 INCRCANIC: CONSTITUENTS 0.030 7.4 Antimony 0.0191 1.4 ⁴ Antimony 0.0561 1.4 ⁴ Antimony 0.0561 1.4 ⁴ Arsenic 0.0661 1.4 ⁴ Arsenic 0.0561 1.4 ⁴ Arsenic 0.060 10 Barium 0.060 10 Barium 0.060 10 Barium 0.061 1.4 ⁴ Beryllium 0.0621 1.4 ¹ Beryllium 0.0621 1.4 Beryllium 0.035 7.4 Cadmium 0.054 6.0 Chromium (Total) 0.054 6.0 Cyanides (Arnenable) 0.054 6.0 Cyanides (Arnenable) 0.054 6.0 Cyanides (Arnenable) 0.054 7.4 Lead 0.057 30 Mercury (All others) 0.057 30 Mercury (All others) </td <td>THIS ONSTITUENT BE MANAGED? IMG/U Index noted IMOR CANIC CONSTITUENTS IMOR CANIC DE MANAGED? 0.056 6.0 CONSTITUENTS Editational state De MANAGED? 0.030 7.4 Antimony Imore constituents 0.030 7.4 Antimony Imore constituents 0.0191 1.4⁴ Antimony Imore constituents 0.0561 1.4⁴ Arenic Imore constituents 0.060 10 Barium Imore constituents 0.0651 1.4⁴ Beryllum Imore constituents 0.062 2.6 Barium Imore constituents 0.042¹ 1.4⁴ Beryllum Imore constituents 0.042¹ 1.4¹ Beryllum Imore constituents 0.055 19 Cadmium Imore constituents 0.055 19 Cadmium Imore constituents 0.054 6.0 Chromlum (Total) A 1 0.054 6.0 Cyanides (Total) Imore constituents 1 0.18 7.4<td>THIS CONSTITUENT THE MANAGED? THE MANAGED? THE MANAGED? THE MANAGED? 0.056 6.0 INORICALIC: CONSTITUENTS PERMANAGED? 1.9 0.030 7.4 Antimony 1.9 1.9 0.0191 1.4⁴ Antimony 1.9 1.4 0.0561 1.4⁴ Antimony 1.9 1.4 0.0561 1.4⁴ Arsenic 1.2 1.2 0.0561 1.4⁴ Arsenic 1.2 1.2 0.0095 2.6 Barlum 0.82 0.82 0.042⁴ 1.4⁴ Beryllum 0.82 0.82 0.035 7.4 Cadmium 0.82 0.82 0.055 19 Cadmium (Total) 2.77 0.89 0.054 6.0 Chromium (Total) A 2.77 A 0.054 6.0 Cyanides (Amenable) 0.86 35 0.054 6.0 Cyanides (Amenable) 0.89 0.59 1.12 A</td></td>	THIS ONSTITUENT BE MANAGED? IMG/U Index noted IMOR CANIC CONSTITUENTS IMOR CANIC DE MANAGED? 0.056 6.0 CONSTITUENTS Editational state De MANAGED? 0.030 7.4 Antimony Imore constituents 0.030 7.4 Antimony Imore constituents 0.0191 1.4 ⁴ Antimony Imore constituents 0.0561 1.4 ⁴ Arenic Imore constituents 0.060 10 Barium Imore constituents 0.0651 1.4 ⁴ Beryllum Imore constituents 0.062 2.6 Barium Imore constituents 0.042 ¹ 1.4 ⁴ Beryllum Imore constituents 0.042 ¹ 1.4 ¹ Beryllum Imore constituents 0.055 19 Cadmium Imore constituents 0.055 19 Cadmium Imore constituents 0.054 6.0 Chromlum (Total) A 1 0.054 6.0 Cyanides (Total) Imore constituents 1 0.18 7.4 <td>THIS CONSTITUENT THE MANAGED? THE MANAGED? THE MANAGED? THE MANAGED? 0.056 6.0 INORICALIC: CONSTITUENTS PERMANAGED? 1.9 0.030 7.4 Antimony 1.9 1.9 0.0191 1.4⁴ Antimony 1.9 1.4 0.0561 1.4⁴ Antimony 1.9 1.4 0.0561 1.4⁴ Arsenic 1.2 1.2 0.0561 1.4⁴ Arsenic 1.2 1.2 0.0095 2.6 Barlum 0.82 0.82 0.042⁴ 1.4⁴ Beryllum 0.82 0.82 0.035 7.4 Cadmium 0.82 0.82 0.055 19 Cadmium (Total) 2.77 0.89 0.054 6.0 Chromium (Total) A 2.77 A 0.054 6.0 Cyanides (Amenable) 0.86 35 0.054 6.0 Cyanides (Amenable) 0.89 0.59 1.12 A</td>	THIS CONSTITUENT THE MANAGED? THE MANAGED? THE MANAGED? THE MANAGED? 0.056 6.0 INORICALIC: CONSTITUENTS PERMANAGED? 1.9 0.030 7.4 Antimony 1.9 1.9 0.0191 1.4 ⁴ Antimony 1.9 1.4 0.0561 1.4 ⁴ Antimony 1.9 1.4 0.0561 1.4 ⁴ Arsenic 1.2 1.2 0.0561 1.4 ⁴ Arsenic 1.2 1.2 0.0095 2.6 Barlum 0.82 0.82 0.042 ⁴ 1.4 ⁴ Beryllum 0.82 0.82 0.035 7.4 Cadmium 0.82 0.82 0.055 19 Cadmium (Total) 2.77 0.89 0.054 6.0 Chromium (Total) A 2.77 A 0.054 6.0 Cyanides (Amenable) 0.86 35 0.054 6.0 Cyanides (Amenable) 0.89 0.59 1.12 A

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. 1

 ² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.
 ⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. 5 This becomes effective In authorized states upon adoption by the state.

> Form B1 Page 3 of 3

DSSI-19-096

121856-01/-02/-03/-04

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP) Manifest Doc	. No.: 019694669JJR
Profile No .	PAD - WD - 0868 - R2 - V7 State Manife	est No.: <u>N/A</u>

ls this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

		2. Support the optimized of the second state of the second st		
1	D008	Lead		Α
2	D022	Chloroform		А
3	D039	Tetrachloroethylene	\square	А
4				

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this **B.3** certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This В.4 decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C,

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45." RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this D, certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. 1 believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature

Title

Waste Engineer _____ Date _____ Date

Form A1 Page 1 of 2

A-95

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LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

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तात् (तरेगाती गोणिक सम्बर्ध स्थिम । त	าโลรเม็ก	n a <u>anan</u>	(ang Arang) (We shen) Sologni (an≝i(nans an abai) 	ji zina). Sani	
and a manufactor of the first of the second	We levelers	Tentwentorefors	u aranafaran Usta Kanasaranan Marina Ingili (S	Nesiminos Color	Manufanal Aventus
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. A.

- Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β,
- High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) Greater than or equal to 10% total organic carbon. C.

D002:

- Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D.
- Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:

FRNP

Manifest Doc. No. : State Manifest No .:

01969466955K NIA

Profile No .:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

Constituent	s/ and and onlying	A.C.InterAult		10511F+	5. 由000ml 可用的公司。
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature 8/26 Date Waste Engineer Title

Form A2 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP	_ Manifest Doc. No. :	019694669JJK
		State Manifest No.:	NIA

Profile No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

	(三) 11-13-13-14 (1 <u>1) (27</u> -13-26-19) (16(1):13-15-00(日本))	SOURCHESONY 1997-1915 SPERGUER OF A DESCRIPTION OF DESCRIPTION OF DESCRIPTION OF DESCRIPTION			LETTEREM FURMAL
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

	A .			
Signature	_ Aonia	Atthe	Date	8126/19
Title	Waste Engineer			urbed from the second s

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694669 J3R
Profile No.:		State Manifest No.:	NIA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST THIS		WW (mg/l)	NWW (mg/kg)
	CONSTITUENT		uniess		CONSTITUE	MT -		unless noted
	BEMANAGED2		noted		BEMANAGE			ALL DE CAR
		0.059	3.4	2-Chloro-1,3-butadiene	<		0.057	0.28 ¹
Acenaphthylene		0.059	3.4	Chlorodibromomethane			0.057	15
Acenapthene		0.000	160	Chloroethane			0.27	6.0
Acetone		5.6	381	bis(2-Chloroethoxy)methane			0.036	7.2
Acetonitrile		0.010	9.7	bis(2-Chloroethyl)ether			0.033	6.0
Acetophenone		0.059	140	Chloroform			0.046	6.0
2-Acetylaminofluorene		0.29	NA	bis(2-Chloroisopropyl)ether			0.055	7.2
Acrolein		191	23 ¹	p-Chloro-m-cresol			0.018	14
Acylamide		0.24	84	2-Chloroethyl vinyl ether			0.0621	NA ¹
Acrylonitrile			0.28 ¹	Chloromethane/Methyl			0.19	30
Aldicarb sulfone		0.056 ¹	0.28	chloride				
A Line		0.021	0.066	2-Chloronaphthalene			0.055	5.6
Aldrin 4-Aminobiphenyl		0.13	NA	2-Chlorophenol		<u> </u>	0.044	5.7
Aniline		0.81	14	3-Chloropropylene		1	0.036	30
Anthracene		0.059	3.4	Chrysene		ļ	0.059	3.4
Aramite		0.36	NA	o-Cresol		ļ	0.11	5,6
alpha-(BHC)		0.00014	0.066	m-Cresol			0.77	5.6
beta-(BHC)		0.00014	0,066	p-Cresol			0.77	5.6 1.4 ¹
delta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate	ļ		0.0561	
gamma-(BHC)		0.0017	0.066	Cyclohexanone			0.36	0.75 mg/l 0.087
Barban		0.0561	1.41	o,p'-DDD	5	\rightarrow	0.023	0.087
Bendiocarb		0.0561	1.4	p,p'-DDD	N-1	N	0.023	
Benomyl		0.0561	1.41	o,p'-DDE		<u>v</u> _	0.031	0.087
Benzene	A	0.14	10	p,p'-DDE	1		0.031	0.087
Benz(a)anthracene	1	0.059	3.4	o,p'-DDT			0.0039	0.087
Benzal chloride		0.0551	6.0 ¹	p,p'-DDT	ļ		0.0039	0.087
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,h)anthracene			0.055	NA
Benzo(k)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene	<u> </u>		0.061	
Benzo (g,h,i)perylene		0.0055	1.8	1,2-Dibromo-3-chloropropane			0.11	15 -
		0.061	3.4	1,2-Dibromomethane/			0.028	15
Benzo(a)pyrene		0.061		Ethylene dibromide	+		0.11	15
Bromodichloromethane		0.35	15	Dibromomethane	+		0.11	10
Bromomethane/Methyl		0.11	15	m-Dichlorobenzene	1 /		0.036	6.0
Bromide		0.11					0.088	6.0
4-Bromophenyl phenyl ether		0.055	15	o-Dichlorobenzene	++		0.090	6.0
n-Butyl alcohol		5.6	2.6	p-Dichlorobenzene			0.030	7.2
Butylate		0.0421	1.4 ¹	Dichlorodifluoromethane	+		0.25	6.0
Butyl benzyl phthalate		0.017	28	1,1-Dichloroethane	+		0.009	
2-sec-Butyl-4,6-				1.2-Dichloroethane			0.21	6.0
dinitrophenol/Dinoseb		0.066	2.5				0.025	6.0
Carbaryl		0.0061	0.141	1,1-Dichloroethylene			0.025	30
Carbenzadim		0.0561	1.41	trans-1,2-Dichloroethylene	+		0.034	14
Carbofuran		0.0061	0.141	2,4-Dichlorophenol			0.044	14
Carbofuran phenol		0.0561	1.41	2.6-Dichlorophenol				
Carbon disulfide		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D			0.72	10
Carbon tetrachloride		0.057	6.0	1,2-Dichloropropane			0.85	18 .
		0.0281	1.41	cis-1,3-Dichloropropylene	T		0.036	18
Carbosulfan Chiordane (alpha and gamma		0,0033	0.26	trans-1,3-Dichloropropylene			0.036	18
isomers)		0.46	16	Dieldrin			0.017	0.13
p-Chloroaniline		0.46	6.0	Diethyl phthalate		>	0.20	28

Form B1 Page 1 of 3

HOW MI			WW.	NWW (mg/kg) :=	CONSTITUENT	HOW MUST	(mg/l)	NWW (mg/kg)
	TUE	NT	(mg/!) -			CONSTITUENT		unless
				noted		BE MANAGED?		noted
In the state of th	- GROPPINES		0.10	NA				NA 30
								36
			0.047					33
								160
	-				Methyl methansulfonate		0.018	NA
							0.014	4.6
								1.41
					Mexacarbate			1.41
					Molinate			1.41
				14	Naphthalene			5.6
			12.0	170				NA 14 ¹
			0.92					28
								14
								28
								131
							0.12	29
							0.40	28
		1					0.40	2.3 ¹
		 		0.13			0.40	17
					N-Nitrosomethylethylamine			2.3
				1.4	N-Nitrosomorpholine			2.3
		A		33	N-Nitrosopiperidine			35
		1		10	N-Nitrosopyrrolidine			35
t	21	N		360	Oxamyl			0.281
5	5		0.12	160			0.014	4.6
	•	d.	0.28	28	isomers or all Aroclors)	A	0.10	10 1.4 ¹
	1	5	0.14	160				1.4 10 ¹
	1		0.12	NA			0.055	10
	Τ		0.017	15	Pentachlorodibenzo-p-dioxins)		0.000035	0.001
	Τ		0.068	3L.4	Pentachlorodibenzofurans)		0.000035	0.001
	1		0.059	3.4				6.0 4.8
	T		0.0561					7.4
			0.0012					16
								5.6
								6.2
								4.6
j			0.057	2.4		+		281
			0.000063	0.001	Phthalic acid			
			0.000063	0.001	Phthalic anhydride			28 ¹
					Physostigmine	+		1.4
\vdash						+		1.41
└──│ ──						1	0.093	1.5
├──┤──						1	0.0561	1.41
├ ─ <i>├</i> ─							0.0561	1.4 ¹
┝─┼─					Prosulfocarb		0.0421	1.41
<u>⊢ </u>			0.0011		Pyrene			8.2
			0.24	84	Pyridine			16
++			5.6	0.75 mg/l ¹	Safrole			22
			0.081	1.5	Silvex/2,4,5-TP			7.9
++			0.0561	1.41	1,2,4,5-Tetrachlorobenzene		0.055	14
1			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
1			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
				110	1,1,1,2-Tetrachloroethane	1	0.057	6.0
+}			0.0055	15	1,1,1,2=1 etracinioroetriario			
1	BEIMAN	CONSTITUE		CONSTITUENT BE MANAGE D? 0.10 0.036 0.047 0.057 0.32 0.12 0.32 0.12 0.32 0.55 0.017 0.40 12.0 0.92 0.92 0.087 0.017 0.028 0.017 0.0087 0.023 0.028 0.023 0.029 0.023 0.029 0.029 0.029 0.029 0.021 0.042 ¹ 0.041 0.12 0.041 0.12 0.055 0.055 0.0056 ¹ 0.00012 0.0055 0.055 0.0055 0.055 0.0055 0.055 0.0055 0.0055 0.0055	CONSTITUENT BE-MANAGED? Unless noted 0.10 NA 0.036 14 0.047 28 0.0567 28 0.32 2.3 0.28 160 0.12 160 0.32 140 0.55 28 0.017 28 0.40 14 0.55 28 0.017 28 0.40 14 12.0 170 0.92 13 ¹ 0.087 NA 0.92 13 ¹ 0.028 28 ¹ 0.029 0.13 0.029 0.13 0.025 0.13 0.025 0.13 0.025 1.3 0.025 0.13 0.024 360 0.12 160 1 0.24 360 1 0.24 360 1 0.28 28 1<	CONSTITUENT Diffest 0.10 NA p-Dimethylaminoazobenzene 0.036 14 Methyl en chloride 0.047 28 Methyl isobulyl ketone 0.32 2.3 Methyl isobulyl ketone 0.32 2.3 Methyl methacsylfate 0.32 140 Metolocarb 0.35 28 Mexacarbate 0.017 28 Molinate 0.92 13' o-Nitroaniline 0.92 13' o-Nitroaniline 0.023 28' o-Nitroaniline 0.024 28' o-Nitrosofiethylamine 0.025 0.13 N-Nitrosofiethylamine 0.028 0.13 N-Nitrosofiethylamine 0.028 0.13 N-Nitrosomethylethylamine 0.042' 1.4' N-Nitrosomethylethylamine 0.042' <td>CONSTITUENT Install CONSTITUENT CONSTITUENC 0.101 NA p-Dimethylamihoazobenzene BELMANAGED/E 0.036 14 Methylerne chloride BELMANAGED/E 0.047 28 Methyl rechanzobenzene BELMANAGED/E 0.057 28 Methyl isobutyl ketone BELMANAGED/E 0.12 160 Methyl methansuffonate BELMANAGED/E 0.112 160 Methyl methansuffonate BELMANAGED/E 0.021 170 2-Mapthylamine BELMANAGED/E 0.022 13' p-Nitroaniline BELMANAGED/E 0.023 0.066 p-Nitroaniline BELMANAGED/E 0.024 0.13 N-Nitrosochienthylamine BELMANAGED/E 0.025 0.13 N-Nitrosochien</td> <td>International and the second secon</td>	CONSTITUENT Install CONSTITUENT CONSTITUENC 0.101 NA p-Dimethylamihoazobenzene BELMANAGED/E 0.036 14 Methylerne chloride BELMANAGED/E 0.047 28 Methyl rechanzobenzene BELMANAGED/E 0.057 28 Methyl isobutyl ketone BELMANAGED/E 0.12 160 Methyl methansuffonate BELMANAGED/E 0.112 160 Methyl methansuffonate BELMANAGED/E 0.021 170 2-Mapthylamine BELMANAGED/E 0.022 13' p-Nitroaniline BELMANAGED/E 0.023 0.066 p-Nitroaniline BELMANAGED/E 0.024 0.13 N-Nitrosochienthylamine BELMANAGED/E 0.025 0.13 N-Nitrosochien	International and the second secon

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST THIS	WW (mg/l)	NWW (mg/kg)
	CONSTITUENT		unless Inoted		GONSTITUENT BEMANAGED2		unless noted +
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium	Α	0.69	0.11 mg/i TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)	А	2.77	0.60 mg/l TCLP ⁴
Trichloroethylene	A	0.054	6.0	Cyanides (Totai)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead .		0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/l TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3-		0.11	0.10 ¹	Nickel	A	3.98	11 mg/l TCLP ⁴
Dibromopropyl)phosphate Vernolate		0.0421	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum		0.32	30	Silver		0.43	0.30 mg/l TCLP
of o-,m-, and p-xylene				Silver		0.43	0.14 mg/l TCLP ⁴
			1	Sulfide		14	NA ²
	10MS .0	F		Thallium		1.4	0.078 mg/ TCLP ¹
	EN1-17			Thailium		1.4	0.20 mg/l TCLP ⁴
	U		1	Vanadium		4.3 ²	1.6 mg/l TCLP ²
4				Zinc	Ą	2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. 1

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon 4 adoption by the state.

5 Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

121868-01, 121868-02) DSSI-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC	Manifest Doc. No. :	019694669JJK
Profile No.:	PAD-WD-0906	State Manifest No.:	NIA
Tome No		-	

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🔲 Wastewater 🛛

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	3. US EPA	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK	NONE.	5. HOW MUST THE WASTE BE MANAGED?
REF#	HAZARDOUS WASTE CODE(S)	DESCRIPTION	NONE	ENTER LETTER FROM BELOW
1	D040	Trichloroethylene – Wastewater – Characteristically Toxic		A
2	F001	Trichloroethylene – Wastewater w/Spent Degreaser		A
3	F002	Trichloroethylene – Wastewater w/Spent Solvent		A
4	U228	Trichloroethylene – Wastewater – w/Spill of pure TCE		A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS B.3 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Cell Ruse_____ Title___ Waste Engineer

Date_ 8-19-2019

Form A1 Page 1 of 2

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLVENT WAS	STETREATMENT STANDARDS	and the second	
Fuur through FUUS spent solvent		nt Standard	FOOT through FOOS spont solvent constituents and their	Treatment Standa	id ^a
constituents and their associated USERA hazardous waste code(s).		Nonwastewaters	associated USEPA bazardous waste code(s).	Wastawäfers	Nonwastewaters
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class | SWDA systems. E.

> Form A1 Page 2 of 2

Four Rivers Nuclear Partnership LLC

Generator Name:

Manifest Doc. No. :

019694669550

NIA

Profile No .:

State Manifest No.:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

REF #	3. US EPA HAZARDOUS	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK	i	- 22		5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM FORM A1,
	WASTE CODE(S)	DESCRIPTION	NC		1	PAGE 1
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	let-	\mathbb{R}	ase	
Title	Waste Engineer			

Date 8-19-2019

Form A2 Page 1 of 2

Generator Name:	Four Rivers Nuclear	Partnership LLC

Manifest Doc. No. :

State Manifest No.:

019694669JJK

Profile No.:

NIA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

REF#	3. US EPA HAZARDOUS	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK N			5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM FORM A1,
	WASTE CODE(S)	DESCRIPTION	NON	<u>ا</u>	PAGE 1
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	al R	And		7-10-7010
Title	Waste Engineer		Date _	6-1-1 601

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Four Rivers Nuclear Partnership LLC

Generator Name:

_ Manifest Doc. No. :

0196946695510

Profile No.:

State Manifest No.:

NIA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUST THIS	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST THIS	WW (mg/l)	NWW (mg/kg)
	CONSTITUENT	(mgn)	unless		CONSTITUENT		unless
	BE MANAGED?		noted		BE MANAGED?		noted
	DE MANAGED!	0.059	3.4	2-Chloro-1,3-butadiene		0.057	0.28 ¹
Acenaphthylene		0.059	3.4	Chlorodibromomethane		0.057	15
Acenapthene		0.039	160	Chloroethane	A	0.27	6.0
Acetone		5.6	381	bis(2-Chloroethoxy)methane		0.036	7.2
Acetonitrile		0.010	9.7	bis(2-Chloroethyl)ether		0.033	6.0
Acetophenone			140	Chloroform	Α	0.046	6.0
2-Acetylaminofluorene		0.059		bis(2-Chloroisopropyl)ether		0.055	7.2
Acrolein		0.29	NA			0.018	14
Acylamide		19 ¹	231	p-Chloro-m-cresol		0.0621	NA ¹
Acrylonitrile		0.24	84	2-Chloroethyl vinyl ether			
Aldicarb sulfone		0.056 ¹	0.28 ¹	Chloromethane/Methyl		0.19	30
Aldicarb sullone				chloride 2-Chloronaphthalene		0.055	5.6
Aldrin		0.021	0.066			0.044	5.7
4-Aminobiphenyl		0.13	NA	2-Chlorophenol		0.036	30
Aniline		0.81	14	3-Chloropropylene		0.059	3.4
Anthracene		0.059	3.4	Chrysene		0.000	5.6
Aramite		0.36	NA	o-Cresol		0.77	5.6
alpha-(BHC)		0.00014	0.066	m-Cresol		0.77	5.6
beta-(BHC)		0.00014	0.066	p-Cresol			1.4
delta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate		0.0561	
gamma-(BHC)		0.0017	0.066	Cyclohexanone		0.36	0.75 mg
Barban		0.0561	1.41	o,p'-DDD		0.023	0.087
Bendiocarb		0.0561	1.41	p,p'-DDD		0.023	0.087
Benomyl		0.0561	1.41	o,p'-DDE		0.031	0.087
Benzene	A	0.14	10	p,p'-DDE		0.031	0.087
Benz(a)anthracene	· · · · · · · · · · · · · · · · · · ·	0.059	3.4	o,p'-DDT		0.0039	0.087
Benzal chloride		0.0551	6.0 ¹	p,p'-DDT		0.0039	0.087
Benzal chloride		0.11	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo(k)fluoranthene ³		0.0055	1.8	1,2-Dibromo-3-chloropropane	A	0.11	15
Benzo (g,h,i)perylene				1.2-Dibromomethane/		0.028	15
Benzo(a)pyrene		0.061	3.4	Ethylene dibromide	A	0.020	10
	A	0.35	15	Dibromomethane		0.11	15
Bromodichloromethane	Α	0.35				0.036	6.0
Bromomethane/Methyl	A	0.11	15	m-Dichlorobenzene	A	0.030	0.0
Bromide	<u> .</u>	0.055	15	o-Dichlorobenzene		0.088	6.0
4-Bromophenyl phenyl ether			2.6	p-Dichlorobenzene	A	0.090	6.0
n-Butyl alcohol		5.6 0.042 ¹	1.4	Dichlorodifluoromethane		0.23	7.2
Butylate			28	1,1-Dichloroethane	A	0.059	6.0
Butyl benzyl phthalate		0.017	28				
2-sec-Butyl-4,6-			25	1,2-Dichloroethane	A	0.21	6.0
dinitrophenol/Dinoseb		0.066	2.5	1,1-Dichloroethylene	A	0.025	6.0
Carbaryl		0.0061	0.141	trans-1,2-Dichloroethylene		0.054	30
Carbenzadim		0.056	1.41			0.044	14
Carbofuran		0.0061	0.141	2,4-Dichlorophenol		0.044	14
Carbofuran phenol		0.0561	1.41	2.6-Dichlorophenol	+		
Carbon disulfide	A	3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
O-shan tatra ablarida	A	0.057	6.0	1,2-Dichloropropane	A	0.85	18
Carbon tetrachloride	1~		1.41	cis-1.3-Dichloropropylene	A	0.036	18
Carbosulfan		0.0281	1.4	and the second	-+		
Chlordane (alpha and gamma		0.0000	0.26	trans-1,3-Dichloropropylene		0.036	18
isomers)		0.0033	0.26	Dieldrin		0.017	0.13
p-Chloroaniline		0.46	16			0.20	28
Chlorobenzene	A	0.057	6.0	Diethyl phthalate			

Form B1 Page 1 of 3

CONSTITUENT	HOW MUST	ww	NWW	CONSTITUENT	HOW MUST THIS	WW (mg/l)	NWW (mg/kg)
	THIS	(mg/l)	(mg/kg) unless		CONSTITUENT		uniess. noted
	BE MANAGED?		noted		BE MANAGED?	0.13 ¹	NA
Chlorobenzilate		0.10	NA	p-Dimethylaminoazobenzene	A	0.089	30
2,4-Dimethyl phenol		0.036	14	Methylene chloride	^	0.28	36
Dimethyl phthalate		0.047	28 28	Methyl ethyl ketone Methyl isobutyl ketone		0.14	33
Di-n-butyl phthalate		0.057	2.3	Methyl methacrylate		0.14	160
1,4-Dinitrobenzene		0.32	160	Methyl methansulfonate		0.018	NA
4,6-Dinitro-o-cresol		0.28	160	Methyl parathion		0.014	4.6
2,4-Dinitrophenol		0.12	140	Metolcarb		0.0561	1.41
2,4-Dinitrotoluene		0.32	28	Mexacarbate		0.0561	1.4 ¹
2,6-Dinitrotoluene		0.017	28	Molinate		0.0421	1.41
Di-n-octyl phthalate		0.40	14	Naphthalene		0.059	5.6
Di-n-propyInitrosamine	•	12.0	170	2-Naphthylamine		0.52	NA
1,4-Dioxane	Α	0.92	131	o-Nitroaniline		0.271	14 ¹
Diphenylamine ³		0.92	131	p-Nitroaniline		0.028	28
Diphenylnitrosamine ³		0.087	NA	Nitrobenzene		0.068	14
1,2-Diphenylhydrazine		0.007	6.2	5-Nitro-o-toluidine		0.32	28
Disulfoton		0.028	281	o-Nitrophenol		0.0281	13 ¹
Dithiocarbamates (total)		0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan I		0.023	0.13	N-Nitrosodiethylamine		0.40	28
Endosulfan II		0.029	0.13	N-Nitrosodimethylamine		0.40	2.3 ¹
Endosulfan sulfate		0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin Endrin		0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
Endrin aldehyde		0.0421	1.41	N-Nitrosomorpholine		0.40	2.3
EPTC		0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl acetate	A	0.057	10	N-Nitrosopyrrolidine		0.013	35
Ethyl cyanide/Propanenitrile	<u></u>	0.24	360	Oxamyl		0.0561	0.281
		0.12	160	Parathion		0.014	4.6
Ethyl ether Bis(2-Ethylhexyl)phthalate		0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)		0.10	10
		0.14	160	Pebulate		0.0421	1.4 ¹
Ethyl methacrylate		0.12	NA	Pentachlorobenzene		0.0551	10 ¹
Ethylene oxide Famphur		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		0.068	3.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
		0.059	3.4	Pentachloroethane		0.055	6.0
Fluorene	<u></u>	0.0561	1.41	Pentachloronitrobenzene		0.055	4.8
Formetanate hydrochloride Heptachlor		0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide		0.016	0.066	Phenacetin		0.081	16
Hexachlorobenzene		0.055	10	Phenanthrene		0.059	5.6
Hexachlorobutadiene		0.055	5.6	Phenol		0.039	6.2
Hexachlorocyclopentadiene		0.057	2.4	Phorate		0.021	4.6
HxCDDs (All Hexachrorodibenzo-p-dioxins)		0.000063	0.001	Phthalic acid		0.055 ¹	28 ¹
HxCDFs (All HxcDFs in the sector of the sect		0.000063	0.001	Phthalic anhydride		0.055	28 ¹
Hexachloroethane		0.055	30	Physostigmine		0.0561	1.4
Hexachloropropylene		0.035	30	Physostigmine salicylate		0.056	1.41
Indeno(1,2,3-c,d)pyrene		0.0055	3.4	Promecarb		0.0561	1.41
lodomethane		0.19	65	Pronamide		0.093	1.5
Isobutyl alcohol		5.6	170	Propham		0.0561	1.41
Isodrin		0.021	0.066	Propoxur		0.0561	1.4
Isosafrole		0.081	2.6	Prosulfocarb		0.0421	1.41
Kepone		0.0011	0.13	Pyrene		0.067	8.2
Methacrylonitrile		0.24	84	Pyridine		0.014	16
Methanol		5.6	0.75 mg/l			0.081	22
Methapyrilene		0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methiocarb		0.0561	1.41	1,2,4,5-Tetrachlorobenzene TCDDs (All		0.055	0.001
Methomyl		0.0281	0.14 ¹	Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
Methoxychlor		0.25	0.18	Tetrachlorodibenzo-furans)		0.000063	6.0
3-Methylcholanthrene	_						6.0
4,4'-Methylene bis(2- chloroaniline)		0.50	30	1,1,2,2-Tetrachloroethane	А	0.057	0.0

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST THIS CONSTITUENT	WW (mg/l)	NWW (mg/kg), unless	CONSTITUENT	HOW MUST THIS CONSTITUENT	WW (mg/l)	NWW (mg/kg) unless noted
	BE MANAGED?	0.056	6.0	INORGANIC	BE MANAGED?		IIOIGO
Tetrachloroethylene	A		+	CONSTITUENTS		1.9	2.1 mg/l
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony		1.9	TCLP 1.15 mg/l
Thiodicarb		0.0191	1.41	Antimony			TCLP ⁴ 5.0 mg/l
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	TCLP 7.6 mg/l
Toluene	А	0.080	10	Barium		1.2	TCLP 21 mg/l
Toxaphene		0.0095	2.6	Barium		1.2	TCLP ⁴ 0.014 mg
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/ TCLP
1,2,4-Trichlorobenzene	A	0.055	19	Cadmium		0.69	0.11 mg/ TCLP ⁴
1,1,1-Trichloroethane	A	0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	A	0.054	6.0	Chromium (Total)		2.77	0.60 mg/ TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg
2,4,5-Trichlorophenoxyacetic		0.72	7.9	Lead		0.69	0.75 mg TCLP
acid/2,4,5-T 1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg TCLP
1,1,2-Trichloro-1,2,2-		0.057	30	Mercury (All others)		0.15	0.025 m TCLP
trifluoroethane Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3-		0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Dibromopropyl)phosphate Vernolate	-	0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg TCLP
Vinyl chloride	A	0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xylenes - mixed isomers (sum		0.32	30	Silver		0.43	0.30 mg TCLP
of o-,m-, and p-xylene		+		Silver		0.43	0.14 mg
			-	Sulfide		14	NA ²
		+		Thallium		1.4	0.078 m TCLP ¹
				Thallium		1.4	0.20 mg TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/
				Zinc		2.61	4.3 mg/
				These constituents are not cons	tituents that require		the second se

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. ² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

121868-01, 121868-02) DSST-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC	Manifest Doc. No. :	019694669538
Profile No.:	PAD-WD-0906	_ State Manifest No.:	NIA

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🔲 Wastewater 🛛 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	De Inferenza			
REFE				
1	D040	Trichloroethylene – Wastewater – Characteristically Toxic		A
	F001	Trichloroethylene – Wastewater w/Spent Degreaser		A
3	F002	Trichloroethylene – Wastewater w/Spent Solvent	<u> </u>	Α
4	U228	Trichloroethylene – Wastewater – w/Spill of pure TCE		A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🛛 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268:40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this B.1 certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268,40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this **B.3** certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This B.4 decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this D. certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

- WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.
- This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Thereby bonary and an an				- 17	-19-ZO/	A
Signature_Cekt ? Ruse	_ Title	Waste Engineer	Date	ß	-14-201-	<u>/</u>

Form A1 Page 1 of 2

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

			TE TREATMENT STRAND A POSS		
वाति किंतवादी, दीपरि इत्येन दिविष्ठको । त्याने किंतवाद की किंत कार कार की किंत विद्युपरि किंतवाद की की किंतवाद की किंत		(Sandun)	Contenn constitutents and their se associated USEIM Internations wasta cooles	UP MAYER CO	. NonWaterwalting
	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
cetone (F003) lenzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
-Butanol (n-butyl alcohol) (F003)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon disulfide (F005)		6.0	Nitrobenzene (F004)	0.068	14
Carbon tetrachloride (F001) Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
	0.11	5.6	Pyridine (F005)	0.014	16
p-Cresol (F004) Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachioroethylene (F001, F002)	0.056	6.0
	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
Cyclohexanone (F003) o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
ethylene glycol, monoethyl ether	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl acetate (F003) Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. A.

Β. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

C,

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

Four Rivers Nuclear Partnership LLC

Generator Name:

Manifest Doc. No. :

019694669JJK

Profile No.:

State Manifest No .:

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 stituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

consultent		4.SUBCATEGORY		5	110月1日に11日1日1月1日
	3 USEA	ENTER THE SUBCALL GORY DESCRIPTION. IF NOT ARREICABLE SIMPLY CREEKING	NE		
REF# 6		4 SUBEAVESORY ENTER THE SUBGATESORY DESCRIPTION. IE NOT APPLICATELE, SIMPLY CREEK NO DESCRIPTION	08		
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Date 8-19-2019 Signature Waste Engineer Title

Form A2 Page 1 of 2

Generator Name:	Four Rivers Nuclear Partnership LLC
Generator Name.	1 Our Trivero Hadioart

Manifest Doc. No. :

State Manifest No .:

019694669JJK

Profile No.:

NIA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. and underlying hazardous constituent(s) if applicable, must be listed and attached.

F039 const	ittlent(s) and underly	A SUBICATEGORY	l lan	5	HOW MEST THE WASUE
	T USEPA	ENTERTHE SUBCALLEGORY DESCRIPTION, LENGT APPLICABLE, SIMPLY REPORT	00		
	HAZARDOUS WASHE(MODES)	DESCRIPTIER			PAGET
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	ale R and	Date _	2-19-2019
Title	Waste Engineer		

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Four Rivers Nuclear Partnership LLC

Manifest Doc. No. :

019694669JJK NIA

Profile No.:

Generator Name:

State Manifest No .:

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

-	LDR form.	WW	NWW	CONSTITUENT	HOW MUST	CONTRACTOR OF STREET,	NWW
	THIS	(mg/l)	(mg/kg)		THIS	(mg/l)	(mg/kg) unless
	CONSTITUENT		uniess		CONSTITUENT		noted
	BE MANAGED?		noted		DEUNANAGI	0.057	0.28 ¹
cenaphthylene		0.059	3.4	2-Chloro-1,3-butadiene		0.057	15
cenapthene		0.059	3.4	Chlorodibromomethane	A	0.27	6.0
cetone		0.28	160		^	0.036	7.2
cetonitrile		5.6	381	bis(2-Chloroethoxy)methane		0.033	6.0
cetophenone		0.010	9.7	bis(2-Chloroethyl)ether	A	0.046	6,0
-Acetylaminofluorene		0.059	140	Chloroform	<u> </u>	0.055	7.2
crolein		0.29	NA	bis(2-Chloroisopropyl)ether		0.018	14
		19 ¹	23 ¹	p-Chloro-m-cresol		0.0621	NA ¹
crylonitrile		0.24	84	2-Chloroethyl vinyl ether			
Aldicarb sulfone		0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride		0.19	30 5.6
11 data		0.021	0.066	2-Chloronaphthalene			5.7
Aldrin I-Aminobiphenyl		0.13	NA	2-Chlorophenol		0.044	30
		0.81	14	3-Chloropropylene			3.4
Aniline		0.059	3.4	Chrysene		0.059	5.6
Anthracene		0.36	NA	o-Cresol			5.6
Aramite		0.00014	0.066	m-Cresol	ļ	0.77	5.6
alpha-(BHC)		0.00014	0.066	p-Cresol			1.4
peta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate		0.0561	
delta-(BHC)		0.0017	0.066	Cyclohexanone		0.36	0.75 mg
gamma-(BHC)		0.0561	1.41	o,p'-DDD		0.023	0.087
Barban		0.0561	1.41	p,p'-DDD		0.023	0.087
Bendiocarb		0.0561	1.4	o,p'-DDE		0.031	0.087
Benomyl	A	0.14	10	p,p'-DDE		0.031	0.087
Benzene	Α	0.059	3.4	o,p'-DDT		0.0039	0.087
Benz(a)anthracene		0.055	6.0 ¹	p,p'-DDT		0.0039	0.087
Benzal chloride		0.000	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo(k)fluoranthene ³		0.0055	1.8	1,2-Dibromo-3-chloropropane	A	0,11	15
Benzo (g,h,i)perylene		0.0055		1,2-Dibromomethane/		0.028	15 .
Benzo(a)pyrene		0:061	3.4	Ethylene dibromide	A	0.020	
	L	0.35	15	Dibromomethane		0.11	15
Bromodichloromethane	Α	0.35				0.036	6.0
Bromomethane/Methyl Bromide	A	0.11	15	m-Dichlorobenzene	A .	0.088	6.0
4-Bromophenyl phenyl ether		0.055	15	p-Dichlorobenzene	A	0.090	6.0
n-Butyl alcohol		5.6	2.6	Dichlorodifluoromethane		0.23	7.2
Butylate		0.0421	1.41		A	0.059	6.0
Butyl benzyl phthalate		0.017	28	1,1-Dichloroethane			
2-sec-Butyl-4,6-				1,2-Dichloroethane	A	0.21	6.0
dinitrophenol/Dinoseb		0.066	2.5	1,1-Dichloroethylene	A	0,025	6.0
Carbaryl		0.0061	0.141			0.054	30
Carbenzadim		0.0561	1.4'	trans-1,2-Dichloroethylene		0.044	14
Carbofuran		0.0061	0.141	2,4-Dichlorophenol	-	0.044	14
Carbofuran phenol		0.0561	1.4 ¹	2.6-Dichlorophenol			
Carbon disulfide	A	3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
Carbon tetrachloride	A	0.057	6.0	1,2-Dichloropropane	A	0.85	18
		0.0281	1.4 ¹	cis-1,3-Dichloropropylene	Α		
Carbosulfan Chlordane (alpha and gamma		0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
isomers)		0.46	16	Dieldrin		0.017	0.13
p-Chloroaniline	A	0.057	6.0	Diethyl phthalate		0.20	28

Form B1 Page 1 of 3

INSTITUENT	HOW MUST	ww.	NWW		How Must	A REAL PROPERTY AND A REAL	WWW ma/ka)
NS ID DENIE	THIS	(mg/l)	(mg/kg):		CONSTITUENT		anless
	CONSTITUENT		unless		BE MANAGED?		noted
	BE MANAGED?		noted	p-Dimethylaminoazobenzene			NA
lorobenzilate		0.10	NA	Methylene chloride	A		30
I-Dimethyl phenol		0.036	<u>14</u> 28	Methyl ethyl ketone			36
methyl phthalate		0.047	28	Methyl isobutyl ketone			33
n-butyl phthalate		0.057	2.3	Methyl methacrylate			160
4-Dinitrobenzene		0.32	160	Methyl methansulfonate			NA
6-Dinitro-o-cresol		0.28	160	Methyl parathion			4.6
4-Dinitrophenol		0.12	140	Metolcarb			1.4 ¹
4-Dinitrotoluene		0.32	28	Mexacarbate			1.4
6-Dinitrotoluene		0.55	28	Molinate		0.0421	1.41
i-n-octyl phthalate		0.40	14	Naphthalene		0.059	5.6
i-n-propyInitrosamine		12.0	170	2-Naphthylamine		0.52	NA
4-Dioxane	Α	0.92	131	o-Nitroaniline		0.27 ¹	14 ¹
iphenylamine ³		0.92	131	p-Nitroaniline		0.028	28
iphenylnitrosamine ³		0.92	NA	Nitrobenzene		0.068	14
2-Diphenylhydrazine		0.017	6.2	5-Nitro-o-toluidine		0.32	28
isulfoton		0.017	281	o-Nitrophenol		0.0281	13 ¹
ithiocarbamates (total)		0.028	0.066	p-Nitrophenol		0.12	29
ndosulfan I		0.029	0.13	N-Nitrosodiethylamine		0.40	28 2.3 ¹
ndosulfan II		0.029	0.13	N-Nitrosodimethylamine		0.40	17
ndosulfan sulfate		0.023	0.13	N-Nitroso-di-n-butylamine		0.40	2.3
ndrin		0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
ndrin aldehyde		0.0421	1.4	N-Nitrosomorpholine		0.40	35
PTC		0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl acetate	Δ	0.057	10	N-Nitrosopyrrolidine		0.013	0.281
Ethyl benzene	Α	0.24	360	Oxamyl		0.0561	4.6
Ethyl cyanide/Propanenitrile		0.12	160	Parathion		0.014	4.0
thyl ether			28	Total PCBs (sum of all PCB		0.10	10
3is(2-Ethylhexyl)phthalate		0.28		isomers or all Aroclors)		0.0421	1.41
Ethyl methacrylate		0.14	160	Pebulate		0.0551	101
Ethylene oxide		0.12	NA	Pentachlorobenzene			+
		0.017	15	PeCDDs (All		0.000035	0.001
Famphur		0.017	10	Pentachlorodibenzo-p-dioxins)			0.004
		0.068	3.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluoranthene		0.000				0.055	6.0
Fluorene		0.059	3.4	Pentachloroethane Pentachloronitrobenzene		0.055	4.8
Formetanate hydrochloride		0.0561	1.41	Pentachlorophenol		0.089	7.4
Heptachlor		0.0012	0.066			0.081	16
Heptachlor epoxide		0.016	0.066	Phenacetin Phenanthrene		0.059	5.6
Hexachlorobenzene		0.055	10			0.039	6.2
Hexachlorobutadiene		0.055	5.6	Phenol		0.021	4.6
Hexachlorocyclopentadiene		0.057	2.4	Phorate		0.055 ¹	28 ¹
HYCDDs (All		0.000063	0.001	Phthalic acid		0.055	20
Hexachrorodibenzo-p-dioxins)					0.055	28 ¹
HyCDEs (All		0.000063	3 0.001	Phthalic anhydride			
Hexachlorodibenzofurans)			30	Physostigmine		0.0561	1.41
Hexachloroethane		0.055	30	Physostigmine salicylate		0.056	1.4 ¹
Hexachloropropylene		0.035	3.4	Promecarb		0.0561	1.41
Indeno(1,2,3-c,d)pyrene		0.0055	65	Pronamide		0.093	1.5
lodomethane		5.6	170	Propham		0.0561	1.4
Isobutyl alcohol		0.021	0.066	Propoxur		0.0561	1.4
Isodrin		0.021	2.6	Prosulfocarb		0.042'	1.41
Isosafrole		0.081	0.13	Pyrene		0.067	8.2
Kepone		0.0011	84	Pyridine		0.014	16
Methacrylonitrile		5.6	0.75 mg			0.081	22
Methanol		0,081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methapyrilene		0.0561	1.4	1,2,4,5-Tetrachlorobenzene		0.055	14
Methiocarb				TCDDs (All		0.00006	3 0.00
		0.028 ¹	0.14 ¹	Tetrachlorodibenzo-p-dioxins	3)		
Methomyl				TCDEs (All		0.00006	3 0.00
Methoxychlor		0.25	0.18	Tetrachlorodibenzo-furans)			6.0
		0.0055	15	1,1,1,2-Tetrachloroethane		0.057	
3-Methylcholanthrene				1,1,2,2-Tetrachloroethane	A	0.057	6.0
4,4'-Methylene bis(2-	1	0,50	30	I, I, Z, Z ⁻ I Cu aomoro cu amo			

Form B1 Page 2 of 3

Page 6 of 7

CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)		HOW MUST	WWW (mg/l)	NWW (mg/kg)
	THIS CONSTITUENT BE MANAGED?	NHIGH K	unless		CONSTITUENT BE MANAGED?		unless noted
Fetrachloroethylene	A	0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene	A	0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/ TCLP⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/ TCLP
1,2,4-Trichlorobenzene	A	0.055	19	Cadmium		0.69	0.11 mg/ TCLP ⁴
1,1,1-Trichloroethane	A	0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane	A	0.054	6.0	Chromium (Total)		2.77	0.60 mg/ TCLP ⁴
		0.054	6.0	Cyanides (Total)		1.2	590
Trichloroethylene Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)	· ·	0.86	30 ¹
		0.18	7.4	Fluoride		35	NA⁴
2,4,5-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg
2,4,6-Trichlorophenol 2,4,5-Trichlorophenoxyacetic		0.72	7.9	Lead		0.69	0.75 mg TCLP
acid/2,4,5-T		0.85	30	Mercury (Nonwastewater from		NA	0.20 mg
1,2,3-Trichloropropane 1,1,2-Trichloro-1,2,2-		0.057	30	Retort) Mercury (All others)		0.15	0.025 m
trifluoroethane		0.081 ¹	1.51	Nickel		3.98	5.0 mg/l
Triethylamine Tris-(2,3-		0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Dibromopropyl)phosphate		0.0421	6.0 ¹	Selenium		0.82	0.16 mg
Vernolate			6.0	Selenium		0.82	5.7 mg/ TCLP ⁵
Vinyl chloride Xylenes – mixed isomers (sum	A	0.27	30	Silver		0.43	0.30 mg
of o-,m-, and p-xylene	1 A	0.32		Silver		0.43	0.14 mg
				Sulfide		14	NA ²
						1.4	0.078 n
			_	Thallium		1.4	TCLP ¹ 0.20 mg TCLP ⁴
						4.3 ²	1.6 mg/
						2.61	TCLP ² 4.3 mg/ TCLP ²
				Zinc These constituents are not cons	14		

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.
 ² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.
 ⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.
 ⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001 D043 waster

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

121809-01	+ 121,09-02
	DSSI-19-096

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	FRNP	Manifest Doc. No. :	01969466955K
Profile No.:	PAD-WD-0838-V4	State Manifest No.:	NA

Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌 1.

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	e de Centra	NALESCONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRAC	onne (
	187/27339101950 - WV: S162(CODEE(S))	intered Stibilitory	- सिल्लास=	
1	D006	Cadmium		A
2	D008	Lead		A
3				
4				

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? in column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

- For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and Imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS B.3 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This B.4 decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C,

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

- RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.
- "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penaltles for submitting a false certification, including the possibility of fine or imprisonment." WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
- E. This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this	s and all associated documents is complete and acc	urate, to the best of my knowledge and information.
Signature Altilly	Title Waste Engineer	Date08/07/2019
		'
\mathbf{V}	Form A1	
(Page 1 of 2	

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

			ງແລະ ອຸ ດຊີລະດາການເ ປັນ <u>ເຊິ່ນໃຫ້ເປັນໃຫ້ແລະເຊັ່ນ</u> ແຜ່ນັ້ນ ເນັ້ກເອກອຸດິກາຈີນີ້ທີ່ອິດຊີລາມ		
ભૂભને સુવારભાવીના ચાંધીને સુવાદી દેકારો જે ચાર જોત સીંતા બાદક શામને સીંતના સંકાર બંધી છે. શુક્રા સુગ્રે સુવાર્ત સુવાર જો કાર બેઠા લે છે.	, iliçelanı Tarihi	a Shatari	ទាស់ក្រុងបានប្រការ ក្រោយ ការចាប់ដែលប្រជាអ្នកក្រុងប្រកាលប្រការ ក្រោះតែលាប់ (ភ្នា	Ficeform State	Manivertevenes
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Beńzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
Dutenel (n butil sizebol) (E003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
n-Butanol (n-butyl alcohol) (F003)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon disulfide (F005)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Carbon tetrachloride (F001) Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
	0.11	5.6	Pyridine (F005)	0.014	16
o-Cresol (F004) Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
Cyclohexanone (F003) o-Dichlorobenzene (F002)	0,088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene giycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. A.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. В.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

Generator Name:

FRIOP

Manifest Doc. No. :

019694669JJK

Profile No.:

State Manifest No .:

NIA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2, F039 stituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature

Waste Engineer Title

08/07/2019 Date

Form A2 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Gen	erator	Nam	e.

FRNP

Manifest Doc. No. :

019694669JJK

Profile No.:

State Manifest No.:

NIA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

		ระสายสาย (1996) (1996) (1996) (1997) (1997) เป็นและได้ (1997) (1996) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1			
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature		L	P.: (R	\checkmark	
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Title	Waste Engineer	(-	-		
nue	vvaste Engineer				and the second sec	

Date 08/07/2019

Form A2 Page 2 of 2

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:

FRNP

Manifest Doc. No. :

019694669JJK

Profile No.:

State Manifest No.:

NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST	WW (mg/l)	NWW (mg/kg)	CONSTITUENT	HOW MUST	- WW - (mg/l)	NWW (mg/kg)
	THIS CONSTITUENT		Unless		CONSTITUENT		unless
	BE MANAGED		noted		BEMANAGED?		noted
	DEMANAGED	大学が一般的なななない生活です。	网络哈拉斯罗马拉斯	2-Chloro-1,3-butadiene		0.057	0.28 ¹
Acenaphthylene	<	0.059	3.4	Chlorodibromomethane		0.057	15
Acenapthene		0.059	3.4	Chloroethane		0.27	6.0
Acetone		0.28	160	bis(2-Chloroethoxy)methane		0.036	7.2
Acetonitrile		5.6	38 ¹ 9.7	bis(2-Chloroethyl)ether		0.033	6.0
Acetophenone		0.010	140	Chloroform		0.046	6.0
2-Acetylaminofluorene		0.059	NA NA	bis(2-Chloroisopropyl)ether		0.055	7.2
Acrolein		0.29	231	p-Chloro-m-cresol		0.018	14
Acylamide		191	84	2-Chloroethyl vinyl ether		0.0621	NA ¹
Acrylonitrile		0.24		Chloromethane/Methyl		0.40	30
Aldicarb sulfone		0.056 ¹	0.281	chloride	<i> </i> -	0.19	5.6
Aldrin		0.021	0,066	2-Chloronaphthalene		0.044	5.7
4-Aminobiphenyi		0.13	NA	2-Chlorophenol	├	0.036	30
Aniline		0.81	14	3-Chloropropylene	+	0.059	3.4
Anthracene		0.059	3.4	Chrysene o-Cresol	+	0.11	5.6
Aramite	L	0.36	NA	m-Cresol	+	0.77	5,6
alpha-(BHC)		0.00014	0.066	p-Cresol		0.77	5,6
beta-(BHC)	ļ	0.00014	0.066	m-Cumenyl methylcarbamate		0.0561	1.41
delta-(BHC)	L	0.023	0.066	Cyclohexanone	+	0.36	0.75 mg/l1
gamma-(BHC)	L		1.4	o,p'-DDD		0.023	0.087
Barban		0.0561	1.4	p,p'-DDD	+	0.023	0.087
Bendiocarb		0.0561	1.4	0,p'-DDE	+	0.031	0.087
Benomyl		0.0561	10	p,p'-DDE		0.031	0.087
Benzene		0.14	3.4	o,p'-DDT		0.0039	0.087
Benz(a)anthracene		0.055	6.01	p,p'-DDT		0,0039	0.087
Benzal chloride		0.055	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo(k)fluoranthene ³	·	0.0055	1.8	1,2-Dibromo-3-chloropropane		0.11	15
Benzo (g,h,i)perylene	<u> </u>			1,2-Dibromomethane/		0.028	15
Benzo(a)pyrene		0.061	3.4	Ethylene dibromide			
		0.35	15	Dibromomethane		0.11	15
Bromodichloromethane Bromomethane/Methyl		0.11	15	m-Dichlorobenzene		0.036	6.0
Bromide	+	0.055	15	o-Dichlorobenzene		0.088	6.0
4-Bromophenyl phenyl ether	↓↓	5,6	2.6	p-Dichlorobenzene		0,090	6.0
n-Butyl alcohol	<u> </u>	0.0421	1.41	Dichlorodifluoromethane		0.23	7.2
Butylate	<u> _ </u>	0.042	28	1.1-Dichloroethane		0.059	6.0
Butyl benzyl phthalate						0.21	6.0
2-sec-Butyl-4,6-	1 1	0.066	2.5	1,2-Dichloroethane			
dinitrophenol/Dinoseb	+	0.0061	0.141	1,1-Dichloroethylene		0.025	6.0
Carbaryl	+	0.056	1.41	trans-1,2-Dichloroethylene		0.054	30
Carbenzadim	+	0.0061	0.141	2,4-Dichlorophenol		0.044	14
Carbofuran Carbofuran phenol	+-1	0.056	1.41	2.6-Dichlorophenol		0.044	14
Carbon disulfide		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
Carbon tetrachloride	+1	0.057	6.0	1,2-Dichloropropane		0.85	18
	+1	0.0281	1.41	cis-1,3-Dichloropropylene		0.036	18
Carbosulfan Chiordane (alpha and gamma	+1	0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
isomers)		0.0033	16	Dieldrin	1	0.017	0.13
p-Chloroaniline	11	0.46	6.0	Diethyl phthalate		0.20	28

Form B1 Page 1 of 3

CONSTITUENT	HOW MUST	ww	NWW		HOW MUS THIS	STI		NWW (mg/kg) -
	THIS	(mg/l)	(mg/kg) unless		CONSTIT	UENT		unless
	CONSTITUENT BE MANAGED?		noted		BE MANA			noted
Chlorobenzilate		0.10	NA	p-Dimethylaminoazobenzene 🗲				NA
2,4-Dimethyl phenol		0.036	14	Methylene chloride				30
Dimethyl phthalate		0.047	28	Methyl ethyl ketone				36 33
Di-n-butyl phthalate		0.057	28	Methyl isobutyl ketone				160
1,4-Dinitrobenzene		0.32	2.3	Methyl methacrylate				NA
4,6-Dinitro-o-cresol		0.28	160	Methyl methansulfonate Methyl parathion		+	0.014	4.6
2,4-Dinitrophenol		0.12	160 140	Metolcarb			0,0561	1.41
2,4-Dinitrotoluene		0.32	28	Metolcarb			0.0561	1.41
2,6-Dinitrotoluene		0.017	28	Molinate			0.0421	1.4 ¹
Di-n-octyl phthalate	 -	0.40	14	Naphthalene			0.059	5.6
Di-n-propylnitrosamine 1.4-Dioxane	-	12.0	170	2-Naphthylamine			0.52	NA
Diphenylamine ³		0.92	13 ¹	o-Nitroaniline			0.271	14 ¹
Diphenylnitrosamine		0.92	13 ¹	p-Nitroaniline			0.028	28
1,2-Diphenylhydrazine		0.087	NA	Nitrobenzene			0.068	14
Disulfoton		0.017	6.2	5-Nitro-o-toluidine			0.32	28 13 ¹
Dithiocarbamates (total)		0.028	281	o-Nitrophenol			0.028 ¹ 0.12	29
Endosulfan I		0.023	0.066	p-Nitrophenol			0.12	29
Endosulfan II		0.029	0.13	N-Nitrosodiethylamine N-Nitrosodimethylamine			0.40	2.31
Endosulfan sulfate	 	0.029	0.13	N-Nitrosodimetnylamine			0.40	17
Endrin	↓↓	0.0028	0.13	N-Nitrosomethylethylamine			0.40	2.3
Endrin aldehyde		0.025	1.41	N-Nitrosomorpholine			0.40	2.3
EPTC		0.042	33	N-Nitrosopiperidine			0.013	35
Ethyl acetate		0.057	10	N-Nitrosopyrrolidine			0.013	35
Ethyl benzene Ethyl cyanide/Propanenitrile		0.24	360	Oxamyl			0.056 ¹	0.281
Ethyl ether		0.12	160	Parathion			0.014	4.6
Bis(2-Ethylhexyl)phthalate		0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)			0.10	10
Ethyl methacrylate		0.14	160	Pebulate			0.0421	1.41
Ethylene oxide		0.12	NA	Pentachlorobenzene		_	0.055 ¹	101
Famphur		0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)			0.000035	0.001
Fluoranthene		0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)			0.000035	0.001
Fluorene		0.059	3.4	Pentachloroethane			0.055	6.0
Formetanate hydrochloride		0.0561	1.41	Pentachloronitrobenzene	 		0.055	4.8
Heptachlor		0.0012	0.066	Pentachlorophenol			0.081	16 .
Heptachlor epoxide		0.016	0.066	Phenacetin			0.059	5.6
Hexachlorobenzene		0.055	10	Phenanthrene			0.039	6.2
Hexachlorobutadiene		0.055	5.6 2.4	Phorate			0.021	4.6
Hexachlorocyclopentadiene	↓↓	0.057			1		0.0551	281
HxCDDs (All Hexachrorodibenzo-p-dioxins)		0.000063	0.001	Phthalic acid				20 28 ¹
HxCDFs (All Hexachlorodibenzofurans)		0.000063	0.001	Phthalic anhydride Physostigmine			0.055	1.4
Hexachloroethane		0.055	30 30	Physostigmine salicylate	+		0.0561	1.4
Hexachloropropylene	+	0.035	3.4	Promecarb	+ + + - + - + - + - + - + - + - + - + -		0.0561	1.41
Indeno(1,2,3-c,d)pyrene	+	0.19	65	Pronamide			0.093	1.5
Iodomethane	+	5.6	170	Propham			0.0561	1.41
Isobutyi alcohol	+	0.021	0.066	Propoxur			0.0561	1.41
Isodrin Isosafrole	+-1	0.081	2.6	Prosulfocarb			0.0421	1.4 ¹
Kepone	+-1	0.0011	0.13	Pyrene			0.067	8.2
Methacrylonitrile	+	0.24	84	Pyridine			0.014	16
Methanol	11	5.6	0.75 mg/l ¹	Safrole	↓↓		0.081	22
Methapyrilene		0.081	1.5	Silvex/2,4,5-TP	·		0.72	7.9
Methiocarb	· · · · · · · · · · · · · · · · · · ·	0.056 ¹ 0.028 ¹	1.4 ¹ 0.14 ¹	1,2,4,5-Tetrachlorobenzene TCDDs (All	++		0.055	14 0.001
Methomyl				Tetrachiorodibenzo-p-dioxins) TCDFs (All			0.000063	0.001
Methoxychlor		0.25	0.18	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane			0,057	6.0
3-Methylcholanthrene 4,4'-Methylene bis(2-						_	0.057	6.0
4,4°-Methylene bis(2- chloroaniline)	<u> </u>	► 0.50	30	1,1,2,2-Tetrachloroethane	1			

Form B1 Page 2 of 3

ъ . .

CONSTITUENT	HOW MUST THIS CONSTITUENT		\WW .(mg/l)	NWW (mg/kg) unless	CONSTITUENT	THIS	MUS Stitu	67.76.0	WW (mg/l)	NWW (mg/kg) (miess –
	BE MANAGED			noted			ANA			noted
Tetrachloroethylene	<	_	0.056	6.0	INORGANIC CONSTITUENTS					0.1
2,3,4,6-Tetrachlorophenol			0.030	7.4	Antimony	<			1.9	2.1 mg/l TCLP
Thiodicarb		1	0.0191	1.4 ¹	Antimony				1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		T	0.0561	1.4 ¹	Arsenic				1.4	5.0 mg/l TCLP
Toluene		Τ	0.080	10	Barium				1.2	7.6 mg/l TCLP
Toxaphene		Γ	0.0095	2.6	Barium			\square	1.2	21 mg/l
Trialiate			0.042 ¹	1.4 ¹	Beryllium				0.82	0.014 mg/ TCLP
Tribromomethane/Bromoform			0.63	15	Beryillum				0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol			0.035	7.4	Cadmium				0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene			0.055	19	Cadmium				0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane			0.054	6.0	Chromium (Total)				2.77	0.86mg/l TCLP
1,1,2-Trichloroethane			0.054	6.0	Chromium (Total)				2.77	0.60 mg/l TCLP ⁴
Trichloroethylene			0.054	6.0	Cyanides (Total)				1.2	590
Trichloromonofluoromethane			0.020	30	Cyanides (Amenable)				0.86	30 ¹
2,4,5-Trichlorophenol			0.18	7.4	Fluoride				35	NA⁴
2,4,6-Trichlorophenol			0.035	7.4	Lead				0.69	0.37 mg/
2,4,5-Trichlorophenoxyacetic			0.72	7.9	Lead				0.69	0.75 mg/ TCLP
acid/2,4,5-T 1,2,3-Trichloropropane			0.85	30	Mercury (Nonwastewater from Retort)				NA	0.20 mg/ TCLP
1,1,2-Trichloro-1,2,2-			0.057	30	Mercury (All others)				0.15	0.025 mg TCLP
trifluoroethane Triethylamine			0.081 ¹	1.5 ¹	Nickel		Τ		3.98	5.0 mg/l TCLP
Tris-(2,3-			0.11	0.10 ¹	Nickel		Τ		3.98	11 mg/l TCLP⁴
Dibromopropyl)phosphate Vernolate	+ + + + + + + + + + + + + + + + + + + +		0.0421	6.0 ¹	Selenium		Τ		0.82	0.16 mg/ TCLP
Vinyl chloride	+ +		0.27	6,0	Selenium				0.82	5.7 mg/l TCLP⁵
Xylenes - mixed isomers (sum	1 1		0.32	30	Silver				0.43	0.30 mg/ TCLP
of o-,m-, and p-xylene	· · ·				Silver				0.43	0.14 mg/ TCLP ⁴
	+1				Sulfide				14	NA ²
	+1				Thallium	11			1.4	0.078 mg TCLP ¹
					Thallium	$\uparrow I$			1.4	0.20 mg/ TCLP ⁴
				-	Vanadium	1			4.3 ²	1.6 mg/l TCLP ²
	1		>		Zinc	K			> 2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon

adoption by the state. ⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

Ple	Please print or type. Form Approved. OMB No. 2050-0039						
Î	UNIF	ORM HAZARDOUS WASTE MANIFEST 21. Generator ID Number (Continuation Sheet) KY 8890008982	22. Page	23. Manii	iest Tracking Nur		4647.JJK
	24. G	enerator's Name Four Rivers Nuclear Partnership, LLC, on behalf of FRNP 5511 Hobbs Road, Kevil, KY 42053					
	25. 1	ransporter Company Name RSB LOGISTICS Inc.			U.S. EPA ID N		WAR000012005
	26. T	ransporter Company Name			U.S. EPA ID N	lumber	
	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Contai No.	iners Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
	RQ	UN 3077, Environmentally Hazardous substance, solid, n.o.s., (PCB), 9, PG III	2	DM	459	к	
					· · · · ·		
GENERATOR							
LENE							
				ļ	• • • • • • • • • • • • • • • • • • •		
							
	32. S	pecial Handling Instructions and Additional Information	Start Date: 1	08/21/48	2		
		ERG # 171 In the event of an RQ Release, call 1-800-424-8 EXCLUSIVE USE SHIPMENT, See Attachment for Additiona	802				return to generator DSSI-19-087
ODTED	33. T Printe	ransporter Acknowledgment of Receipt of Materials ad/Typed Name Signature Signature	MF				Moath Day Year
TDANCDODTED	34. T Printe	ransporter Acknowledgment of Receipt of Materials ad/Typed Name Signature	\bigcup				Month Day Year
Ŀ	35. 0	iscrepancy					<u>1</u> 1
DESIGNATED EACH ITV							
ICNATE	36. ⊦	azardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and r	ecycling systems)				
EF	A Form	8700-22A (Rev. 12-17) Previous editions are obsolete.	DES	GNATE	D FACILITY	TO EPA	V's e-MANIFEST SYSTEM

PCB and Additional Information Attachment, Page 3 of 3

Manifest Number: 019694647JJK

Shipment ID Number: DSSI-19-087

Shipment Date: 8/21/2019

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	PCB Date To Storage	Accumulation Start Date	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	Net Wt (Ib)	Net Wt (Kg)	Maximum Activity MBq
27b.1	121618	121618-01	PAD18C41037	OIL FILLED DOOR CLOSERS	08/22/18	N/A	6	734	333	674	306	NA
27b.1	121618	121618-02	PAD18C41112	OIL FILLED DOOR CLOSERS	09/05/18	N/A	3	368	167	338	153	NA
9b.3	121423	121423-05	PAD19C42009	VENTILATION DUCT OIL AND WATER	02/13/19	N/A	6.59	466	211	410	186	0.423
9b.3	121423	121423-06	PAD19C42044	VENTILATION DUCT OIL AND WATER	04/17/19	N/A	7.4	484	220	428	194	0.442
9b.4	120885	120885-03	PAD19C42504	PF PUMP OIL	N/A	N/A	0.56	36	16	27	12	0.143
9b.1	121799	121799-01	PAD19C42747	UNUSED KEROSENE	N/A	06/19/19	11.4	500	227	420	191	NA
9b.1	121799	121799-02	PAD19C42748	UNUSED KEROSENE	N/A	06/19/19	11.4	483	219	403	183	NA
9b.1	121799	121799-03	PAD19C42749	UNUSED KEROSENE	N/A	06/19/19	11.4	336	152	256	116	NA
9b.1	121799	121799-04	PAD19C42750	UNUSED KEROSENE	N/A	06/19/19	11.4	323	147	243	110	NA
9b.1	121800	121800-01	PAD19C42917	UNUSED MINERAL SPIRITS	N/A	06/19/19	11.4	497	225	417	189	NA
9b.2	121586	121586-01	PAD18C40808	VACUUM DEBRIS AND PARTS	N/A	08/21/18	7.4	158	72	102	46	8.164
		Totals	11				87.95	4385	1989	3718	1686	9.1

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

121799-01/-02/-03/-04

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC (FRNP)	Manifest Doc. No. :	019694647 JJK
Profile No.:	19-08-041	_ State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🖾 Wastewater 🗖

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

			nesista Alexa Polous Pran Polous	्रविक्रमणीयः । साह २७.३, ४०७२ व्यक्ति विद्युत्ति मित्रिक् प्रतिक्रमणीयः । त्याहार सिंह २७.३, ४०७२ व्यक्ति विद्युत्ति मित्रिक्त । विद्युत्ति केर्यात्री स्वयं होत्यु आहितः । त्याहारः क्र व्यक्तिक स्वयंग्वेक			CONTREPORT CONTREPORT CONTREPORT CONTREPORT CONTREPORT CONTREPORT CONTREPORT
		1	D001	HI TOC TREATMENT			A
Γ	• .	2	←		F		
		3			Γ]	
		4			E]	>

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land	1
disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized b	v
EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed	to
refer to those state citations instead of the 40 CFR citations.	
A. RESTRICTED WASTE REQUIRES TREATMENT	

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and Imprisonment."

B.3	GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
	"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this
	certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have
	been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith
	efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
B.4	DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

- C. RESTRICTED WASTE SUBJECT TO A VARIANCE This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268,45."
- D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. | believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	mia	Oten	_ Title	Waste Engineer	Date	7/24/19	
				,			

Form A1 Page 1 of 2

A-125

121/77-01/-02/-03/-04

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

្លាយមួយសារៀ ^{ង លោ} ងស្វាជាប្រសាវធាវី សម្ភាស់ស្ថិតសេរា ប្រសាវធាវីទេ សេរី សេរីស្ថិ៍ សេ្តក្រសិសារ សេរីស្ថិត សេរីស្ថិត	UIZZEN ME	Sonsvinii (Va) nistaniinel	nie diszennyayi strypy danasty Taing in englistani secon engan singstani sing dian	5% (maal Seidin	
មួយចម្បីបាំងសេរីយ៍ ដែលក្រចាប់ ដែនដំបំ ធ្វើឱ្យដឹងស្នែរីរីសំណាមខេត្ត ដែលនៅស្វែ ភ្លា	Southan Anniel Park	linowestiwelers	enderand Station Constant	Volusia veitas	1 HORNER STATE
Acetone (F003)	0.28	160	Methanol (F003)	5,6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chioride (F001, F002)	0.089	30 ×
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP)3	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chiorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0,11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachioroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	. 0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002;

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

nerator Name:	FRNP		Ma	nifest Doc. No. :	910	69	46473JK
		19-08-041	St	ate Manifest No.:			NA
ofile No.:	from from fr	orm A1 for a waste iden	tified by more than fi	ve USEPA waste c	ode/subca	tegory	
NOT an eccepto	bla Land Dich	ocal Notification and UB	mication rollit.				
ontinue (from forr	m A1, Page 1)	to identify ALL USEPA	hazardous wastes th	at apply to this was rintion from 40 CFI	te shipme 3 268.40. (nt (as o or cheo	ck NONE if the waste d
ach waste numbe of have a subcate	er, identity the c agory.). Also ide	entify in column 5 how t	he waste must be m	anaged. Spent solv	ents are lis	sted or	Form A1, Page 2. F03
onstituent(s) and	underlying haz	ardous constituent(s) if	applicable, must be	isted and attached			L III MI MICTINI INC.
		entify in column 5 how t ardous constituent(s) if		公田記念時度的開開	- (日間湯空) い	iğin <u>ş</u> î î	
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

-		A+1
Signature	Donia	atahn
Title	Waste Engineer	

Date 7/24/19

Form A2 Page 1 of 2

P

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121/77-01/-02/-03/-04

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694647 JJK
Profile No.:	19-68-041	State Manifest No.:	NA

Profile No .:

NA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

		A SUBTRATION OF	1.1	
	Straight Alternation			annia rechterstader
	一個的問題(韓国書名)			
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	bonia Atalin		DUVIA
Title	Waste Engineer	Date	

Form A2 Page 2 of 2

121/99-01/-02/-03/-04	F039/UI	NDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)
Generator Name	FRNP	Manifest Doc. No. :	01969464733

19-28-041

Profile No.:

State Manifest No.:

А

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENIE	HOW MUST	WW	NWW (mg/Rg)	CONSTITUENT	HOW MUST	WW (mg/l)	NWW (mg/kg)
	THIS		Unless		CONSTITUEN		unless
	BEMANAGED		noted		CONSTITUENT BE MANAGED	2	noted
		2016 A 127 - 12 - 20 - 40 - 00 - 20	UK WERE AND STATE			0.057	0.281
Acenaphthylene	<u> </u>	0.059	3.4	2-Chloro-1,3-butadiene	<u> </u>	0.057	15
Acenapthene		0.059	3.4	Chlorodibromomethane		0.037	6.0
Acetone		0.28	160 38 ¹	Chloroethane bis(2-Chloroethoxy)methane		0.036	7.2
Acetonitrile		5.6		bis(2-Chloroethyl)ether		0.033	6.0
Acetophenone		0.010	9.7			0.046	6.0
2-Acetylaminofluorene		0.059	140	Chloroform bis(2-Chloroisopropyl)ether		0.055	7.2
Acrolein		0.29	NA	p-Chioro-m-cresol	<u> </u>	0.018	14
Acylamide		19'	23 ¹ 84	2-Chloroethyl vinyl ether		0.062	NA ¹
Acrylonitrile		0.24		Chloromethane/Methyl		1-1	
Aldicarb sulfone		0.056 ¹	0.281	chloride		0.19	30
Aldrin		0.021	0.066	2-Chloronaphthalene		0.055	5.6
4-Aminobiphenyl		0.13	NA	2-Chlorophenol	↓ ↓	0.044	5.7
Aniline		0.81	14	3-Chloropropylene	↓∤	0.036	30
Anthracene		0,059	3.4	Chrysene	<u>↓</u>	0.059	3.4
Aramite		0.36	NA	o-Cresol	<u>↓</u>	0.11	5,6
alpha-(BHC)		0.00014	0.066	m-Cresol	<u>↓</u> <i>↓</i>	0.77	5,6
beta-(BHC)		0.00014	0,066	p-Cresol	↓	0.77	5.6 1.4 ¹
delta-(BHC)		0,023	0.066	m-Cumenyl methylcarbamate	ļļ.	0.0561	
gamma-(BHC)		0.0017	0.066	Cyclohexanone	<u> </u>	0.36	0.75 mg/l ¹
Barban		0.0561	1.4	o,p'-DDD		0.023	0.087
Bendiocarb		0.0561	1.4	p,p'-DDD	ļ	0.023	0.087
Benomyl		0.0561	1.41	o,p'-DDE	·	0.031	0.087
Benzene		0.14	10	p,p'-DDE	·	0.031	0.087
Benz(a)anthracene		0.059	3.4	o,p'-DDT	ļ	0.0039	0.087
Benzal chloride		0.055 ¹	6.0 ¹	p,p'-DDT		0.0039	0.087
Benzo(b)fluoranthene ³		0.11	6.8	Dibenz(a,h)anthracene		0.055	8.2
Benzo(k)fluoranthene ³		0.11	6.8	Dibenz(a,e)pyrene		0.061	NA
Benzo (g,h,i)perylene		0.0055	1.8	1,2-Dibromo-3-chloropropane	<u> </u>	0.11	15
Benzo(a)pyrene		0.061	3.4	1,2-Dibromomethane/ Ethylene dibromide		0.028	15
Bromodichloromethane		0.35	15	Dibromomethane		0.11	15
Bromomethane/Methyl		0.11	15	m-Dichlorobenzene		0.036	6.0
Bromide	<u>├───</u>	0.055	15	o-Dichlorobenzene		0.088	6.0
4-Bromophenyl phenyl ether		5.6	2.6	p-Dichlorobenzene		0.090 -	6.0
n-Butyl alcohol		0.0421	1.41	Dichlorodifluoromethane		0.23	7.2
Butylate		0.017	28	1.1-Dichloroethane	1 1	0.059	6.0
Butyl benzyl phthalate 2-sec-Butyl-4,6-				1,2-Dichloroethane	11	0.21	6.0
dinitrophenol/Dinoseb	L	0.066	2.5		+	0.025	6.0
Carbaryl		0.0061	0.14	1,1-Dichloroethylene	+	0.025	30
Carbenzadim	<u> </u>	0.0561	1.4	trans-1,2-Dichioroethylene	+	0.054	14
Carbofuran	1	0.0061	0.141	2,4-Dichlorophenol	+	0.044	14
Carbofuran phenol		0.0561	1.41	2.6-Dichlorophenol	+	0,044	
Carbon disulfide		3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D		0.72	10
Carbon tetrachloride		0.057	6,0	1,2-Dichloropropane	<u> </u>	0.85	18
Carbosulfan	17	0.0281	1.41	cis-1,3-Dichloropropylene		0.036	18
Chlordane (alpha and gamma isomers)	1	0.0033	0.26	trans-1,3-Dichloropropylene		0.036	18
p-Chloroaniline	1/	0.46	16	Dieldrin	11	0.017	0.13
Chlorobenzene	10	0.057	6.0	Diethyl phthalate	N	> 0.20	28

Form B1 Page 1 of 3

121/77-01/-02/-03/-04

21/77-01/-02/-03/-04	Savas		13489502	12.5	A THE REAL PROPERTY AND A PROPERTY A	142470 Mar Salar Bala				Defendence and the
CONSTITUENT		W ML	IST		WW.	NWW	CONSTITUENT	HOW MUST	WW	NWW
	I		的設定		.(mg/l)	:(mg/kg)		THIS	(mg/)	(mg/kg)= unless
		NSTU				unless noted		BEMANAGEDR		noted
	SBE	MAN	AGE		0.10	NA	p-Dimethylaminoazobenzene		0.13 ¹	NA
Chlorobenzilate -	<u></u>			\rightarrow	0.036	14	Methylene chloride		0.089	30
2,4-Dimethyl phenol	H				0.038	28	Methyl ethyl ketone		0.28	36
Dimethyl phthalate	Η				0.047	28	Methyl isobutyl ketone		0.14	33
Di-n-butyl phthalate 1.4-Dinitrobenzene					0.32	2.3	Methyl methacrylate		0.14	160
4,6-Dinitro-o-cresol	\vdash				0.28	160	Methyl methansulfonate		0.018	NA
2,4-Dinitrophenol	++-				0.12	160	Methyl parathion		0.014	4.6
2,4-Dinitrotoluene	\vdash				0.32	140	Metolcarb		0.056 ¹	1.4 ¹
2,6-Dinitrotoluene	\vdash				0.55	28	Mexacarbate		0.056 ¹	1.4 ¹
Di-n-octyl phthalate	\vdash				0.017	28	Molinate		0.042 ¹	1.41
Di-n-propylnitrosamine	-+				0.40	14	Naphthalene		0.059	5.6
1.4-Dioxane					12.0	170	2-Naphthylamine	A	0.52	NA
Diphenylamine ³					0.92	131	o-Nitroaniline		0.271	14 ¹
Diphenylnitrosamine ³					0.92	131	p-Nitroaniline		0.028	28
1,2-Diphenylhydrazine	<u> </u>				0.087	NA	Nitrobenzene		0.068	14
Disulfoton		+			0.007	6.2	5-Nitro-o-toluidine		0.32	28
					0.028	281	o-Nitrophenol		0.0281	13 ¹
Dithiocarbamates (total) Endosulfan I		+-			0.023	0.066	p-Nitrophenol		0,12	29
Endosulfan II		+			0.029	0.13	N-Nitrosodiethylamine		0.40	28
Endosulfan sulfate		+			0.029	0.13	N-Nitrosodimethylamine		0.40	2.31
Endrin					0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin aldehyde					0.025	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC					0.0421	1.4	N-Nitrosomorpholine		0.40	2.3
Ethyl acetate		+			0.34	33	N-Nitrosopiperidine		0.013	35
		-+			0.057	10	N-Nitrosopyrrolidine		0.013	35
Ethyl benzene					0.24	360	Oxamvl		0.0561	0.281
Ethyl cyanide/Propanenitrile	ļ				0.12	160	Parathion		0.014	4.6
Ethyl ether							Total PCBs (sum of all PCB			
Bis(2-Ethylhexyl)phthalate		- 1			0.28	28	isomers or all Aroclors)		0.10	10
Ethyl methacrylate					0.14	160	Pebulate		0.0421	1.41
Ethylene oxide					0.12	NA	Pentachlorobenzene		0.0551	10'
							PeCDDs (All		0.000005	0.001
Famphur					0.017	15	Pentachlorodibenzo-p-dioxins)		0.000035	0.001
			1			01.4	PeCDFs(All		0.000035	0.001
Fluoranthene					0.068	3L.4	Pentachlorodibenzofurans)		0.000035	0.001
Fluorene					0.059	3,4	Pentachioroethane		0.055	6.0
Formetanate hydrochloride			+		0,0561	1.4	Pentachloronitrobenzene		0.055	4.8
Heptachlor			+		0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide			+		0.016	0.066	Phenacetin		0.081	16
Hexachlorobenzene			+		0.055	10	Phenanthrene		0.059	5.6
Hexachlorobutadiene			-+-		0.055	5.6	Phenol		0,039	6.2
Hexachlorocyclopentadiene			-+		0.057	2.4	Phorate		0.021	4.6
			+-							28 ¹
HxCDDs (All Hexachrorodibenzo-p-dioxins)			1		0.000063	0.001	Phthalic acid		0.055 ¹	28
HxCDFs (All			+		0.000000	0.004	Dhihelie estudaida		0.055	28 ¹
Hexachlorodibenzofurans)			1		0.000063	0.001	Phthalic anhydride		0.055	1
Hexachloroethane					0,055	30	Physostigmine		0.056 ¹	1.4 ¹
Hexachloropropylene					0.035	30	Physostigmine salicylate		0.056 ¹	1.4 ¹
Indeno(1,2,3-c,d)pyrene				<u> </u>	0.0055	3.4	Promecarb		0.0561	1.41
Iodomethane				1	0.19	65	Pronamide		0.093	1.5
Isobutyl alcohol				1	5.6	170	Propham		0.0561	1.41
Isodrin				1	0.021	0.066	Propoxur		0.0561	1.41
Isosafrole				1	0.081	2.6	Prosulfocarb		0.042 ¹	1.41
Kepone				1	0.0011	0.13	Pyrene		0.067	8.2
Methacrylonitrile				1	0.24	84	Pyridine		0.014	16
Methanol					5.6	0.75 mg/l ¹	Safrole		0.081	22
			-		0.081	1.5	Silvex/2,4,5-TP		0.72	7.9
Methapyrilene					0.0561	1.4 ¹	1,2,4,5-Tetrachlorobenzene		0.055	14
Methapyrilene Methiocarb							TCDDs (All			
Methapyrliene Methiocarb Methomyl				\uparrow	0.028 ¹	0.14 ¹	Tetrachlorodibenzo-p-dioxins)		0,000063	0.001
Methiocarb					0.028 ¹ 0.25	0.14 ¹ 0.18			0.000063	0.001
Methiocarb Methomyl Methoxychlor							Tetrachlorodibenzo-p-dioxins) TCDFs (All			+
Methiocarb Methomyl					0.25	0.18	Tetrachlorodibenzo-p-dioxins) TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001

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121/77-01/-02/-03/-04

CONSTITUENT	HOW THIS CONS	MUST TITUE	NT (WW (mg/l)	NWW (mg/kg) unless	CONSTITUENT	HOW MU TIHIS CONSTIT	UENT	WW (ing/l)	NWW (mg/kg) uniëss
		ANAGE		0.056	noted 6.0	INORGANIC	HEEMANZ			noted
Tetrachloroethylene	<u></u>				7.4	CONSTITUENTS Antimony	<u> </u>		1.9	2.1 mg/l
2,3,4,6-Tetrachiorophenol	↓			0.030	1.4 ¹		~	1	1.9	TCLP 1.15 mg/l
Thiodicarb				0.0191	1.4 1.4 ¹	Antimony			1.5	TCLP ⁴ 5.0 mg/l
Thiophanate-methyl	-			0.0561		Arsenic				TCLP 7.6 mg/l
Toluene	-			0.080	10	Barium			1.2	TCLP
Toxaphene	<u> </u>			0.0095	2.6	Barium			1.2	21 mg/l TCLP ⁴ 0.014 mg/l
Triallate				0.0421	1.41	Beryllium			0.82	TCLP
Tribromomethane/Bromoform				0.63	15	Beryllium			0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol				0.035	7.4	Cadmium			0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene				0.055	19	Cadmium			0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane				0.054	6.0	Chromium (Total)			2.77	0.86mg/l TCLP
1,1,2-Trichloroethane				0.054	6.0	Chromium (Total)			2.77	0.60 mg/l TCLP ⁴
Trichloroethylene			•	0.054	6.0	Cyanides (Total)		1	1.2	590
Trichloromonofluoromethane				0.020	30	Cyanides (Amenable)		1	0.86	30 ¹
2,4,5-Trichlorophenol				0.18	7.4	Fluoride			35	NA ⁴
2,4,6-Trichlorophenol		1		0.035	7.4	Lead			0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T				0.72	7.9	Lead			0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane			1	0.85	30	Mercury (Nonwastewater from Retort)			NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane			T	0.057	30	Mercury (All others)			0.15	0.025 mg/l TCLP
Triethylamine			1	0.0811	1.5 ¹	Nickel			3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate			1	0.11	0.101	Nickel			3.98	11 mg/l TCLP⁴
Vernolate			-1	0.042 ¹	6.0 ¹	Selenium			0.82	0.16 mg/l TCLP
Vinyl chloride				0.27	6.0	Selenium			0.82	5.7 mg/l TCLP ⁵
Xylenes - mixed isomers (sum	(-			0.32	30	Silver			0,43	0.30 mg/l TCLP
of o-,m-, and p-xylene	<u> </u>					Silver	1 1		0.43	0.14 mg/l TCLP ⁴
						Sulfide	11		14	NA ²
			\geq			Thallium	1	``	1.4	0.078 mg/l TCLP ¹
						Thallium	+/		1.4	0.20 mg/l
						Vanadium	1		4.3 ²	1.6 mg/l TCLP ²
						Zinc	K	>	. 2.61	4.3 mg/l TCLP ²
	L			L	1	L These constituents are not constit	l			

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. Not an underlying hazardous constituent requiring treatment in a D001-D043 waste. These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

I AND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	_ Manifest Doc. No. :	019694647 JJK
Profile No.:	19-08-047	_ State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268,48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

14989 0.57421. 1979-0-1998 - 1998 1	D006	CADMIUM		A , A.1
2	D007	CHROMUM	\boxtimes	A, A1 5
3	D008	LEAD	\square	A, A.1 (1)
4 🗧				

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Å.

ICPATION PRIME STRATES AND LIGHT () HILLS	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	مغامتهم فالمتعاص
This waste must be treated to the applicable treatment s	dandards out for this AO CI	ED Dort 268 AL
The worth must be treated to the applicable treatment s	stanuarus sectorum in 40 or	1) 1 GIL 200.70.
Filld Avaale Hilldl op houlde to bie appresent a		

- For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45." A.I
- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1
 - I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information. I believe that the treatment process has been operated and maintained property so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS **B.3** "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. Lam aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.* DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
- **B.4** "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.*
- RESTRICTED WASTE SUBJECT TO A VARIANCE. C.
- This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.
- "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.
- WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.
- This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information. Date 8/19/19 Waste Engineer Title 1 and

Signature

Form A1 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		Solution (mg	ne ne ontra del sel astrono 1952		
ល់ការ ភូវារាក គឺមិសាក្សាភាស៊ីស៊ីមីអីអា) ស្នា អាមារាក គឺជា 2 បាកសារ (២២៧ ស្នេងស ត្រូវ ភ្លេសស ហ៊ុនសាករនៅ២៧		a Samuel	(1999) 1999	ingernal Sizer	
istary. The area is wrate to dealers	Westamilies -	Manmanana⊋	NUMERIA METERS	मगावर्भावर्भ	e fragivariteration
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanoi (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chiorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
p-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
p-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN ar BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifiuoroethane (F002)	0.057	30
Isobutanoi (Isobutyi Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

- Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.
- High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) Greater than or equal to 10% total organic carbon. C.

D002:

- Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D.
- Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

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LAND DISPOSAL NOTIFICA	ATION AND	CERTIFICATION	(PHASE IV)
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Four Rivers Nuclear Partnership (FRNP) Generator Name:

-18-0

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Manifest Doc. No. : State Manifest No.:

Profile No .: This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Title Waste Engineer

7/20/79 Date

Form A2 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	Manifest Doc. No. :	019684647JJK
Profile No :	19-08-047	State Manifest No.:	NA

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Alonio Atatin Date	8/20/19
Title <u>Waste Engineer</u> Date	

Form A2 Page 2 of 2

A-135

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	Manifest Doc. No. :	019694641 2210
Profile No.:	19-08-047	State Manifest No.:	NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOW MUST	n 31 - 21	ww mg///	NWW (mg/kg)	CONSTITUENT	THIS			ww umg/l)	NWW (mg/kg) unless
	CONSTITU			unless		BE	ISTITU MANAC	ENH:		noted
	BEMANAG	ED		noted		in the second				0.28 ¹
Acenaphthylene			0.059	3,4	2-Chloro-1,3-butadiene	\leftarrow			0.057	15
Acenapthene			þ.059	3.4	Chlorodibromomethane				0.057	6.0
Acetone			0.28	160	Chloroethane					7.2
Acetonitrile			5.6	38 ¹	bis(2-Chloroethoxy)methane				0.036	6.0
Acetophenone			0.010	9.7	bis(2-Chloroethyl)ether				0.033	6.0
2-Acetylaminofluorene			0.059	140	Chloroform			+	0.046	
Acrolein			0.29 ,	NA	bis(2-Chlorolsopropyl)ether				0.055	7.2
Acylamide		1	19 ¹	231	p-Chloro-m-cresol				0.018	14 NA1
Acrylonitrile		1	0.24	84	2-Chloroethyl vinyl ether				0.0621	INA
			0.056 ¹	0.28 ¹	Chloromethane/Methyl				0.19	30
Aldicarb sulfone			0.050).	chioride					
Aldrin			0.021	0.066	2-Chloronaphthalene				0.055	5.6
4-Aminobiphenyl			0.13	NA	2-Chiorophenol				0.044	5.7
Aniline			0.81	14	3-Chloropropylene				0.036	30
Anthracene		-1-	0.059	3.4	Chrysene				0.059	3.4
Aramite		-1-	0,36	NA	o-Cresol				0.11	5.6
alpha-(BHC)		1	0.00014	0.066	m-Cresol				0.77	5.6
beta-(BHC)			0.00014	0.066	p-Cresol	ļ			0.77	5.6
delta-(BHC)		1-	0.023	0.066	m-Cumenyl methylcarbamate			1	0.0561	1.41
gamma-(BHC)		1	0.0017	0.066	Cyclohexanone			ļ	0.36	0.75 mg/l
		1	0.0561	1.41	o,p'-DDD			<u> </u>	0.023	0.087
Barban		1	0.0561	1.4 ¹	p,p'-DDD			I	0.023	0.087
Bendiocarb		1.	0.0561	1.41	o,p'-DDE				0.031	0.087
Benomyl			0.14	10	p,p'-DDE				0.031	0.087
Benzene			0.059	3.4	o,p'-DDT				0.0039	0.087
Benz(a)anthracene			0.0551	6.01	p,p'-DDT				0.0039	0.087
Benzal chloride			0.11	6.8	Dibenz(a,h)anthracene	T	1		0.055	8.2
Benzo(b)fluoranthene ³	<i> </i> -		0.11	6.8	Dibenz(a,e)pyrene				0.061	NA
Benzo(k)fluoranthene ³	<u> </u>		0.0055	1.8	1.2-Dibromo-3-chloropropane				0.11	15
Benzo (g,h,i)perylene	<u> </u>				1,2-Dibromomethane/				0.028	15
Benzo(a)pyrene			0.061	3.4	Ethylene dibromide				0.028	15
	<u>↓</u>		0.35	15	Dibromomethane				0.11	15
Bromodichloromethane									0.036	6.0
Bromomethane/Methyl			0.11	15	m-Dichlorobenzene	1			0,030	0.0
Bromide	<u>↓ </u>		0.055	15	o-Dichlorobenzene	1			0.088	6.0
4-Bromophenyl phenyl ether	↓/		5.6	2.6	p-Dichlorobenzene				0.090	6.0
n-Butyl alcohol	<u>↓</u>		0.0421	1.41	Dichlorodifluoromethane	1	1		0.23	7.2
Butylate	ļ		0.042	28	1.1-Dichloroethane		1		0.059	6.0
Butyl benzyl phthalate			0.017	20		-	-1		0.04	
2-sec-Butyl-4,6-			0.066	2.5	1,2-Dichloroethane		1		0.21	6.0
dinitrophenol/Dinoseb	<u> </u>		0.0061	0.141	1.1-Dichloroethylene	1	1		0.025	6,0
Carbaryl	<u>↓</u>		0.006	1.4	trans-1,2-Dichloroethylene		1		0.054	30
Carbenzadim	↓↓		0.0061	0.14	2,4-Dichlorophenol		1		0.044	14
Carbofuran	<u> </u>				2.6-Dichlorophenol				0.044	14
Carbofuran phenol	↓_ <i> </i>		0.056	1.4 ¹ 4.8 mg/l	2,4-Dichlorophenoxyacetic	+ -				
Carbon disulfide			3.8	TCLP ¹	acid/2,4-D	$\downarrow \downarrow$			0.72	10
Carbon tetrachioride	TI		0.057	6.0	1,2-Dichloropropane	$\downarrow \downarrow$			0.85	18
Carbosulfan	11		0.0281	1.41	cis-1,3-Dichloropropylene	++			0.036	18
Chiordane (alpha and gamma	1/		0.0033	0.26	trans-1,3-Dichloropropylene				0.036	18
isomers)	+/		0.46	16	Dieldrin	T			0.017	0.13
p-Chloroaniline	4		0.057	6.0	Diethyl phthalate	N			0.20	28

Form B1 Page 1 of 3

GONSTITUENT	HOW	MÜS	il se	WW	NWW SC	CONSTITUENT	HOW MUST		NVW.
	THIS			. (mg/l))	(mg/kg)		THIS CONSTITUENT	(mg/j)	(mg/Xg)) unless
	001	SIR	JENT. GED?		unless		BEMANAGED?		noted
Chlorobenzilate		HINA		0.10	NA	p-Dimethylaminoazobenzene			NA
2,4-Dimethyl phenol	<u> </u>			0.036	14	Methylene chloride		0.089	30
Dimethyl phthalate				0.047	28	Methyl ethyl ketone		0.28	36
Di-n-butyl phthalate				0.057	28	Methyl isobutyl ketone		0.14	33
1,4-Dinitrobenzene			1	0.32	2.3	Methyl methacrylate		0.14	160
4,6-Dinitro-o-cresol				0.28	160	Methyl methansulfonate		0.018	NA 4.6
2,4-Dinitrophenol				0.12	160	Methyl parathion		0.014	1.41
2,4-Dinitrotoluene				0.32	140 28	Metoicarb		0.0561	1.41
2,6-Dinitrotoluene				0.55	28	Molinate		0.0421	1.4'
Di-n-octyl phthalate				0.40	14	Naphthalene		0.059	5.6
Di-n-propylnitrosamine				12.0	170	2-Naphthylamine		0.52	NA
1,4-Dioxane Diphenylamine ³				0.92	131	o-Nitroaniline		0.27 ¹	14 ¹
Diphenylnitrosamine ³				0.92	131	p-Nitroaniline		0.028	28
1,2-Diphenylhydrazine				0.087	NA	Nitrobenzene		0.068	14
Disulfoton				0.017	6.2	5-Nitro-o-toluidine		0.32	28
Dithiocarbamates (total)				0.028	28 ¹	o-Nitrophenol		0.0281	131
Endosulfan I				0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan II		-		0.029	0.13	N-Nitrosodiethylamine		0.40	28 2.3 ¹
Endosulfan sulfate				0.029	0.13	N-Nitrosodimethylamine		0.40	17
Endrin				0.0028	0.13	N-Nitroso-di-n-butylamine		0.40	2.3
Endrin aldehyde				0.025	0.13 1.4 ¹	N-Nitrosometnyletnylamine N-Nitrosomorpholine		0.40	2.3
EPTC				0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl acetate				0.057	10	N-Nitrosopyrrolidine		0.013	35
Ethyl benzene Ethyl cyanide/Propanenitrile				0.24	360	Oxamvi		0.0561	0.281
Ethyl ether			1	0.12	160	Parathion		0.014	4.6
Bis(2-Ethylhexyl)phthalate			1	0.28	28	Total PCBs (sum of all PCB isomers or all Arociors)	A	0.10	10
Ethyl methacrylate				0.14	160	Pebulate		0.0421	1.41
Ethylene oxide				0.12	NA	Pentachlorobenzene		0.0551	10 ¹
Famphur				0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)	L.	0.000035	0.001
Fluoranthene				0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene	-			0.059	3.4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride				0.0561	1.41	Pentachloronitrobenzene		0.055	4.8
Heptachlor				0.0012	0.066	Pentachlorophenol		0.089	7.4
Heptachlor epoxide				0.016	0.066	Phenacetin		0.081	16 5.6
Hexachlorobenzene				0.055	10	Phenanthrene Phenol		0.039	6.2
Hexachlorobutadiene	ļ			0.055	5.6 2.4	Phorate		0.000	4.6
Hexachlorocyclopentadiene				0.057					28 ¹
HxCDDs (All Hexachrorodibenzo-p-dioxins)		<u> </u>		0.000063	0.001	Phthalic acid		0.0551	
HxCDFs (All Hexachlorodibenzofurans)				0.000063	0.001	Phthalic anhydride Physostigmine	· · · · · · · · · · · · · · · · · · ·	0.055	28 ¹
Hexachloroethane	ļ	<u> .</u>		0.055	30 30	Physostigmine salicylate		0.0561	1.4
Hexachloropropylene		l		0.035	3.4	Promecarb		0.0561	1.4
Indeno(1,2,3-c,d)pyrene	├			0.0055	65	Pronamide		0.093	1.5
lodomethane	++			5.6	170	Propham		0.0561	1.41
Isobutyl alcohol	++			0.021	0.066	Propoxur		0,0561	1.41
Isosafrole				0.081	2.6	Prosulfocarb		0.0421	1.4 ¹
Kepone				0.0011	0.13	Pyrene		0.067	8.2
Methacrylonitrile				0.24	84	Pyridine		0.014	16
Methanol				5,6	0.75 mg/l ¹	Safrole		0.081	22
Methapyrilene				0.081	1.5	Silvex/2,4,5-TP	+	0.72	7.9
Methiocarb				0.056 ¹ 0.028 ¹	1.4 ¹ 0.14 ¹	1,2,4,5-Tetrachlorobenzene TCDDs (All		0.000063	0.001
Methomyl				0.25	0.18	Tetrachlorodibenzo-p-dioxins) TCDFs (All		0.000063	0.001
Methoxychior 3-Methylcholanthrene				0.0055	15	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane		0.057	6.0
	H			> 0.50	30	1,1,2,2-Tetrachloroethane		0.057	6.0
4,4'-Methylene bis(2-	W/								

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST THIS CONSTITUT	NT.	WW (mg/l)	NWW (mg/kg): unless:		HOW MUST THIS CONSTITUENT	ww. (mg/l):	NWW (mg/kg) unless
Tetrachloroethylene	BE MANAGI	507÷	0.056	noted 6.0		EEM/MWCED/		inoted
2,3,4,6-Tetrachlorophenol			0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
			0.0191	1.4 ¹	Antimony		1.9	1.15 mg/i TCLP ⁴
			0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l
Thiophanate-methyl			0.080	10	Barium		1.2	TCLP 7.6 mg/l
Toluene			0.0095	2.6	Barium		1.2	TCLP 21 mg/l TCLP ⁴
Toxaphene			0.0095	1.4 ¹	Beryllium		0.82	0.014 mg/
Triallate		<u> </u>					0.82	TCLP 1.22 mg/l
Tribromomethane/Bromoform			0.63	15	Beryllium		0.69	TCLP ⁴ 0.19 mg/l
2,4,6-Tribromophenol			0.035	7.4	Cadmium			TCLP .
1,2,4-Trichlorobenzene			0.055	19	Cadmium .		0.69	TCLP ⁴ 0.86mg/l
1,1,1-Trichloroethane			0.054	6.0	Chromium (Total)		2.77	TCLP
1,1,2-Trichloroethane			0.054	6.0	Chromium (Total)		2.77	0.60 mg/l TCLP ⁴
Trichloroethylene			0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane			0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol			0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol			0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T			0.72	7.9	Lead		0.69	0.75 mg/l TCLP
1,2,3-Trichioropropane			0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l
1,1,2-Trichloro-1,2,2- trifluoroethane			0.057	30	Mercury (All others)		0.15	0.025 mg TCLP
Triethylamine			0.081 ¹	1.5 ¹	Nickel		3,98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate			0.11	0.10 ¹	Nickel	A	3.98	11 mg/l TCLP ⁴
Vemolate			0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride			0.27	6.0	Selenium	A	0.82	5.7 mg/l TCLP⁵
Xylenes – mixed isomers (sum	V.	\rightarrow	0.32	30	Silver		0.43	0.30 mg/ TCLP
of o-,m-, and p-xylene					Silver	A	0.43	0.14 mg/ TCLP ⁴
					Sulfide		14	NA ²
		/	F	+	Thallium		1.4	0.078 mg TCLP ¹
					Thallium	A	1.4	0.20 mg/l
					Vanadium		4.3 ²	1,6 mg/l
			<u> </u>		Zinc	<u> </u>	2.61	4.3 mg/l TCLP ²

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

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121800-01	
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LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership LLC	(FRNP) Manifest Doc. No. :	5196946
Profile No.:	19-08-041	State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🖾 Wastewater 🗆

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

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To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state-citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
 B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

- C. RESTRICTED WASTE SUBJECT TO A VARIANCE
- This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
- D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
- "I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature Aonia Atahn Title Waste Engineer Date _7/24//5	9
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Form A1 Page 1 of 2 12554

121800-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

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ក្រុមនៃអាកតេជា ដែលកីឡើងអាវិតទៅមេណៈ ស្ថិតចម្រើនអាជីវិតនៅ ដែលថា (អ្នកអា ២៤អ្នកក្នុងអាកត្តក្តីសេច សេដីស្ថិតទៅអ្នកអា	BEDOM	PL STUDDIEC	ารางของ สุขอรสุขอรสุขอรสุขอรีการเป็น - แรงจากเหตุ (1917) การจะสี่สุขอ - พี่แรงจากเสียว	Vietational Antonio Vietational Antonio Vietational Antonio Vietational Antonio Vietational Antonio Vietational	
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	. 36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	. 0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5,6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0,088	6.0	1,1,1-Trichioroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	. 10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems.

B. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems.

C. High TOC ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

D002:

D. Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.

E. Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems.

Form A1 Page 2 of 2

121800-01	LAN	ם סו	ISPOSAL NOTIFI	CATION ANI	CERTIFICATION	(PHAS	SE I	IV)	
Generator N									464735K
		9	-08-041		State Manifest No.:				NA
This form is <u>IS NOT</u> an Continue (f each waste	a continuation from acceptable Land D rom form A1, Page number, identify th	n forr ispos 1) to ne col	m A1 for a waste identi al Notification and Cer identify ALL USEPA h rresponding subcatego	fied by more tha tification Form. azardous waste rry (write in the c	an five USEPA waste coord s that apply to this waste description from 40 CFR	e shipm 268.40,	ent (, or o	(as d chec	groups. This page by itself lefined by 40 CFR 261). F k NONE if the waste does Form A1, Page 2. F039
	(s) and underlying E/C/1999	nazar (IM	⊴ous constituent(s) na ຊະຫາ: ອີດແຮງອີນສະຫະອີດອີນ		e managed. Spent solve be listed and attached.		前 201		e novî mirt filencêre Alem dasta a filîzî Letter standarî Letter
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

	1	14.A
Signature	Amin	Stahr
Title	Waste Engineer	

7/24/19 Date

Form A2 Page 1 of 2

LAND DISPOSAL NOTIFICATION AND CERTIFICAT	ION (PHASE IV)
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019694647 50 Manifest Doc. No. : FRNP Generator Name: 9-08-04 State Manifest No .:

Profile No .:

17-000171

NA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature _ Date Waste Engineer Title

Form A2 Page 2 of 2

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F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	FRNP	Manifest Doc. No. :	019694647JJK
Profile No.:	19-08-041	State Manifest No.:	MA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	HOWMUST		(MWW) (mg/kg)	CONSTITUENT	HOW MUS			NWW (mg/kg)
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		·····································	建設在1000年間に	2-Chloro-1,3-butadiene	\leftarrow	ELECTRONIC STREET	0.057	0.281
Acenaphthylene	<u> </u>	0.059	3.4	Chlorodibromomethane	<u>`</u>		0.057	15
Acenapthene		0,059	160	Chloroethane			0.27	6.0
Acetone		5.6	38 ¹	bis(2-Chloroethoxy)methane			0.036	7.2
Acetonitrile		0.010	9.7	bis(2-Chloroethyl)ether			0.033	6.0
Acetophenone		0.059	140	Chioroform			0,046	6.0
2-Acetylaminofluorene		0.039	NA	bis(2-Chloroisopropyl)ether			0.055	7.2
Acrolein	<u> </u>	191	231	p-Chloro-m-cresol			0.018	14
Acylamide	++	0.24	84	2-Chloroethyl vinyl ether			0.0621	NA 1
Acrylonitrile	<u> </u>			Chloromethane/Methyl			0.19	30
Aldicarb sulfone	1 /	0,056 ¹	0.28 ¹	chloride				
Aldrin	+	0.021	0,066	2-Chloronaphthalene	ļ		0.055	5.6
4-Aminobiphenyl		0.13	NA	2-Chlorophenol			0.044	5.7
Aniline	+	0.81	14	3-Chloropropylene	ļ		0.036	30
Anthracene	+	0.059	3.4	Chrysene	L		0.059	3.4
Aramite		0.36	NA	o-Cresol		<u>_</u>	0.11	5.6
alpha-(BHC)	+	0.00014	0.066	m-Cresol		<u> </u>	0.77	5.6
beta-(BHC)	+	0.00014	0.066	p-Cresol			0.77	5.6
delta-(BHC)		0.023	0.066	m-Cumenyl methylcarbamate			0.0561	1.41
gamma-(BHC)	+	0.0017	0.066	Cyclohexanone			0,36	0.75 mg/l ¹
Barban	+	0.0561	1.41	o,p'-DDD			0,023	0.087
Bendiocarb	+	· 0,0561	1.41	p,p'-DDD			0,023	0,087
	+	0.0561	1.41	o,p'-DDE			0.031	0.087
Benomyl Benzene	+	0.14	10	p,p'-DDE			0.031	0.087
Benz(a)anthracene	+	0.059	3.4	o,p'-DDT		l	0.0039	0.087
Benzal chloride	+	0.0551	6.0 ¹	p,p'-DDT			0.0039	0.087
Benzo(b)fluoranthene ³	+	0.11	6.8	Dibenz(a,h)anthracene			0.055	8.2
Benzo(k)fluoranthene ³	+	0.11	6.8	Dibenz(a,e)pyrene			0.061	NA
Benzo (g,h,i)perylene	+	0.0055	1.8	1,2-Dibromo-3-chloropropane			0.11	15
Benzo (g,n,i)perviene	+			1,2-Dibromomethane/			0.028	15
Benzo(a)pyrene		0.061	3.4	Ethylene dibromide	ļ			
Bromodichloromethane		0.35	15	Dibromomethane	ļ		0,11	15
Bromomethane/Methyl	1 1	0.11	15	m-Dichlorobenzene			0.036	6.0
Bromide		0,055	15	o-Dichlorobenzene	+		0.088	6.0
4-Bromophenyl phenyl ether		5.6	2.6	p-Dichlorobenzene	+		0.090	6.0
n-Butyl alcohol		0.0421	1.41	Dichlorodifluoromethane	+		0.23	7.2
Butylate	<u> </u>	0.042	28	1,1-Dichloroethane	+ +		0.059	6.0
Butyl benzyl phthalate	_ <u></u>	0.017	20					
2-sec-Butyl-4,6-		0.066	2,5	1,2-Dichloroethane			0.21	6.0
dinitrophenol/Dinoseb	+	0.0061	0.14	1,1-Dichloroethylene	+		0.025	6.0
Carbary	+	0.006	1.4	trans-1,2-Dichloroethylene	+ 1		0.054	30
Carbenzadim		0.0061	0.14	2.4-Dichlorophenol	+ +		0.044	14
Carbofuran		0.006	1.41	2.6-Dichlorophenol	+ /		0.044	14
Carbofuran phenol	+	0.000	4.8 mg/l	2.4-Dichlorophenoxyacetic	+	_		
Carbon disulfide		3.8	TCLP	acid/2,4-D			0.72	10
Carbon tetrachloride	+ /	0.057	6.0	1,2-Dichloropropane			0.85	18
	++	0.028	1.41	cis-1,3-Dichloropropylene			0.036	18
Carbosulfan Chlordane (alpha and gamma	-+/			trans-1,3-Dichloropropylene	17		0.036	18
isomers)		0.0033	0.26				0.017	0.13
p-Chloroaniline		0.46	16	Dieldrin	1	~~~~~	0.20	28
Chlorobenzene	¥	> 0.057	6.0	Diethyl phthalate	1		- 10.20	120

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121800-01

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1800-01	cirre Licroin		2262642464					(975) Zajatek		SECTION OF THE REAL	NWW
GONSTITUENT	HOW	MUS	T	WW .	NVVW	CONSTITUENT	How I This	NUSI		WW (mg/l)	(mg/kg)
	THIS		ENT	.(mg/l)	(mg/kg) unless		CONS	TITUE	NT.		unless
			EED2		noted		BEM				noted
Chlorobenzilate -				→ 0.10	NA	p-Dimethylaminoazobenzene			\rightarrow	0.131	NA
2,4-Dimethyl phenol	1			0.036	14	Methylene chloride	ļ			0.089	30
Dimethyl phthalate				0.047	28	Methyl ethyl ketone	<u> </u>			0.28	36 33
Di-n-butyl phthalate				0.057	28	Methyl isobutyl ketone				0.14	<u> </u>
1,4-Dinitrobenzene				0.32	2.3	Methyl methacrylate				0.018	NA
4,6-Dinitro-o-cresol				0.28	160	Methyl methansulfonate				0.018	4.6
2,4-Dinitrophenol				0.12	160 140	Methyl parathion Metolcarb				0.0561	1.41
2,4-Dinitrotoluene				0.32	28	Metolcarb				0.0561	1.41
2,6-Dinitrotoluene				0.55	28	Molinate		<u>`</u>		0.042'	1.41
Di-n-octyl phthalate				0.40	14	Naphthalene				0.059	5.6
DI-n-propyInitrosamine				12.0	170	2-Naphthylamine				0.52	NA
1,4-Dioxane				0.92	131	o-Nitroaniline				0,271	14 ¹
Diphenylamine ³				0.92	131	p-Nitroaniline				0.028	28
Diphenylnitrosamine ³				0.087	NA	Nitrobenzene				0.068	14
Disulfoton				0.017	6.2	5-Nitro-o-toluidine		•		0.32	28
Dithiocarbamates (total)				0.028	28 ¹	o-Nitrophenol				0.0281	131
Endosulfan I				0,023	0.066	p-Nitrophenol				0.12	29
Endosulfan II				0.029	0.13	N-Nitrosodiethylamine				0.40	28
Endosulfan sulfate				0,029	0.13	N-Nitrosodimethylamine				0,40	2.3 ¹
Endrin				0.0028	0,13	N-Nitroso-di-n-butylamine	L			0.40	17
Endrin aldehyde				0.025	0.13	N-Nitrosomethylethylamine				0.40	2.3
EPTC				0.0421	1.4'	N-Nitrosomorpholine		 		0.40	35
Ethyl acetate				0.34	33	N-Nitrosopiperidine		\			35
Ethyl benzene		1		0.057	10	N-Nitrosopyrrolidine		\		0.013	0.281
Ethyl cyanide/Propanenitrile				0.24	360	Oxamyl		<u> </u>		0.056	4.6
Ethyl ether				0.12	160	Parathion					
Bis(2-Ethylhexyl)phthalate				0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)		1		0.10	10
Ethyl methacrylate				0.14	160	Pebulate				0.0421	1.4 ¹
Ethylene oxide				0.12	NA	Pentachlorobenzene					10
Famphur				0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		\square		0.000035	0.001
Fluoranthene				0.068	3L.4	PeCDFs(All Pentachlorodibenzofurans)				0.000035	0.001
Fluorene				0.059	3.4	Pentachloroethane				0.055	6.0
Formetanate hydrochloride				0.0561	1.4'	Pentachloronitrobenzene				0.055	4.8
Heptachlor				0.0012	0.066	Pentachlorophenol				0.089	7.4
Heptachlor epoxide				0.016	0.066	Phenacetin				0.081	16
Hexachlorobenzene			T	0.055	10	Phenanthrene				0.059	5.6
Hexachlorobutadiene			1	0.055	5.6	Phenol				0.039	6.2
Hexachlorocyclopentadiene				0.057	2.4	Phorate	<u> </u>			0.021	4.6
HxCDDs (All Hexachrorodibenzo-p-dioxins)				0.000063	0.001	Phthalic acid				0.0551	28 ¹
HxCDFs (All Hexachlorodibenzofurans)			T	0.000063	0.001	Phthalic anhydride				0.055	28 ¹
Hexachloroethane	1			0.055	30	Physostigmine				0.0561	1.41
Hexachloropropylene				0.035	30	Physostigmine salicylate				0.0561	1.4
Indeno(1,2,3-c,d)pyrene				0.0055	3.4	Promecarb	ļ			0.0561	1.41
Iodomethane				0.19	65	Pronamide	ļ			0.093	1.5
Isobutyl alcohol				5,6	170	Propham	ļ			0.0561	1.4
Isodrin			T	0.021	0.066	Propoxur	 			0.0561	1.41
Isosafrole				0.081	2.6	Prosulfocarb				0.0421	1.4
Керопе				0.0011	0.13	Pyrene	+		\ _	0.067	8,2
Methacrylonitrile	ļ			0.24	84	Pyridine	+			0.014	22
Methanol	ļ			5.6	0.75 mg/l ¹	Safrole				0.001	7.9
Methapyrilene				0.081	1.5 1.4 ¹	Silvex/2,4,5-TP	+			0.055	14
Methiocarb				0.0561	0.14 ¹	1,2,4,5-Tetrachlorobenzene TCDDs (All				0.000063	0.001
Methomyl				+	0.18	Tetrachlorodibenzo-p-dloxins) TCDFs (All				0.000063	0.001
Methoxychlor				0.25	15	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane				0.057	6.0
-				10,0055	1 10		1			1 0.001	
3-Methylcholanthrene 4,4'-Methylene bis(2-				0.0055	30	1,1,2,2-Tetrachloroethane				0.057	6.0

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	THIS	STITUE	NT	WW. (Nem)	NWW (mg/kg) Juniess	CONSTITUENT	HOW MU THIS CONSTIL	UENT.	ww (në/l)	NWW (mg/kg)) unless
	BEN	IANAGI	10?#	0.055	noted 6.0	INORGANIC	BEMAN	AGEDIA-		Indied
Tetrachioroethylene	<u> </u>			0.056		CONSTITUENTS			4.0	2.1 mg/l
2,3,4,6-Tetrachlorophenol	4			0.030	7.4	Antimony	<u> </u>		1.9	TCLP 1.15 mg/l
Thiodicarb	Ц			0.0191	1.4 ¹	Antimony			1.9	TCLP ⁴ 5.0 mg/l
Thiophanate-methyl				0.0561	1.41	Arsenic			1.4	TCLP
Toluene			•	0.080	10	Barium			1.2	7.6 mg/l TCLP
Toxaphene				0.0095	2.6	Barium			1.2	21 mg/l TCLP ⁴
Triallate				0.042 ¹	1.4 ¹	Beryllium			0.82	0.014 mg/
Tribromomethane/Bromoform				0.63	15	Beryllium			0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		1		0.035	7.4	Cadmium			0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		1		0.055	19	Cadmium			0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		-1		0.054	6.0	Chromium (Total)			2.77	0.86mg/I TCLP
1,1,2-Trichloroethane		1		0.054	6.0	Chromium (Total)		1	2.77	0.60 mg/l TCLP ⁴
Trichloroethylene				0.054	6.0	Cyanides (Total)		1	1.2	590
Trichloromonofluoromethane				0.020	30	Cyanides (Amenable)		1	0.86	30 ¹
2,4,5-Trichlorophenol		1		0.18	7.4	Fluoride			35	NA ⁴
2,4,6-Trichlorophenol				0.035	7.4	Lead			0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T				0.72	7.9	Lead			0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane			\top	0.85	30	Mercury (Nonwastewater from Retort)			NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane			1	0.057	30	Mercury (All others)			0.15	0.025 mg/ TCLP
Triethylamine			\top	0.081 ¹	1.5 ¹	Nickel			3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate			\top	0.11	0.10 ¹	Nickel			3.98	11 mg/l TCLP ⁴
Vernolate				0.042 ¹	6.0 ¹	Selenium			0.82	0.16 mg/l TCLP
Vinyl chloride				0.27	6.0	Selenium		wa	0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum	4			0.32	30	Silver			0.43	0.30 mg/l TCLP
of o-,m-, and p-xylene	\vdash				\rightarrow	Silver			0.43	0.14 mg/l
		· · · ·	•			Sulfide	1/		14	NA ²
				F		Thallium	1.		1.4	0.078 mg/
						Thailium	1	,	1.4	0.20 mg/l
						Vanadium	/		4.3 ²	1.6 mg/l TCLP ²
					$ \longrightarrow $	Zinc	K	·>	2.61	4.3 mg/i TCLP ²

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. ² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

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PCB and Additional Information Attachment, Page 3 of 3

Manifest Number: 019694669JJK

Shipment ID Number: DSSI-19-096

Shipment Date: 9/10/2019

umm Servers term Description Description Normal N				1				1					Maximum
bit VIEW VIEW PADICARD PADICARD VIEW PADICARD PADICARD VIEW PADICARD PADICARD PADICARD			WASTE ID			Start Date	Storage	(ft3)	(lb)	(Kg)	(lb)	(Kg)	Activity MBq
bit 11388 11389 11389 10160 223 1035 NA bit 11389 121650 PANECADD TENNETORMER OLL FROM CASS SWITCHYARD 071019 NA 44.1 2238 1264 2164 2164 2164 2164 2164 2164 12144 121444 PARISCADD TENNETORMER OLL FROM CASS SWITCHYARD 072218 NA 22.5 1244 12144 PARISCADD TENNETORMER OLL FROM CASS SWITCHYARD 072218 NA 25.5 124 134 240 10 133 73 NA bit 121450 121440 121440 PARISCADU DED CLE FROM MAREE CASADITORSETC. NA 0600 ftm 10 3387 138 15 24 11 153 12771 121777 1217770 PARISCADU DED CLE FROM MAREE PROM TOPED FROM NA NA 00071 NA 6.88 461 162 313 114 NA 275.1 121727 121770 PARISCADU DED CLE FROM NAMP P21 NG 310 NA	9b.1	121856	121856-01	PAD19C43001	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/09/19	N/A	44.11					
bit 121808 121804 121805 PARICADOM TRANSFORMER OL FROM CAST SINTCHARD 071013 NA 42.27 12102 44.4 857 300 154 NA 052 12144 121441 PARICADO TRANSFORMER OL FROM CAST NARNER OL FROM CAST NARNER OL FROM CAST NARNE 306 300 170 170 NAR 052 12144 121441 PARICADO FROM CAST NARNER OL FROM CAST NARNER OL FROM CAST NAR 300 120													
bits 121969 121969 121969 12196 12196 1200 1401 3309 330 NA 32 121441 1214419 PAISCAI29 USED OL FROM MORE COLPMENT 04/08/19 NA 4.2 229 104 173 78 NA 36.3 12160 12160 PAISCAI29 USED OL FROM MORE SCARATIONSETC NA 06/0119 7.3 1347 2.40 52 7.41 11 153 12170 121707 1201707 PAISCAI29 VARITIONNOMENCICIES (USED OLL FROM MORE PCI ACATOTONNET NA NA 0.40 0.87 0.30 151 241 11 151 12170 121707 120170 PAISCAI26 DESELFUE 02019 NA 0.80 0.61 131 141 NA 12170 121707 121707 PAISCAI26 DESELFUE 02019 NA 6.68 307 160 311 141 NA 12172 121720 PAISCAI26 DESELFUE	9b.1	121856	121856-03	PAD19C43003	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/10/19	N/A	44.11	2338	1060	2282	1035	N/A
Bale 12144 121441 121441 121441 121441 PADISC/32 UEED OLIFEON MOBLE EQUIPMENT D40919 NA 4 398 160 100 173 NA Bal 121650 1214441 PADISC/116 EDLUSTIF BELGISTIF	9b.1	121856	121856-04	PAD19C43004	TRANSFORMER OIL FROM C-537 SWITCHYARD	07/10/19	N/A	40.1	2148	974	2003	909	N/A
bb.2 121444 1214451 124451 12450 121455 124454 12450 121455 124545 124554 124544 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 12454 1245 1245 12454 </td <td></td>													
bb.3 121625 1216250 PAD16C4169 CEL LIGHT PLATSTTMANFORMERICAPACTORSETC. NA 0011018 7.4 2.06 1.34 2.06 1.34 2.06 1.34 2.06 1.34 2.06 1.34 2.06 1.34 2.06 1.34 2.06 1.34 NA 121164 121717.0 PAD16C4105 UED LEROM WAP #2 IN C.310 NA NA 0.67 3.8 1.07 2.08 1.01 1.01 1.01 12175 121762 PAD16C4200 UEROM WAP #2 IN C.310 NA 0.67 3.8 1.07 1.02 3.15 1.01 NA 6.80 3.07 1.08 3.01 NA 6.80 3.07 1.08 3.01 NA 6.81 3.07 1.01 3.01 NA 6.81 3.07 1.01 NA 6.81 3.01 1.01 3.01 NA 0.01 1.01 NA 0.01 1.01 NA 0.01 1.01 NA 0.01 1.01 1.01 1.01													
bas. Lifes Visites Pathes Ball ASTSTERMSPONMERSCOMERSEC. N/A OB/ODS 7.4 gals 134 2.00 104 2.33 12710 121717 1217170 POIDCA148 ICS STEMS LODO 1002/19 N/A 0.80 373 160 502 7.4 511 155 2710 121717 1217170 POIDCA2104 USED OL FROM WAP /// NC-310 N/A N/A 0.67 38 170 29 131 141 N/A 27152 121757 121750 POIDCA210 USED OL FROM WAP /// NC-310 N/A 0.67 4.01 160 341 141 N/A 27152 121752 121754 POIDCA210 DESEL FUEL 032219 N/A 6.73 4.01 160 342 161 N/A 27152 121752 121750 POIDCA218 DESEL FUEL 032219 N/A 6.73 4.18 190 322 164 N/A 21752 121750 <td< td=""><td>9b.2</td><td>121444</td><td>121444-16</td><td>PAD19C42715</td><td></td><td>04/09/19</td><td>N/A</td><td>2.5</td><td>229</td><td>104</td><td>173</td><td>78</td><td>N/A</td></td<>	9b.2	121444	121444-16	PAD19C42715		04/09/19	N/A	2.5	229	104	173	78	N/A
1 12177 12177-01 PAD19C42104 USED OL FROM WAP 12 N C-310 NA NA NA NA NA NA NA Sa 57 24 11 15 272-1 12167 121752 121762 121682 PAD19C4201 ROSENE DRANED FROM TORPED HEATERS 0001 NA NA 6.68 361 111 141 NA 27b3 121752 1217520 PAD19C4213 DESEL FUEL 0022019 NA 6.59 401 122 345 156 NA 27b3 121752 1277540 PAD19C4213 DESEL FUEL 0022019 NA 6.73 410 984 414 NA 27b3 121752 1277540 PAD19C4218 DESEL FUEL 032019 NA 6.73 410 986 375 171 NA 27b3 121752 1277540 PAD19C4218 DESEL FUEL 032019 NA 6.73 418 196 345 171 NA					BALLASTS/TRANSFORMERS/CAPACITORS/ETC.		09/10/18						
1 12171 12177-12 PAD16/2410 USED DL FROM WAP #2 IN C-310 NA NA 0.67 38 17 29 13 181 27b2 121687 121680 PAD16/24201 IESSENE ORALED FROM TORPED HEATERS 030710 NA 6.68 307 168 311 141 NA 27b3 121752 1277520 PAD16/24213 DIESEL FUEL 032116 NA 6.73 413 166 354 162 NA 27b3 121752 1277520 PAD16/2418 DIESEL FUEL 032216 NA 6.73 440 164 NA 27b3 121752 1277520 PAD16/2418 DIESEL FUEL 032216 NA 6.73 420 198 365 176 NA 27b3 121752 1277520 PAD16/2418 DIESEL FUEL 032216 NA 6.73 420 198 375 176 NA 27b3 121752 1277500 PAD16/2418 DIESE FUEL 04221	9b.4	121584	121584-01	PAD18C41455	TCE SYSTEMS LIQUD	10/22/18	N/A	13.367	1240	562	774	351	N/A
27b2 121687 121687-03 PAD190C4201 KEROSENE DRANED FROM TORPEDO HEATERS 0307/19 NA 6.68 397 166 311 141 NA 27b3 12172 121724-01 PAD190C4213 DESEL FUEL 022019 NA 6.69 401 182 345 166 NA 27b3 12172 121732-01 PAD190C4218 DESEL FUEL 032219 NA 6.73 410 186 384 161 NA 27b3 121732 121732-0 PAD190C4218 DESEL FUEL 032219 NA 6.73 420 101 364 165 NA 27b3 121732 121732-0 PAD190C4181 DESEL FUEL 032219 NA 6.73 420 106 362 104 NA 27b3 121732 121732-0 PAD190C4181 DESEL FUEL 032219 NA 6.615 431 105 376 107 NA 27b3 121732 121732-0 PAD190C4181 DESEL FUEL 04219 NA 6.615 431 105 376 <t< td=""><td>27b.1</td><td>121717</td><td>121717-01</td><td>PAD19C42104</td><td>USED OIL FROM WAP #2 IN C-310</td><td>N/A</td><td>N/A</td><td>0.67</td><td>33</td><td>15</td><td>24</td><td>11</td><td>15</td></t<>	27b.1	121717	121717-01	PAD19C42104	USED OIL FROM WAP #2 IN C-310	N/A	N/A	0.67	33	15	24	11	15
27b.3 121752 1217552 1217551 1217552	27b.1	121717	121717-02	PAD19C42105	USED OIL FROM WAP #2 IN C-310	N/A	N/A	0.67	38	17	29	13	18
12753 121752	27b.2	121687	121687-03	PAD19C42401	KEROSENE DRAINED FROM TORPEDO HEATERS	03/07/19	N/A	6.68	367	166	311	141	N/A
27.3 12176 121762	27b.3	121752	121752-01	PAD19C42213	DIESEL FUEL	02/20/19	N/A	6.59	401	182	345	156	N/A
27b3 12175 121752 1217520 PAD19C42180 DIESEL FUEL 0326/19 NA 6.73 418 190 362 164 NA 27b3 121752 1217520 PAD19C4218 DIESEL FUEL 0326/19 NA 6.73 4420 191 364 105 MA 27b3 121752 1217520 PAD19C4218 DIESEL FUEL 0327/19 NA 6.73 418 190 362 164 NA 27b3 121752 1217520 PAD19C4218 DIESEL FUEL 0402/19 NA 6.60 431 195 375 170 NA 27b3 121752 PAD19C4219 DIESEL FUEL 0402/19 NA 6.42 388 107 332 151 NA 27b3 121752 PAD19C4219 DIESEL FUEL 0422/19 NA 6.42 388 107 399 172 NA 27b4 12175 121755 PAD19C4218 DIESEL FUEL 0225/19 NA 7.4 531 241 362 161 342 161	27b.3	121752	121752-02	PAD19C42173	DIESEL FUEL	03/21/19	N/A	7.27	413	187	357	162	N/A
1 12175 121752 121753 121752 121753 121752 1217551 1217554 1217551 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 1217554 121754 121754 121754 121754 121754 121754 121754 1217564	27b.3	121752	121752-03	PAD19C42418	DIESEL FUEL	03/23/19	N/A	6.73	410	186	354	161	N/A
27.3. 121752 121752.01 PAD19C42182 DIESEL FUEL 03/20/19 N/A 6.73 432 196 376 171 N/A 273.3 121752 121752.07 PAD19C42183 DIESEL FUEL 04/02/19 N/A 6.73 418 190 562 164 N/A 273.3 121752 121752.00 PAD19C42185 DIESEL FUEL 04/02/19 N/A 6.86 420 191 364 165 N/A 273.3 121752 121752.01 PAD19C42185 DIESEL FUEL 04/02/19 N/A 6.42 388 176 332 161 N/A 275.3 121752 121753.01 PAD19C42182 DIESEL FUEL 02/25/19 N/A 2.43 136 167 323 161 N/A 275.5 121755 121755.01 PAD19C42182 ETHVLENE CLYCOL (ANTIFREEZE) 02/25/19 N/A 7.4 531 241 398 168 171 147 275.6 121797 121797.02 PAD19C42181 UNUSED SHELL TURB0 320 OL N/A N/A 7.4	27b.3	121752	121752-04	PAD19C42180	DIESEL FUEL	03/26/19	N/A	6.73	418	190	362	164	N/A
273.3 121752 121752.0 121752.0 121752.0 121752.0 PAD19C42183 DIESEL FUEL 003/27/19 N/A 6.6.35 4.18 190 362 164 N/A 273.3 121752 121752.00 PAD19C42185 DIESEL FUEL 04/02/19 N/A 6.6.86 420 191 364 165 N/A 273.3 121752 121752.01 PAD19C42190 DIESEL FUEL 04/02/19 N/A 6.86 420 191 364 165 N/A 273.3 121752 121752.01 PAD19C42190 DIESEL FUEL 04/02/19 N/A 7.4 435 197 379 172 N/A 275.5 121755.01 PAD19C42162 ETHYLENE CLYCOL (ANTIFREEZE) 02/25/19 N/A 1.21 114 52 58 26 2 275.6 121757 121707.01 PAD19C42180 UNUSED SHELL TUREO 320 OIL N/A N/A 7.4 552 250 416 198 141 275.6 12179 121797.01 PAD19C42181 UNUSED SHELTUREO 320 OIL N/A	27b.3	121752	121752-05	PAD19C42181	DIESEL FUEL	03/26/19	N/A	6.73	420	191	364	165	N/A
1 1	27b.3	121752	121752-06	PAD19C42182	DIESEL FUEL	03/26/19	N/A	6.73	432	196	376	171	N/A
27.3. 121752 121752.0 PAD 19CA 2195 DIESEL FUEL 04/12/19 N/A 6.86 420 191 364 165 N/A 27.3. 121752 121752.01 PAD 19CA 2199 DIESEL FUEL 04/12/19 N/A 6.42 388 176 332 151 N/A 27.5. 121752 1217532.01 PAD 19CA 2714 OIESEL FUEL 02/25/19 N/A 2.43 236 107 180 82 N/A 27.5. 121755 121755.01 PAD 19CA 2714 GASOL (ANT IFREEZE) 02/25/19 N/A 7.4 531 241 475 215 1215 121757 1217570 PAD 19CA 2714 GASOL (ANT IFREEZE) 02/25/19 N/A 7.4 531 241 475 215 1215 121757 121757 PAD 19CA 2714 UNUSED SHELL TURB 020 OL N/A N/A 7.4 532 241 396 180 131 276.6 12179 12179-02 PAD 19CA 274 UNUSED WELCH VACUUM OL N/A N/A 7.4 532 241 396 <td>27b.3</td> <td>121752</td> <td>121752-07</td> <td>PAD19C42183</td> <td>DIESEL FUEL</td> <td>03/27/19</td> <td>N/A</td> <td>6.73</td> <td>418</td> <td>190</td> <td>362</td> <td>164</td> <td>N/A</td>	27b.3	121752	121752-07	PAD19C42183	DIESEL FUEL	03/27/19	N/A	6.73	418	190	362	164	N/A
275.3 121752 121782.1 PAD19C4219 DESEL FUEL 04/2219 N/A 7.4 435 197 332 151 N/A 275.3 121752 121782.1 PAD19C4274 DESEL FUEL 05/16/19 N/A 7.4 435 197 379 172 N/A 275.4 121753 1217540 PAD19C4274 DESEL FUEL 02/2519 N/A 7.4 435 107 130 82 N/A 275.5 121755 1217540 PAD19C4270 ETHYLENE GLYCOL (ANTIFREEZE) 02/2519 N/A 7.4 552 250 416 189 14 275.6 121797 121797.0 PAD19C42915 UNUSED SHELL TURB0 320 OLL N/A N/A 7.4 532 241 396 180 131 275.6 121797 121801-02 PAD19C42915 UNUSED SHELL TURB0 320 OLL N/A N/A 7.4 532 241 396 180 131 275.6 121801 PAD19C42915 UNUSED VIELT VACUUM OLL N/A N/A 7.4 532 241 396 </td <td>27b.3</td> <td>121752</td> <td>121752-08</td> <td>PAD19C42187</td> <td>DIESEL FUEL</td> <td>04/02/19</td> <td>N/A</td> <td>6.015</td> <td>431</td> <td>195</td> <td>375</td> <td>170</td> <td>N/A</td>	27b.3	121752	121752-08	PAD19C42187	DIESEL FUEL	04/02/19	N/A	6.015	431	195	375	170	N/A
27b.3 121752 121752.11 PAD19C42714 DESEL FUEL 05/18/19 N/A 7.4 435 197 379 172 N/A 27b.4 121753 121753.01 PAD19C42714 GASOLINE 02/25/19 N/A 2.53 236 107 180 82 N/A 27b.5 121755 1217550 PAD19C42162 ETHYLENE GLYCOL (ANTIFREEZE) 05/13/19 N/A 7.4 531 241 475 215 1217 121797 121797.01 PAD19C42913 UNUSED SHELL TURB0 320 OLL N/A N/A 7.4 532 241 396 180 131 27b.6 121797 121797.02 PAD19C42914 UNUSED WELCH VACUUM OLL N/A N/A 7.4 532 241 396 180 131 27b.6 121798 12198-02 PAD19C42914 UNUSED WELCH VACUUM OLL N/A N/A 7.4 532 241 396 180 131 27b.6 121801 121801-02 PAD19C42916 UNUSED WELCH VACUUM OLL N/A N/A 7.4 532 287	27b.3	121752	121752-09	PAD19C42195	DIESEL FUEL	04/12/19	N/A	6.86	420	191	364	165	N/A
27b.4 121753 121755-01 PAD19C42214 GASOLINE 02/25/19 NA 2.63 2.65 107 180 82 NA 27b.5 121755 121755-01 PAD19C42162 ETHYLENE GLYCOL (ANTIFREEZE) 05/13/19 NA 7.4 531 241 475 215 15 27b.6 121757 121757-01 PAD19C4213 UNUSED SHELL TURBO 320 OLL NA NA 7.4 552 250 416 189 13 27b.6 121797 12179-02 PAD19C42913 UNUSED SHELL TURBO 320 OLL NA NA 7.4 552 241 396 180 131 27b.6 121798 121798-02 PAD19C42914 UNUSED WELCH VACUUM OLL NA NA 7.4 532 241 396 180 131 27b.6 121801 12180-10 PAD19C42914 UNUSED WINTREX-GLYCOL NA NA 7.4 582 241 396 180 151 21802 121801 121801-02 PAD19C4274 UNUSED WINTREX-GLYCOL NA NA 7.4 582	27b.3	121752	121752-10	PAD19C42199	DIESEL FUEL	04/22/19	N/A	6.42	388	176	332	151	N/A
27b.5 121755 121755 121755 121755 121755 121755 121755 121755 121755 121755 121755 121757 121757 121797 121797.01 PAD19C42913 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 552 250 416 189 14 27b.6 121797 121797.01 PAD19C42913 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 552 250 416 189 14 27b.6 121797 121797.02 PAD19C42914 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 552 250 416 189 13 27b.6 121798 121798-01 PAD19C42916 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121801 121801.01 PAD19C42916 UNUSED WINTREX-GLYCOL N/A N/A 7.4 658 298 522 237 177 27b.6 121802 121802.02 PAD19C42916 UNUSED CWET (OUT OF DATE) N/A N/A 7.4 558	27b.3	121752	121752-11	PAD19C42714	DIESEL FUEL	05/18/19	N/A	7.4	435	197	379	172	N/A
27b.5 121755 121755-02 PAD 19C42709 ETHYLENE GLYCOL (ANTIFREEZE) 05/13/19 N/A 1.21 114 52 58 26 2 27b.6 121797 121797-01 PAD 19C42913 UNUSED SHELL TURGO 320 OIL N/A N/A 7.4 552 250 416 189 14 27b.6 121797 121797-02 PAD 19C42914 UNUSED SHELL TURGO 320 OIL N/A N/A 7.4 532 241 396 180 133 27b.6 121798 121798-02 PAD 19C42915 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121801 121801-01 PAD 19C4274 UNUSED WITREX-GLYCOL N/A N/A 7.4 632 287 496 225 16 27b.6 121802 121802-01 PAD 19C42745 UNUSED WITREX-GLYCOL N/A N/A 7.4 584 266 448 203 157 27b.6 121802 121802-02 PAD 19C42745 UNUSED WITREX-GLYCOL N/A N/A 7.4 <td>27b.4</td> <td>121753</td> <td>121753-01</td> <td>PAD19C42214</td> <td>GASOLINE</td> <td>02/25/19</td> <td>N/A</td> <td>2.53</td> <td>236</td> <td>107</td> <td>180</td> <td>82</td> <td>N/A</td>	27b.4	121753	121753-01	PAD19C42214	GASOLINE	02/25/19	N/A	2.53	236	107	180	82	N/A
27b.6 121797 121797-01 PAD19C42913 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 552 250 416 189 14 27b.6 121797 121797-02 PAD19C42914 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121798 121798-02 PAD19C42915 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121798 121798-02 PAD19C42916 UNUSED WELCH VACUUM OIL N/A N/A 7.4 632 241 396 180 131 27b.6 121801 121801-02 PAD19C42914 UNUSED WINTREX-GLYCOL N/A N/A 7.4 632 288 522 237 177 27b.6 121802 121802-01 PAD19C42745 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 584 265 448 203 155 27b.6 121802 121802-01 PAD19C42745 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4<	27b.5	121755	121755-01	PAD19C42162	ETHYLENE GLYCOL (ANTIFREEZE)	02/25/19	N/A	7.4	531	241	475	215	15
27b.6 121797 121797-02 PAD 19C42914 UNUSED SHELL TURBO 320 OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121798 121798-01 PAD 19C42915 UNUSED WELCH VACUUM OIL N/A N/A 7.4 514 233 378 171 12 27b.6 121798 121798-02 PAD 19C42915 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 133 27b.6 121801 121801-01 PAD 19C42745 UNUSED WINTREX-GLYCOL N/A N/A 7.4 632 287 496 225 16 27b.6 121801 121801-01 PAD 19C42745 UNUSED WINTREX-GLYCOL N/A N/A 7.4 584 265 448 203 15 27b.6 121802 121802-01 PAD 19C42745 UNUSED WINTREX-GLYCOL N/A N/A 7.4 598 271 497 225 16 27b.6 121851 121851-01 PAD 19C42745 UNUSED WINTREX-GLYCOL N/A N/A 7.4 <	27b.5	121755	121755-02	PAD19C42709	ETHYLENE GLYCOL (ANTIFREEZE)	05/13/19	N/A	1.21	114	52	58	26	2
27b.6 121798 121798-01 PAD19C42915 UNUSED WELCH VACUUM OIL N/A N/A 7.4 514 233 378 171 12 27b.6 121798 121798-02 PAD19C42916 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 133 27b.6 121801 121801-01 PAD19C4274 UNUSED WINTREX-GLYCOL N/A N/A 7.4 6532 287 496 225 16 27b.6 121801 121801-02 PAD19C42745 UNUSED CWET (OUT OF DATE) N/A N/A 7.4 6584 286 522 237 177 27b.6 121802 121802-02 PAD19C42745 UNUSED CWET (OUT OF DATE) N/A N/A 7.4 584 265 448 203 155 27b.6 121802 121851-01 PAD19C42924 WATER DRAINED FROM THE C-310 TOPS PURGE N/A N/A 7.4 502 228 446 202 232 166 27b.6 121851 121851-03 PAD19C42924 WATER DRAINED FROM THE C-310 TOPS PURGE <td< td=""><td>27b.6</td><td>121797</td><td>121797-01</td><td>PAD19C42913</td><td>UNUSED SHELL TURBO 320 OIL</td><td>N/A</td><td>N/A</td><td>7.4</td><td>552</td><td>250</td><td>416</td><td>189</td><td>14</td></td<>	27b.6	121797	121797-01	PAD19C42913	UNUSED SHELL TURBO 320 OIL	N/A	N/A	7.4	552	250	416	189	14
27b6 121798 121798-02 PAD19C42916 UNUSED WELCH VACUUM OIL N/A N/A 7.4 532 241 396 180 13 27b.6 121801 121801-01 PAD19C42744 UNUSED WINTREX-GLYCOL N/A N/A 7.4 653 287 496 225 16 27b.6 121801 121801-02 PAD19C42918 UNUSED WINTREX-GLYCOL N/A N/A 7.4 658 298 522 237 17 27b.6 121802 121802-01 PAD19C42745 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 584 265 448 203 15 27b.6 121802 121802-02 PAD19C42746 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 598 271 497 225 16 27b.6 121851 121851-01 PAD19C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.6	27b.6	121797	121797-02	PAD19C42914	UNUSED SHELL TURBO 320 OIL	N/A	N/A	7.4	532	241	396	180	13
27b.6 121801 121801-01 PADJ9C42744 UNUSED WINTREX-GLYCOL N/A N/A 7.4 632 287 496 225 16 27b.6 121801 121801-02 PADJ9C42745 UNUSED WINTREX-GLYCOL N/A N/A 7.4 658 298 522 237 177 27b.6 121802 121802-01 PADJ9C42745 UNUSED CWET (OUT OF DATE) N/A N/A 7.4 558 265 448 203 155 27b.6 121802 121802-02 PADJ9C42746 UNUSED CWET (OUT OF DATE) N/A N/A 7.4 598 271 497 225 16 27b.6 121851 121851-01 PADJ9C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 502 228 446 202 233 27b.6 121851 121851-03 PADJ9C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.7 121809 121809-01 PADJ9C42615 LIQUIDS FROM C-4	27b.6	121798	121798-01	PAD19C42915	UNUSED WELCH VACUUM OIL	N/A	N/A	7.4	514	233	378	171	12
27b.6 121801 1218001 121801 121801	27b.6	121798	121798-02	PAD19C42916	UNUSED WELCH VACUUM OIL	N/A	N/A	7.4	532	241	396	180	13
27b.6 121802 121802-01 PAD19C42745 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 584 265 448 203 15 27b.6 121802-02 PAD19C42745 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 598 271 497 225 16 27b.6 121851 121851-01 PAD19C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 502 228 446 202 23 27b.6 121851 121851-02 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-02 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.6 121809 121809-01 PAD19C42615 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2944 1335 2944 1335 96 27b.7 121809 121809-01 PAD19C42615 LIQUID	27b.6	121801	121801-01	PAD19C42744	UNUSED WINTREX-GLYCOL	N/A	N/A	7.4	632	287	496	225	16
27b.6 121802 121802-02 PAD19C42746 UNUSED CC WET (OUT OF DATE) N/A N/A 7.4 598 271 497 225 16 27b.6 121851 121851-01 PAD19C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 502 228 446 202 23 27b.6 121851 121851-02 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-02 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-03 PAD19C42921 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK - REPACKAGED FROM 121848-01 N/A N/A 7.4 330 150 274 124 14 27b.7 121809 121809-01 PAD19C42615 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1337 2948 1337 96 <td>27b.6</td> <td>121801</td> <td>121801-02</td> <td>PAD19C42918</td> <td>UNUSED WINTREX-GLYCOL</td> <td>N/A</td> <td>N/A</td> <td>7.4</td> <td>658</td> <td>298</td> <td>522</td> <td>237</td> <td>17</td>	27b.6	121801	121801-02	PAD19C42918	UNUSED WINTREX-GLYCOL	N/A	N/A	7.4	658	298	522	237	17
27b.6 121851 121851-01 PAD19C42919 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 502 228 446 202 23 27b.6 121851 121851-02 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-03 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-03 PAD19C42921 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK - REPACKAGED FROM 121848-01 N/A N/A 7.4 330 150 274 124 14 27b.7 121809 121809-01 PAD19C42615 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1335 2944 1335 96 27b.8 121809 121809-02 PAD19C42617 LUBE OIL C-400 IRA 04/23/19 N/A 7.4 80 36 24 11 N/A	27b.6	121802	121802-01	PAD19C42745	UNUSED CC WET (OUT OF DATE)	N/A	N/A	7.4	584	265	448	203	15
27b.6 121851 121851-01 PAD19C42919 200 FT STACK N/A N/A N/A 7.4 502 228 446 202 23 27b.6 121851 121851-02 PAD19C42929 200 FT STACK WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-03 PAD19C42929 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK - REPACKAGED FROM 121848-01 N/A N/A 7.4 512 232 456 207 24 27b.7 121809 121809-01 PAD19C42915 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 7.4 330 150 274 124 14 27b.7 121809 121809-02 PAD19C42616 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1337 2948 1337 96 27b.8 121800 12180-01 PAD19C42617 LUBE OIL C-400 IRA 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.9 121868	27b.6	121802	121802-02	PAD19C42746	UNUSED CC WET (OUT OF DATE)	N/A	N/A	7.4	598	271	497	225	16
27b.6 121851 121851-02 PAD19C42920 200 FT STACK N/A N/A 7.4 512 232 456 207 24 27b.6 121851 121851-03 PAD19C42921 WATER DRAINED FROM THE C-310 TOPS PURGE 200 FT STACK - REPACKAGED FROM 121848-01 N/A N/A 7.4 330 150 274 124 14 27b.7 121809 121809-01 PAD19C42015 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1335 2948 1337 96 27b.8 121810 121810-01 PAD19C42615 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.8 121810-01 PAD19C42615 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.9 121809 12180-01 PAD19C42615 LIQUIDS FROM C-400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42863 TCE WATER-C400 IRA OUTSIDE	27b.6	121851	121851-01	PAD19C42919		N/A	N/A	7.4	502	228	446	202	23
27b.6 121851 121851-03 PAD19C42921 200 FT STACK - REPACKAGED FROM 121848-01 N/A N/A 7.4 330 150 274 124 14 27b.7 121809 121809-01 PAD19C42951 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2944 1335 2944 1335 96 27b.7 121809 121809-02 PAD19C42616 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1337 2948 1337 96 27b.8 121810 121810-01 PAD19C42617 LUBE OIL C-400 IRA 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.9 121868 121868-01 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42836 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 19 9 10 5 N/A	27b.6	121851	121851-02	PAD19C42920		N/A	N/A	7.4	512	232	456	207	24
27b.7 121809 121809-02 PAD19C42616 LIQUIDS FROM C-400 IRA GLYCOL 04/23/19 N/A 44.11 2948 1337 2948 1337 96 27b.8 121810 121810-01 PAD19C42617 LUBE OIL C-400 IRA 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.9 121868 121868-01 PAD19C42635 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42836 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 19 9 10 5 N/A	27b.6	121851	121851-03	PAD19C42921		N/A	N/A	7.4	330	150	274	124	14
27b.8 121810 121810-01 PAD19C42617 LUBE OIL C-400 IRA 04/23/19 N/A 7.4 80 36 24 11 N/A 27b.9 121868 121868-01 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 19 9 10 5 N/A	27b.7	121809	121809-01	PAD19C42615	LIQUIDS FROM C-400 IRA GLYCOL	04/23/19	N/A	44.11	2944	1335	2944	1335	96
27b.9 121868 121868-01 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 15 7 6 3 N/A 27b.9 121868 121868-02 PAD19C42835 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 19 9 10 5 N/A	27b.7	121809	121809-02	PAD19C42616	LIQUIDS FROM C-400 IRA GLYCOL	04/23/19	N/A	44.11	2948	1337	2948	1337	96
27b.9 121868 121868-02 PAD19C42836 TCE WATER-C400 IRA OUTSIDE 06/12/19 N/A 0.13 19 9 10 5 N/A	27b.8	121810	121810-01	PAD19C42617	LUBE OIL C-400 IRA	04/23/19	N/A	7.4	80	36	24	11	N/A
	27b.9	121868	121868-01	PAD19C42835	TCE WATER-C400 IRA OUTSIDE	06/12/19	N/A	0.13	15	7	6	3	N/A
Totals 42 493.1 30,256 13,724 26,833 12,171 442	27b.9	121868	121868-02	PAD19C42836	TCE WATER-C400 IRA OUTSIDE	06/12/19	N/A	0.13	19	9	10	5	N/A
		-	Totals	42				493.1	30,256	13,724	26,833	12,171	442

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

Ple	ase pr	int or type.								. OMB No.	2050-0039
Î	W	ASTE MANIFEST KY 8890008982	2. Page 1 of 2		ency Response		4. Manifest			33 J '	JK
	5. Ge	enerator's Name and Mailing Address		Generator	's Site Address	(if different that	n mailing addre	ss)			
		Four Rivers Nuclear Partnership, LLC, (FRNP) on behalf of FRNF 5511 Hobbs Road, Kevil, KY 42053 rators Phone: 270-441-5025) I	Pac	NP on beh Iucah Gas 1 Hobbs F	eous Diffu	ision Plant	-			
		rator's Phone: 27U-441-5U25 ansporter 1 Company Name		001	11100051	vo, rvevir, i	U.S. EPA ID				
		Interstate Ventures, Inc.						TNROO	003467	8	
	7. Tra	insporter 2 Company Name					U.S. EPA ID I	Number			
	1	signated Facility Name and Site Address Energy Solutions Clive Disposal Site-Waste Treatme	ent Facili	ity			U.S. EPA ID I	Number			
		US I-80 Exit 49, Clive, UT 84029									
	Facili	ty's Phone: 1–435–884–0155						UTD98	259889	8	
	9a.	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number,			10. Contair	iers	11. Total	12. Unit	10		
	HM	and Packing Group (if any))			No.	Туре	Quantity	Wt./Vol.	13.	Waste Code	S
1 22		^{1.} UN 3077, Environmentally hazardous substance, s	solid n.	0.5							
15	RQ	(PCB), 9, PGIII			5	DM	118	K			
ER										'	
NH NH	RQ	2.									
li											
		3.									
		 Four Rivers Nuclear Partnership, LLC (FRNP) and the U.S. Department of Energy (DOE) and the U.S. Department of En	ere co-canerat		at to a Co-Gener	tor agreement	dated Sentemb	er 13, 2017, 1	Inder this agr	reement.	
		FRNP is responsible for performing all Resource Conservation and Recovery Act (RCRA)	generator act	tivities on b	ehalf of both FRI	VP and DOE for	all activities un	der the scope	of FRNP's Co	ntract DE-	
		EM0004895, including, but not limited to, characterizing waste, manifesting waste to o with RCRA requirements. Transportation hereunder is for DOE and the actual total tran	nsportation ch	arges paid	g and labeling w are to be reimbu	rsed by the Go	vernment pursu	and managing ant to Contra	ct DE-EM0004	4895.	
		pecial Handling Instructions and Additional Information	4						. = .		
	1	Truck: H58 Trailer 251669 TID: 349504			Start Date:	N/A		PCB Sta			
	1	ERG # 171 In the event of an RQ Release, call 1-	800-424	-8802			lf undel	iverable	e, returr	n to gen	erator
		See Attachment for Additional Info					Shipme				
		GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this of the second s									
		marked and labeled/placarded, and are in all respects in proper condition for transport acco Exporter, I certify that the contents of this consignment conform to the terms of the attached	EPA Acknowl	ledgment o	f Consent.	-		il export shi	oment and 1 a	am the Prima	ary
		certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large	and the second se		b) (if I am a sma	I quantity gene	rator) is true.				
		rator's/Offeror's Printed/Typed Name	Sigi I	nature	-	1			Mon		Year
+	16. Int	Paina Pea on behalf of FRNP		Neg	ina t	an			110	0 31	19
I'T'L	L		Export from U	J.S.	Port of ent						
2		porter signature (for exports only): ansporter Acknowledgment of Receipt of Materials			Date leavir	ig 0.5.:					
TRANSPORTER		porter 1 Printed/Typed Name	Sigr	nature		-			Mon	th Day	Year
POR	m	ichael Calip	IN	nol	hall	C. J.			11	03	1 19
NS	Trans	porter 2 Printed/Typed Name	Sigr	nature					Mon	nth Day	Year
TRA						•					1
1	18. Di	screpancy									
	18a. D	Discrepancy Indication Space Quantity Type			Residue		Partial Rej	ection	Г	Full Reje	ection
			NEC	ET	E			ection	L		Clion
				Man	ifest Reference	Number:					
Ē	18b. A	Iternate Facility (or Generator)	NOV	18	2019		U.S. EPA ID N	lumber			
ACII				11-		1-0					
DE		y's Phone:	BY: A	#V V	1allsh	me			LM	with David	Veer
HH	100. 0	ignature of Alternate Facility (or Generator)							Mo	nth Day	Year
DESIGNATED FACILITY	10 11-	szardous Wasta Dapart Managament Malked Cades (i.e. and a fan hanned an an an an	nont diarray	land	ling out and						
ESI	19. Ha	zardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatm	nent, disposal	i, and recyc	aing systems)		4.				
		H132	0.				1.				
	20. De	esignated Facility Owner or Operator: Certification of receipt of hazardous materials covered	by the manif	lest except	as noted in Item	18a					
		d/Typed Name	Contraction of the local division of the loc	nature		1			Mo	nth Day	Year
11		Allart Frus		(].	and a	En	1		11	114	19
EPA	Form	8700-22 (Rev. 12-17) Previous editions are obsolete.	[~	DESI	GNATED	FACILITY	TO EPA	's e-MAN	IFEST S	SYSTEM

PCB and Additional Information Attachment, Page 2 of 2

Manifest Number: 019694693JJK

Shipment ID Number: 7340-08-0005

Shipment Date: 10/31/2019

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	PCB Date to Storage	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	NET WT (lb)	NET WT (Kg)
9b.1	121424	121424-06	PAD18C41095	RAG, PANS, PLASTIC, PADS, PPE	11/07/18	7.4	82	37	26	12
9b.1	121424	121424-07	PAD19C42008	RAG, PANS, PLASTIC, PADS, PPE	01/24/19	7.4	98	44	42	19
9b.1	121424	121424-08	PAD19C42042	RAG, PANS, PLASTIC, PADS, PPE	03/06/19	7.4	126	57	70	32
9b.1	121424	121424-09	PAD19C42043	SPILL CLEANUP DEBRIS/ENCAPSULATION WASTE	03/14/19	7.4	118	54	62	28
9b.1	121424	121424-10	PAD19C42502	RAG, PANS, PLASTIC, PADS, PPE	05/09/19	7.3	116	53	60	27
	:	Totals	5			36.9	540	245	260	118

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

Four Rivers Nuclear Partnership, LLC (FRNP) and the U.S. Department of Energy (DOE) are co-generators pursuant to a Co-Generator agreement dated September 13, 2017. Under this agreement, FRNP is responsible for performing all Resource Conservation and Recovery Act (RCRA) generator activities on behalf of both FRNP and DDE for all activities under the scope of FRNP's Contract DE-EM0004895, including, but not limited to, characterizing waste, manifesting waste to off-site facilities, packaging and labeling waste for transport, and storing and managing waste, in accordance Please print or ty, with RCRA requirements. Transportation hereunder is for DOE and the actual total transportation charges paid are to be reimbursed by the Government pursuant to Contract DE-EM0004895. 2050-0039

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1	WA	ASTE MANIFEST	1. Generator ID Numbery 889	0008982	2. Page 1 of		pency Response			969	1470	3 J .	JK
	5. Gen		gleaneBartnership, LLC.				nts Bite Address (
		(FRNP)					^p aducah Ga						
		5511 Hobbs Ro	ad, Kevil, KY 42053			t I	511 Hobbs	Rd, Kevi	I, KY 42U5	3			
		rator's Phone: nsporter 1 Company Nam RSB LOGIST	ÎCS Inc.		· · · · ·				U.S. EPA ID I	NUMBEAR	000120	05	
	7 Trop	nsporter 2 Company Nam	Δ						U.S. EPA ID N	Number			
									1				
	8. Des	signeted Eacility Name and	Sentific Services, Inc	. (DSSI)					U.S. EPA ID I	Number			
	1	857 Gallaher	Road, Kingston, TN	37763									
			5-376-8747						1	TND9	8210914	12	
		y's Phone:	- /iludia - Daara - Ohiania - Nama	Lineard Class JD Number			10. Contain	are l					
	9a. HM	and Packing Group (if a	on (including Proper Shipping Name (ny))	, Hazaro Class, ID Normber,			No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. V	Vaste Code	s
1	X		ste, Metal powders, flamm	iable, n.o.s. (Moblun	n Powder,		110.	1700			DÖD1	5000	•
S			Powder), 4.1, PG-II				1	DM	7	K			
AT													
GENERATOR	X	2. UN 3209. WA	ste, Metallic substance, w	ater-reactive, self-he	ating, n.o.	5.			<u></u>		0001	0003	
5	1 ^	(Carbon Powd	er, Aluminum Powder), 4.3		2.		4	DM	1	ĸ			
			•						•			11.100.0	
	RG	3. LIN 1479, Wa	ste Oxidizing solid, n.o.s.	Potassium Permano	anate.						0001	D003	
	1 Park	Potassium Pe	rsuifide), 5.1, RQ (Potasal			1	1	DM	39	K			
											I		
	RC	^{4.} UN 1992, Wat	ste Flammable liquids, tox	ic, n.o.s., (Methanol	, PCB), 3(5.1),	1	DM	З	ĸ	D001	U154	
		RQ (PCB), PC	3-11				1	20101	2				
	14 50	porter Handlingthstradie	ns and Addition D: 2							<u> </u>		~~~	07140
	14.0	been have the state of the			6	Justice	Charles Dates	66 m m m / A	n	MAR C	Anna the Thomas in		
11		mmm // amen					Start Date:	09/27/1			Start Date		27/18
			138, 140, 131 in the	event of an RQ Rel				09/27/1	lf unde	eliverab	le, retur	n to ge	nerator
				event of an RQ Rel				09/27/1	lf unde	eliverab	le, retur : PFD3	n to ge 81-02	nerator 79-25-1
	15.	See PCB Att	138, 140, 131 In the achment for Addition	event of an RQ Rel al Info	ease, call	1-800-4	24-8802 and accurately des	scribed above	If unde Shipm	hipping nam	le, retur PFDS e, and are clas	Th to ge	nerator 77-25-4 703 105 aged,
	1	See PCB Att	138, 140, 131 In the achment for Addition R's CERTIFICATION: I hereby de rded, and are in all respects in prop	event of an RQ Rel al Info clare that the contents of this er condition for transport acc	ease, call s consignment	1-800-4 t are fully a licable inte	24-8802 and accurately deservational and national and nat	scribed above	If unde Shipm	hipping nam	le, retur PFDS e, and are clas	Th to ge	nerator 77-25-4 703 105 aged,
	1	See PCB Att GENERATOR'S/OFFERO marked and labeled/placa Exporter, I certify that the	138, 140, 131 In the achment for Addition	event of an RQ Rel al Info clare that the contents of this er condition for transport acc m to the terms of the attache	ease, call s consignment cording to appl ed EPA Acknow	t are fully a licable inte	24-8802 and accurately dee ernational and national t of Consent.	scribed above	If under Shipm by the proper si ental regulations	hipping nam	le, retur PFDS e, and are clas	Th to ge	nerator 77-25-4 703 105 aged,
		See PCB Att. GENERATOR'S/OFFERO marked and labeled/placa Exporter, I certify that the - I certify that the waste min rator's/Offeror's Printed/Ty	138, 140, 131 In the achment for Addition R'S CERTIFICATION: I hereby der rded, and are in all respects in prop contents of this consignment conform imization statement identified in 40 rged Name	event of an RQ Rel al Info clare that the contents of this er condition for transport acc m to the terms of the attache CFR 262.27(a) (if 1 am a larg	ease, call s consignment cording to appl ed EPA Acknow ge quantity ge	t are fully a licable inte	24-8802 and accurately dee ernational and national t of Consent.	scribed above	If under Shipm by the proper si ental regulations	hipping nam	le, retur PFDS e, and are clas	Th to ge BI 02 Sified , pack am the Prime th Day	rierator 703 aged, ary Year
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A-150

Additional Information Attachment, Page 2 of 2

Manifest Number: 019694743 JJK

Shipment ID Number: 9750-01-0008

Shipment Date: 12/16/2019

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	Accumulation Storage Date	Date to Storage	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	Maximum Activity MBq	Net Wt (lb)	Net Wt (Kg)
9b.1	121872	121872-01	PAD19C42840	Vacuums and vacuum debris	07/25/19	07/25/19	7	112	50.80	23.04	56	25
<u></u>		Totals	1				7	112	51	23	56	25

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

PAD-WD-0901-R1	LAND DISPOSA		ON AND CERTIFIC	ATION
Generator Name'	Bur Rivers Nuclear	(FRNP)	Manifest Doc. No. :	019694743 Jtk
	97.53-01-0008		_ State Manifest No.:	AN

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗍

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. 2. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

		SANDA THE SOLVANDA OF HIGH ALL MADE AND AND ALL A			n an
1	D004	Arsenic	L	_	Α
	D006	Cadmium			A
		Chromium		٦.	A
3	. D007	Olliomán		1	A
4	D008	Lead			A

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT A.

121872-01

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS **B** 1

D .1	in the training the training to the training t	ess used to subdoll	085
	"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process	bee been energied	and
	continuation. Based on my inquiry of those intrivudue in the adaptivity of CED part 269 40 without impermissible dilution of the prohibited waste.	I am aware that then	re are
	certification. Based on my inquiry of those individuals intrineutately responsible to obtaining the international property so as to comply with the treatment standards in 40 CFP Part 264.0 without impermissible dilution of the prohibited waste.		
	significant penalties for submitting a false certification, including the possibility of fine and imprisonment."		
	significant penalties for submitting a false default app. Non-Epstern OPCANICS	• .	•

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this B.3 certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This B.4 decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

") certify under penalty of law | personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this D. certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hampy cartify that all int) mation submitte	t in this and all associate	d documents is complete and accurat	te, to the best of my knowledge an	d information.
1	OL. (Title	LASTE ENGINEER	Date_ <u>[0/3</u>]	2019
Signature	T			/ (
•/	(U	Form A1		
			Page 1 of 2		
					Dogo 1 of 7

CP3-WM-0437-F04 FR1

Page 1 of 7

121872-01

POOR QUALITY ORIGINAL

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		S MARINE S	TERRELINSK EVENDER			
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and the contract of the second second						
Barry manufactor and the second second	WATSON TIOT'S	REFRIETS WITTENS-	PEG-2010E		NUMPERIA PROVIDE	
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³	
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30	
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36	
Carbon disulfide (F005)	3.8	4.8 (TCLP)3	Methyl isobutyl ketone (F003)	0.14	33	
Carbon tetrachloride (F001)	0.057	6,0	Nitrobenzene (F004)	0.068	14 [.]	
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN	
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16	
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0	
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10	
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0	
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054 .	6.0	
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0	
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30	
Ethyl ether (F003)	0.12	. 160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30	
Isobutanol (isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30	

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated solls using the alternative soli treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class | SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β,

High TOC ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

LAND DISPOSAL NOTIFICATION A			Manifest Do		16947	43 JJK
enerator Name:	1					
rofile No.: (C-	11-19 95	9750-01-000	State Manife	est No.:		<u>9.</u> ne. This nage by it
e NOT an accept	ahle Land Dispo	rm A1 for a waste identified sal Notification and Certifica	ation Form.			
		a identify ALL LISEDA haza	rdous wastes that apply t	this waste shipm	ent (as define	ed by 40 CFR 261)
		orresponding subcategory () entify in column 5 how the w				
onstituent(s) and	i		canie must ne listen ann	anacheo		
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Form A2 Page 1 of 2

	LAND DISPOSAL NOTIF	ICATION AND CERTIFICATION	N (PHASE IV)
Generator Name:	FRNP	Manifest Doc. No. :	017694743 JOK
Profile No.:	97.50-01-0008	State Manifest No.:	NA
This form is a contin	uation from form A1 for a waste iden ble Land Disposal Notification and Ce	tified by more than five USEPA waste c rtification Form.	
		hazardous wastes that apply to this was ategory (write in the description from 40	
does not have a sub	category.). Also identity in column 5	now the waste must be managed. Spe	
F039 constituent(s)	and underlying nazardous constituer	it(s) if applicable, must be listed and att Space of the state of state (SPE 등 Ma Second Difference)	G. ADD MILTING WE
		जेवहर, जुलान भी जिले जह जोता है जिले हुए जिले हैं।	
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areby certify that all inf	ormation submitted in this and all associa	ted documents is complete and accurate, to	the best of my knowledge and information.
HEBY COLUNY MAY AN IN	0D. 11/ L/	· · · ·	

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F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:

FRNP

750-01-0008

121872-01

Profile No.:

Manifest Doc. No. : State Manifest No.:

NIC TO AND A STATE OF A

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

AND A DESCRIPTION OF THE OWNER OF THE OWNER OF		NWW	CONSTITUENT			NWW (mg/kg)
TONSTITUENT	10000	unless		CONSTITUENTS		funless-
				BEMANAGED?		noted
	0.059	3.4	2-Chloro-1,3-butadiene			0.281
	0.059	3.4	Chlorodibromomethane			15
	0.28	160	Chloroethane			6.0
	5.6	38 ¹	bis(2-Chloroethoxy)methane			7.2
	0.010	9.7				6.0
	0.059	140	Chioroform			6.0
	0,29	NA				7.2
	191	231				14
,	0.24	84			0.062'	NA ¹
	0.0561	0.28 ¹	Chloromethane/Methyl chloride		0.19	30
	0.021	0.066	2-Chioronaphthalene			5.6
			2-Chlorophenol			5.7
	0.81	14	3-Chloropropylene			30
		3.4	Chrysene		0.059	3.4
		NA	o-Cresol		0.11	5,6
		0.066	m-Cresol			5.6
		0.066	p-Cresol			5.6
		0.066	m-Cumenyl methylcarbamate			1.4
						0.75 mg/l ¹
		1.41	ó,p'-DDD			0.087
	0.0561	1.41	p,p'-DDD			0.087
			o,p'-DDE		1	0.087
			p,p'-DDE			0.087
		3.4	o,p'-DDT			0.087
		6.01	p,p'-DDT			0.087
		6.8				8.2
			Dibenz(a,e)pyrene			NA
		1.8	1,2-Dibromo-3-chloropropane	•	0.11	15
	0,061	3.4	1,2-Dibromomethane/ Ethylene dibromide		0.028	15 .
	0.35	15	Dibromomethane		0.11	15
	0.11	15	m-Dichlorobenzene		0.036	6.0
	0.055	15	o-Dichlorobenzene		0.088	6.0
					0.090	6.0
					0.23	7.2
					0.059	6.0
· · · · · · · · · · · · · · · · · · ·			1,2-Dichloroethane		0.21	6.0
			1 d d Dichloroothulono	+	0.025	6.0
						30
						14
		0.14	2,4-Dichlorophenol		_	14
	0.056		2.0-Dichlorophenol			
	3.8	4.8 mg/i TCLP ¹	acid/2,4-D			10 :
	0.057	6.0	1,2-Dichloropropane			18
	0.028	1.41	cis-1.3-Dichloropropylene		0,036	18
		1			1	T
	0.0022	0.26	trans-1,3-Dichloropropylene		0.036	18
	0.0033	0.26	trans-1,3-Dichloropropylene Dieldrin		0.036	18 0.13
		THIS (rng/l). CONSTUITUENT 12 0.059 0.059 0.28 5.6 0.010 0.059 0.28 5.6 0.010 0.059 0.29 19 ³ 0.24 0.056 ¹ 0.021 0.13 0.81 0.059 0.36 0.00014 0.00014 0.0059 0.36 0.00017 0.056 ¹ 0.056 ¹ 0.056 ¹ 0.056 ¹ 0.056 ¹ 0.056 ¹ 0.055 ¹ 0.11 0.066 ¹ 0.35 0.061 0.35 0.017 0.065 0.055 0.042 ¹ 0.017 0.066 ¹ 0.056 ¹ 0.056 ¹ 0.066 ¹ 0.056 ¹ 0.066 ¹ 0.056 ¹ 0.066 ¹	THIS (mg/l) (mg/l) (mg/l) CONSTURTENT 12 unless 0.059 3.4 0.059 3.4 0.28 160 5.6 38' 0.010 9.7 0.059 140 0.29 NA 19' 23' 0.24 84 0.056' 0.28' 0.021 0.066 0.13 NA 0.010 9.7 0.059 3.4 0.021 0.066 0.28' 14' 0.021 0.066 0.13 NA 0.13 NA 0.81 14 0.059 3.4 0.36 NA 0.0014 0.066 0.0017 0.066 0.0017 0.066 0.056' 1.4' 0.056' 1.4' 0.056' 1.4' 0.059 3.4 0.055' 6.0' 0.056' 1.4' 0.055' 1.4' 0.055' 6.0' 0.11 6.8	INTEC Implify Implify CONSINTUENT Interse Interse Brithmann 0.059 3.4 Chlorodlbromethane 0.28 160 Chlorodthane 0.28 160 Chlorodthane 0.28 160 Chlorodthane 0.28 160 Chlorodthane 0.29 NA bis(2-Chlorodthy)ether 0.059 140 Chloroform 0.29 NA bis(2-Chlorodspropyl)ether 0.29 NA bis(2-Chlorodspropyl)ether 0.0561 0.281 Chloronethane/Methyl 0.0561 0.281 Chlorophenol 0.13 NA 2-Chlorophenol 0.14 3-Chlorophenol 0.81 14 3-Chlorophenol 0.0014 0.066 m-Cresol 0.00014 0.066 m-Cresol 0.0017 0.0661 1.41 0.p ¹ -DDD 0.0661 1.41 0.p ¹ -DDE 0.0661 1.41 0.p ¹ -DDE	THUS Transfer Top/strain Top/strain	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

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CONSTITUENTS		ww.		CONSTITUENT	HOW MUST	ww. mg/l.	NWW (mg/kg)-2-
		(mg/l)	(mg/kg) anless		THIS CONSTITUENT	(III9/1+ A	unless
B	GNSTITUENT		noted		BEMANAGEDRA		noted.
Chlorobenzilate		0.10	NA	p-Dimethylaminoazobenzene		0.131	NA
2,4-Dimethyl phenol		0.036	14	Methylene chloride Methyl ethyl ketone		0.089	36
Dimethyl phthalate		0.047	28 28	Methyl isobutyl ketone		0.14	33
Di-n-butyl phthalate		0.32	2.3	Methyl methacrylate		0.14	160
4.6-Dinitro-o-cresol		0.28	160	Methyl methansulfonate		0.018 ·	NA
2.4-Dinitrophenol		0.12	160	Methyl parathion		0.014	4.6
2,4-Dinitrotoluene		0.32	140	Metolcarb		0.056 ¹ 0.056 ¹	1.41
2,6-Dinitrotoluene		0.55	28	Mexacarbate		0.056	1.4 ¹ 1.4 ¹
Di-n-octyl phthalate		0.017	28 14	Molinate Naphthalene		0.042	5.6
Di-n-propyinitrosamine		12.0	170	2-Naphthylamine		0.52	NA
1,4-Dioxane Diphenylamine ³		0.92	13 ¹	o-Nitroaniline		0.271	14 ¹
Diphenylanine Diphenylnitrosamine ³		0.92	13 ¹	p-Nitroaniline		0.028	28
1,2-Diphenylhydrazine		0.087	NA	Nitrobenzene		0.068	14
Disulfoton		0.017.	6.2	5-Nitro-o-toluidine		0.32	28
Dithlocarbamates (total)		0.028	28 ¹	o-Nitrophenol		0.0281	13 ¹ 29
Endosulfan I		0.023	0.066	p-Nitrophenol		0.12	29
Endosulfan II		0.029	0.13	N-Nitrosodiethylamine N-Nitrosodimethylamine		0.40	2.3 ¹
Endosulfan sulfate		0.029	0.13	N-Nitroso-di-n-butylamine		0.40	17
Endrin Endrin aldehyde		0.0028	0.13	N-Nitrosomethylethylamine		0.40	2.3
EPTC		0.0421	1.4	N-Nitrosomorpholine		0.40	2.3
Ethyl acetate		0.34	33	N-Nitrosopiperidine		0.013	35
Ethyl benzene		0.057	10	N-Nitrosopyrrolidine		0.013	35
Ethyl cyanide/Propanenitrile		0.24	360	Oxamyl		0.0561	0.281
Ethyl ether		0.12	160	Parathion		0.014	4.6
Bis(2-Ethylhexyl)phthalate	1	0.28	28	Total PCBs (sum of all PCB isomers or all Arociors)	А	0.10	10 .
Ethyl methacrylate		0.14	160	Pebulate		0.0421	1.4 ¹ 10 ¹
Ethylene oxide		0.12	NA	Pentachlorobenzene			
Famphur		0.017	15	PeCDDs (All Pentachiorodibenzo-p-dioxins)		0.000035	0.001
Fluoranthene		0.068	3,4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Fluorene		0.059	3.4	Pentachloroethane		0.055	6.0
Formetanate hydrochloride		0.0561	1.41	Pentachloronitrobenzene		0.055	<u>4.8</u> 7.4
Heptachlor		0.0012	0.066	Pentachlorophenol		0.089	16
Heptachlor epoxide		0.016	0.066	Phenacetin Phenanthrene		0.059	5,6
Hexachlorobenzene		0.055	5.6	Phenol		0.039	6.2
Hexachlorobutadiene Hexachlorocyclopentadiene		0.057	2.4	Phorate		0.021	4.6
Hexachiorocyclopentadiene HxCDDs (All			0.001	Phthalic acid		0.055 ¹	28 ¹
Hexachrorodibenzo-p-dioxins)		0.000063		<u>_</u>			28 ¹
HxCDFs (All Hexachlorodibenzofurans)		0.000063	0.001	Phthalic anhydride		0.055	
Hexachloroethane		0.055 .	30	Physostigmine Physostigmine salicylate		0.056	1.4'
Hexachloropropylene		0.035	30	Promecarb		0.0561	1.41
Indeno(1,2,3-c,d)pyrene		0.0055	3.4 65	Pronamide		0.093	1.5
lodomethane		5.6	170	Propham		0.0561	1.4'
Isobutyl alcohol		0.021	0.066	Propoxur		0.0561	1.4
Isosafrole		0.081	2.6	Prosulfocarb		0.0421	1.41
Kepone		0.0011	0.13	Pyrene	-	0.067	8.2
Methacrylonitrile		0.24	84	Pyridine		0.014	16 22
Methanol		5.6	0.75 mg/l ¹	Safrole		0.081	7.9
Methapyrilene		0.081	1.5	Silvex/2,4,5-TP 1,2,4,5-Tetrachlorobenzene		0.055	14
Methiocarb		0.056 ¹ 0.028 ¹	1.4 ¹ 0.14 ¹	TCDDs (All	·	0.000063	0.001
Methomyl		0.25	0.18	Tetrachlorodibenzo-p-dioxins) TCDFs (All		0.000063	0.001
Methoxychior		0.25	15	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane		0.057	6.0
3-Methylcholanthrene 4,4'-Methylene bis(2-			1			0.057	6.0
chloroaniline)		0.50	30	1,1,2,2-Tetrachloroethane		0.057	0.0

Form B1 Page 2 of 3

121872-01

POOR QUALITY ORIGINAL

CONSTITUENT	HOW MUST	WWS mg/ly	NWW (ms/ka)	GONSTITUENT	HOW MUST	ww (mg/l)	NWW (mg/kg)/
	CONSTITUENT		unless		TRIS GONSTITUENTA BEIMANAGED?		unless. Joded.
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol	- <u></u>	0.030	7.4	Antimony		1.9	2.1 mg/l TCLP
Thiodicarb	· · ·	0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
- Thiophanate-methyl	· · · · · · · · · · · · · · · · · · ·	0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP ⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium	•	0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Totai)		2.77	0.60 mg/l TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)	· ·	0.86	30 ¹
2,4,5-Trichlorophenol		0,18	7.4	Fluoride		35	NA ⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/[TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1;2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg TCLP
Triethylamine		0.0811	1.5 ¹	Nickel	A	3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.101	Nickel		3.98	11 mg/l TCLP ⁴
Vernolate		0.0421	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum of o-,m-, and p-xylene		0.32	30	Silver		0.43	0.30 mg/l TCLP
				Silver		0.43	0.14 mg/l TCLP ⁴
•		•		Sulfide		14	NA ²
				Thallium		1.4	0.078 mg TCLP ¹
				Thallium v		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
				Zinc		2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. 1

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.
 ³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon 4 adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

PGB and Additional Information Attachment, Page 2 of 2

Manifest Number: 019694703 JJK

Shipment ID Number: DSSI-19-105

Shipment Date: 9/25/2019

UHWM Section	RFD	Container / WASTE ID	Barcode	Description	PCB Date to Storage	Accumulation Storage Date	NET VOLUME (ft3)	GROSS WT (lb)	Gross Wt (Kg)	NET WT (lb)	Net Wt (Kg)
9b.1	121465	121465-13	PAD18C41132	Unused Lab Chemicals	N/A	09/27/18	0.67	27	12	15	7
9b.2	121465	121465-15	PAD18C41129	Unused Lab Chemicals	N/A	09/27/18	0.67	13	6	1	0.5
9b.3	121644	121644-01	PAD18C40704	Unused Lab Chemicals	N/A	09/27/18	1	116	53	86	39
9b.4	121645	121645-01	PAD18C40715	Unused Lab Chemicals	09/27/18	09/27/18	0.205	10	5	6	3
		Totals	4				2.5	166	75	108	49

Equal Employment Opportunity, all provisions of the Executive Order 11246, as amended by Executive Order 11375, and of the rules, regulations, and relevant orders of the Secretary of Labor are incorporated herein.

POOR QUALITY ORIGINAL

-121465-06/-07/-08/-09/-11/16 121644-01 CT 9-23-19

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	Manifest Doc. No. :	01969470335K
Profile No.:	19-09-063	State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗍

2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

() () (== et ())	A USERA RAZARDIOUS	4 SUBCATEGORY STER THE SUBLATEGORY DESCRIPTION. IF NOT ARPLICABLE SIMPLY CHEEK I	IONE -	TO ADM MUST THE RASTED
	WASTIE BUDIES).	DESCRIPTION	NONE	
1	D003	Reactive		A
2				
3				
4	4			>

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here I if no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
 B.4

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature To A. M. Sulta	m IT	Title	Waste Engineer	Date	9-23-19
			Form A1		

Page 1 of 2

121402-001-077-087-097-11700 12164-01 LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV) LT 9-23-19

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLVENTWAS	STE TREATMENT STANDARDS		
F001 through F005 spent solvent	Treatme	nt Standard	 F001 through F005 spent solvent constituents and their 	Treatment Stand	ard [®]
constituents and their associated USEPA hazardous waste code(s).		Nonwastewaters	associated USEPA hazardous waste code(s).	Wastewaters	Nonwastewaters
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	· 10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. A.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems. D.

Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

> Form A1 Page 2 of 2

121407-101-111-1181-11 LT 9-23-19	1402-00/-0//-08/-097-11716 記(644-0) て テー23ー1ア LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)					
	LAND DISPOSAL NOTIFIC		_			
Generator Name:	_(FRNP)	Manifest Doc. No. :	019694703JJK	<u>`</u>		
Profile No.:	19-09-063	State Manifest No.:	NA			
This form is a cont	tinuation from form A1 for a waste identifi	ed by more than five USEPA waste co	de/subcategory groups. This page by i	itself		
IS NOT an accept	able Land Disposal Notification and Certi rm A1, Page 1) to identify ALL USEPA ha	fication Form.	e shinment (as defined by 40 CER 261	1). Fo		
ooch waste numb	er identify the corresponding subcategor	v (write in the description from 40 CFR	268.40, or check NONE If the waste of	loes		
not have a subcat	egory.). Also identify in column 5 how the underlying hazardous constituent(s) if an	waste must be managed. Spent solve	ents are listed on Form A1, Page 2. F0	39		
	and the second	# 4.SUECATEGORY	5. HOW MUST THE WAS	TE		
	USIEPA ENTERTHE SUBCATEGORY DI	ESCRIPTION. IF NOT APPLICABLE, SIMPLY	CHECK NONE BEMANAGED 7 ENTE			
		AESCRIPTION -	NONE PAGE 1			
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	Let March			9-22-18
Title	Waste Engineer) C	Date	7-23-19

Form A2 Page 1 of 2

POOR QUALITY ORIGINAL

Page 3 of 7

121402-00/-0. CT 9-23-	-19 LAN		ATION AND CERTIFICATION (PHASE	IV)
Generator N	Name: (FRNP)	Manifest Doc. No. :	0190	69	4703 JJK
Profile No.:	10	7-09-063	State Manifest No.:		١	A
This form i	s a continuation fro	m form A1 for a waste identifi	ed by more than five USEPA waste cod			
<u>IS NOT</u> an	acceptable Land D	isposal Notification and Certi	fication Form.			
For each w	vaste number, ident	tify the corresponding subcate). Also identify in column 5 ho	zardous wastes that apply to this waste gory (write in the description from 40 C bw the waste must be managed. Spent b) if applicable, must be listed and attac	FR 268.4 solvents	0, oi	check NONE if the waste
	3. US EPA		4 SUBCATEGORY SCRIPTION. IF NOT APPLICABLE, SIMPLY		we	5. HOW MUST THE WASTE
REF	HAZARDOUS	HENNER THE SUBCRITESORY D		ulation and the second		BE MANAGEDP ENTER
	WASTE CODES)		DESCRIPTION	N N	oni=	PAGE 1
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature		ACHILLE	Jan		- 9 . 7 . 18
Title	Waste Engineer			Date _	7-25-19
			Form A2		

Page 2 of 2

الكرامات-سام-سلا-سلا-سلا-سلا- الله الكرال (12/144-0) تت ۲۰۹-۲:3-19 F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name:	(FRNP)	Manifest Doc. No. :	019694703JJK
Profile No.:	19-09-063	State Manifest No.:	NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	THI CO	S NST	UST ITUE	519000 C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WW (mg/l)	NWW (mg/kg) unless	CONSTITUENT	ALC: NOT THE DOCT	STITI	st Jent Ged?		WW (mg/l)	NWW (mg/kg) unless noted
	BE	MAI	NAG	=D?	0.050	noted	2 Oblass 1.2 butadiana	מ שם	IANA	GLU		0.057	0.281
Acenaphthylene				\rightarrow	0.059	3.4	2-Chloro-1,3-butadiene	1=				0.057	15
Acenapthene /	<u> </u>				0.059	3.4	Chlorodibromomethane					0.037	6.0
Acetone	1				0.28	160	Chloroethane					0.036	7.2
Acetonitrile					5.6	38 ¹	bis(2-Chloroethoxy)methane						6.0
Acetophenone					0.010	9.7	bis(2-Chloroethyl)ether					0.033	
2-Acetylaminofluorene					0.059	140	Chloroform	<u> </u>			_	0.046	6.0
Acrolein	Π				0.29	NA	bis(2-Chloroisopropyl)ether					0.055	7.2
Acylamide					19 ¹	231	p-Chloro-m-cresol					0.018	14
Acrylonitrile					0.24	84	2-Chloroethyl vinyl ether					0.062	NA ¹
Aldicarb sulfone					0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride					0.19	30
Aldrin	+				0.021	0.066	2-Chloronaphthalene					0.055	5.6
4-Aminobiphenyl					0.13	NA	2-Chlorophenol					0.044	5.7
	<u> </u>	 			0.81	14	3-Chloropropylene				-+	0.036	30
Aniline		+			0.059	3.4	Chrysene		1			0.059	3.4
Anthracene		+			0.36	NA	o-Cresol	<u> </u>	1			0.11	5.6
Aramite		+			0.00014	0.066	m-Cresol		1			0.77	5.6
alpha-(BHC)	<u> </u>	+			0.00014	0.066	p-Cresol		+			0.77	5.6
beta-(BHC)							m-Cumenyl methylcarbamate		+-			0.0561	1.4
delta-(BHC)		-+			0.023	0.066						0.36	0.75 mg/
gamma-(BHC)		-+			0.0017	0.066	Cyclohexanone		_			0.023	0.087
Barban					0.0561	1.41	o,p'-DDD		-+-				0.087
Bendiocarb					0.0561	1.4	p,p'-DDD					0.023	
Benomyl					0.0561	1.4 ¹	o,p'-DDE	ļ				0.031	0.087
Benzene					0.14	10	p,p'-DDE					0.031	0.087
Benz(a)anthracene					0.059	3.4	o,p'-DDT					0.0039	0.087
Benzal chloride			T		0.0551	6.0 ¹	p,p'-DDT					0.0039	0.087
Benzo(b)fluoranthene ³			1		0.11	6.8	Dibenz(a,h)anthracene					0.055	8.2
Benzo(k)fluoranthene ³			1		0.11	6.8	Dibenz(a,e)pyrene					0.061	NA
Benzo (g,h,i)perylene	+		1		0.0055	1.8	1,2-Dibromo-3-chloropropane					0.11	15
Benzo(a)pyrene			\uparrow		0.061	3.4	1,2-Dibromomethane/ Ethylene dibromide					0.028	15
Bromodichloromethane	+		-+-		0.35	15	Dibromomethane					0.11	15
Bromomethane/Methyl			\neg		0.11	15	m-Dichlorobenzene			1		0.036	6.0
Bromide	+				0.055	15	o-Dichlorobenzene	1		-		0.088	6.0
4-Bromophenyl phenyl ether	+				5.6	2.6	p-Dichlorobenzene	1		-+		0.090	6.0
n-Butyl alcohol					0.0421	1.41	Dichlorodifluoromethane		·	-+		0.23	7.2
Butylate				\			1.1-Dichloroethane	+		-+		0.059	6.0
Butyl benzyl phthalate				<u> </u>	0.017	28		+		-+			
2-sec-Butyl-4,6-				1	0.000		1,2-Dichloroethane			1		0.21	6.0
dinitrophenol/Dinoseb					0.066	2.5	d d Dieblereetbulene	+		+		0.025	6.0
Carbaryl					0.0061	0.141	1,1-Dichloroethylene					0.025	30
Carbenzadim					0.0561	1.41	trans-1,2-Dichloroethylene	+				0.044	
Carbofuran					0.0061	0.14	2,4-Dichlorophenol				├	0.044	14
Carbofuran phenol					0.0561	1.4 ¹	2.6-Dichlorophenol				╄──┥	0.044	14
Carbon disulfide					3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D					0.72	10
Carbon tetrachloride				1	0.057	6.0	1,2-Dichloropropane					0.85	18
Carbosulfan					0.0281	1.4 ¹	cis-1,3-Dichloropropylene					0.036	18
Chlordane (alpha and gamma isomers)			,		0.0033	0.26	trans-1,3-Dichloropropylene					0.036	18
p-Chloroaniline	+				0.46	16	Dieldrin				1	0.017	0.13
p-Chloroanliine Chlorobenzene	+				4 0.057	6.0	Diethyl phthalate	-				0.20	28

Form B1 Page 1 of 3

~1/103~U0/=U7/~U8/~U\$/=11/10	121644	Marken Collector	angen (seeten een een seeten in de						
CONSTITUENT	HOW M	UST	ww	NWW	CONSTITUENT	HOW M	UST	WW	NWW
	THIS		(mg/l)	(mg/kg)		THIS CONSTI	THEMT	(mg/l)	(mg/kg) unless
	CONST			unless noted		BEMAN			noted
Chlorobenzilate	BEMAN	IAGED	r → 0.10	NA	p-Dimethylaminoazobenzene			0.131	NA
2,4-Dimethyl phenol	<u></u>		→ 0.10	14	Methylene chloride	1		0.089	30
Dimethyl phthalate			0.047	28	Methyl ethyl ketone			0.28	36
Di-n-butyl phthalate			0.057	28	Methyl isobutyl ketone	1	· · · · · · · · · · · · · · · · · · ·	0.14	33
1.4-Dinitrobenzene	H		0.32	2.3	Methyl methacrylate		· · · · · · · · · · · · · · · · · · ·	0.14	160
4.6-Dinitro-o-cresol	1		0.28	160	Methyl methansulfonate			0.018	NA
2,4-Dinitrophenol			0.12	160	Methyl parathion			0.014	4.6
2,4-Dinitrotoluene	1		0.32	140	Metolcarb			0.0561	1.4 ¹
2.6-Dinitrotoluene			0.55	28	Mexacarbate			0.056 ¹	1.4 ¹
Di-n-octyl phthalate			0.017	28	Molinate			0.042 ¹	1.4 ¹
Di-n-propylnitrosamine			0.40	14	Naphthalene			0.059	5.6
1,4-Dioxane			12.0	170	2-Naphthylamine			0.52	NA
Diphenylamine ³			0.92	13 ¹	o-Nitroaniline			0.27 ¹	14 ¹
Diphenylnitrosamine ³			0.92	13 ¹	p-Nitroaniline			0.028	28
1,2-Diphenylhydrazine			0.087	NA	Nitrobenzene			0.068	14
Disulfoton			0.017	6.2	5-Nitro-o-toluidine			0.32	28
Dithiocarbamates (total)			0.028	28 ¹	o-Nitrophenol	↓		0.0281	13 ¹
Endosulfan I			0.023	0.066	p-Nitrophenol	ļ		0.12	29
Endosulfan II			0.029	0.13	N-Nitrosodiethylamine	↓		0.40	28
Endosulfan sulfate			0.029	0.13	N-Nitrosodimethylamine	↓↓		0.40	2.31
Endrin			0.0028	0.13	N-Nitroso-di-n-butylamine	<u>↓</u>		0.40	17
Endrin aldehyde			0.025	0.13	N-Nitrosomethylethylamine			0.40	2.3
EPTC			0.042 ¹	1.41	N-Nitrosomorpholine			0.40	2.3 35
Ethyl acetate			0.34	33	N-Nitrosopiperidine			0.013	35
Ethyl benzene			0.057	10	N-Nitrosopyrrolidine			0.013	0.281
Ethyl cyanide/Propanenitrile			0.24	360	Oxamyl Parathion			0.038	4.6
Ethyl ether			0.12	160	Total PCBs (sum of all PCB				
Bis(2-Ethylhexyl)phthalate			0.28	28	isomers or all Aroclors)			0.10	10
Ethyl methacrylate			0.14	160	Pebulate		\	0.0421	1.41
Ethylene oxide			0.12	NA	Pentachlorobenzene		ļ	0.055 ¹	10 ¹
Famphur			0.017	15	PeCDDs (All Pentachlorodibenzo-p-dioxins)			0.000035	0.001
Fluoranthene			0.068	3.4	PeCDFs(All Pentachlorodibenzofurans)			0.000035	0.001
Fluorene		-	0.059	3.4	Pentachloroethane			0.055	6.0
Formetanate hydrochloride		1	0.056 ¹	1.4 ¹	Pentachloronitrobenzene			0.055	4.8
Heptachlor	1		0.0012	0.066	Pentachlorophenol			0.089	7.4
Heptachlor epoxide			0.016	0.066	Phenacetin			0.081	16
Hexachlorobenzene			0.055	10	Phenanthrene			0.059	5.6
Hexachlorobutadiene			0.055	5.6	Phenol			0.039	6.2
Hexachlorocyclopentadiene			0.057	2.4	Phorate			0.021	4.6
HxCDDs (All Hexachrorodibenzo-p-dioxins)			0.00006	63 0.001	Phthalic acid			0.055 ¹	28 ¹
HxCDFs (All Hexachlorodibenzofurans)			0.0000	53 0.001	Phthalic anhydride			0.055	28 ¹
Hexachloroethane	1		0.055	30	Physostigmine			0.056 ¹	1.4 ¹
Hexachloropropylene	1		0.035	30	Physostigmine salicylate			0.0561	1.4 ¹
Indeno(1,2,3-c,d)pyrene		1	0.0055		Promecarb			0.0561	1.4 ¹
Iodomethane			0.19	65	Pronamide			0.093	1.5
Isobutyl alcohol	1		5.6	170	Propham			0.0561	1.4 ¹
Isodrin			0.021	0.066	Propoxur			0.0561	1.4
Isosafrole			0.081	2.6	Prosulfocarb	1		0.0421	1.41
Kepone			0.0011	0.13	Pyrene			0.067	8.2
Methacrylonitrile			0.24	84	Pyridine			0.014	16
Methanol			5.6	0.75 mg/l ¹	Safrole			0.081	22
Methapyrilene			0.081	1.5	Silvex/2,4,5-TP	1		0.72	7.9
Methiocarb			0.056 ¹	1.4 ¹	1,2,4,5-Tetrachlorobenzene			0.055	14
Methomyi			0.028 ¹	0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)			0.000063	0.001
Methoxychlor			0.25	0.18	TCDFs (All Tetrachlorodibenzo-furans)			0.000063	0.001
3-Methylcholanthrene			0.0055	15	1,1,1,2-Tetrachloroethane			0.057	6.0
	1			30	1,1,2,2-Tetrachloroethane			0.057	6.0
4,4'-Methylene bis(2-	4		0.50	1 20					101

Form B1 Page 2 of 3

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/kg) unless noted	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/kg) unless noted
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol	1	0.030	7.4	Antimony	$ \longrightarrow $	1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene		0.0095	2.6	Barium		1.2	21 mg/l TCLP⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/l TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.60 mg/l TCLP⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/l⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)		0.15	0.025 mg/ TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate		0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP⁴
Vernolate		0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP⁵
Xylenes – mixed isomers (sum of o-,m-, and p-xylene	¥	0.32	30	Silver		0.43	0.30 mg/l TCLP
			>	[≯] Silver		0.43	0.14 mg/l TCLP⁴
				Sulfide		14	NA ²
				Thallium		1.4	0.078 mg/ TCLP ¹
				Thallium		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
<				Zinc	╡	2.61	4.3 mg/l TCLP ²

¹ These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste.
 This becomes effective in authorized states upon adoption by the state.

Form B1 Page 3 of 3

POOR QUALITY ORIGINAL

121465-13/ -14 /-15	
479-24-1	29

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	Manifest Doc. No. :	017694703JJK
Profile No.:	19-09-052, 19-09-054	State Manifest No.:	AЦ
FIOME NO			· · · · · · · · · · · · · · · · · · ·

- 1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌
- Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2 corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	- a USEPA	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION, TENOT APPLICABLE SIMPLY CHECK I	IONE	5. HOW MUST THE WASTE BEMANAGED?
REF	HAZARDOUS WASTECODES)	DESCRIPTION	NONE	ENDER DEIMER EROM BELOW
1	D001	Ignitable		A
2	D003	Reactive	\square	A
3				\rightarrow
4				\rightarrow

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🗌 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT Α.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

- For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1
- "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS B.3

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS **B.4**

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Date Title Waste Engineer Signature

Form A1 Page 1 of 2 1402-13/-14/-13 -14/-13

121465-13

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

121465-15 If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLVENTWAS	TE TREATMENT STANDARDS		
F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(5).	Treatme	nt Standard ¹	F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Stand: Wastewaters	ard ^a Nonwastewaters
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachloroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems. Α.

Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems. Β.

High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon. C.

D002:

- Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class | SDWA systems. D.
- Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems. E.

Form A1 Page 2 of 2

1 41402-13/-14/-13 CT	2-24-19		
21465-13	LAND DISPOSAL NOTIFICATION A	ND CERTIFICATION	I (PHASE IV)
IZI465-15 Generator Name:	(FRNP)	Manifest Doc. No. :	019694703 JJK
Profile No.:	19-09-052, 19-09-054	State Manifest No.:	NA
This form is a contin	uation from form A1 for a waste identified by more to ble Land Disposal Notification and Certification Form	than five USEPA waste co	ode/subcategory groups. This page by itself

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

	s) and anconying	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK N	0.110	5. HOW MUST THE WASTE
REF#	3. US EPA HAZARDOUS			BE MANAGED? ENTER
	WASTE CODE(S)	DESCRIPTION	IONE	PAGE 1
5				\rightarrow
6				
7				
8				
9				
10				
11			\Box	1
12				
13				
14				
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18				
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20			Ц.	
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23			Ц	
24			<u>Ц</u>	
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27				
28			<u> </u>	
29			<u> </u>	
30			┝┥	
31			<u> </u>	
32			<u> </u>	
33			╞╡	
34	/		Ц.	<u> </u>
35				/

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	- Shill JN	Q-13	-19
Title	Waste Engineer	Date 7 2 2	,- (7

Form A2 Page 1 of 2

POOR QUALITY ORIGINAL

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403-13/-147	-12 -24-1	17				
21463-13/-14/ 21465-13 21465-15		ID DISPOSAL NOTIFICATI	ON AND CERTIFICATION	(PHASE	IV)	
21465-15			Manifest Doc. No. :	0196	,94	17(13.TtK.
Generator Na	ame: <u>(FRNP</u>)					
Profile No.:	_ [9-	09-052, 19-09-6	State Manifest No.:			NIN This page by iteal
This form is	a continuation troi	m form A1 for a waste identified by isposal Notification and Certification	mole than live oocl A waste coc	de/subcate	gory	groups. This page by itsel
0 11		1) to identify ALL LISEPA bazardo	us wastes that apply to this waste	e shipment	(as c	lefined by 40 CFR 261).
	este number ident	ify the corresponding subcategory). Also identify in column 5 how the	(write in the description from 40 U	7FK 200.4U	J. OF C	TIEUK NUNE II IIE WASIE
f039 consti	ituent(s) and under	rlying hazardous constituent(s) if a	oplicable, must be listed and attac	hed.		
	3. USEPA	and the second	SUBCALEGORY		NIC.	5. HOW MUSTTHE WASTE
REF#	HAZARDOUS	ENTER THE SUBCATEGORY DESCRI	PTION. IF NOT APPLICABLE SIMPLY		-	BE MANAGED? ENTER
	WASTE CODE(S)	DES	CRIPTION	N	DNE	PAGE 1
36						\longrightarrow
37						
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45					_	· · · · · · · · · · · · · · · · · · ·
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62					Ц.	
63					<u>Ц</u>	<u> </u>
64					<u>⊢</u>	
65	<					

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

JUL ant X N Δ Signature 9-23-19 Date Title ____ Waste Engineer

Form A2 Page 2 of 2

1/1402-12/-14/-13- (7 9-24-18		
121465-13	F039/UNI	DERLYING HAZARDOUS CONSTITUENT (UTS)	(Phase IV)
121465-15 Generator Name:	(FRNP)	Manifest Doc. No. :	019694703 JUL
Generator Name.			

Profile No.:

0.: 19-09-050

19-09-05#State Manifest No.:

NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

CONSTITUENT	THI COI	S NST	iust Ituei		WW (mg/l)	NWW (mg/kg) unless	CONSTITUENT	22.627722.72	i ISTIT	UENT	- (I	VW mg/l)	NWW (mg/kg) unless noted
	BE	MA	NAGE	:D?		noted		DEN	nana	GED		.057	0.281
Acenaphthylene	k			\rightarrow	0.059	3.4	2-Chloro-1,3-butadiene	+=				.057	15
Acenapthene	<u> </u> `				0.059	3.4	Chlorodibromomethane	+).27	6.0
Acetone	1				0.28	160	Chloroethane).036	7.2
Acetonitrile					5.6	381	bis(2-Chloroethoxy)methane					0.033	6.0
Acetophenone	1				0.010	9.7	bis(2-Chloroethyl)ether	-+				0.035	6.0
2-Acetylaminofluorene					0.059	140	Chloroform					0.040	7.2
Acrolein	\square				0.29	NA	bis(2-Chloroisopropyl)ether).035).018	14
Acylamide					19 ¹	23 ¹	p-Chloro-m-cresol	-+-				0.018 0.062 ¹	NA ¹
Acrylonitrile					0.24	84	2-Chloroethyl vinyl ether					1.062	INA
Aldicarb sulfone					0.056 ¹	0.28 ¹	Chloromethane/Methyl chloride).19	30
Aldrin					0.021	0.066	2-Chloronaphthalene					0.055	5.6
4-Aminobiphenyl	1-1				0.13	NA	2-Chlorophenol).044	5.7
Aniline	1	1			0.81	14	3-Chloropropylene					0.036	30
Anthracene	1	\uparrow			0.059	3.4	Chrysene					0.059	3.4
Aramite	1	\uparrow			0.36	NA	o-Cresol					0.11	5.6
alpha-(BHC)	+	+			0.00014	0.066	m-Cresol					0.77	5.6
beta-(BHC)	+	+			0.00014	0.066	p-Cresol					0.77	5.6
delta-(BHC)	+	+			0.023	0.066	m-Cumenyl methylcarbamate					0.056 ¹	1.4 ¹
gamma-(BHC)		+			0.0017	0.066	Cyclohexanone		\top		(0.36	0.75 mg/
	+	-+			0.0561	1.41	o,p'-DDD		1		(0.023	0.087
Barban		-+			0.0561	1.4	p,p'-DDD				(0.023	0.087
Bendiocarb					0.0561	1.41	o,p'-DDE					0.031	0.087 ·
Benomyl			├		0.14	10	p,p'-DDE					0.031	0.087
Benzene	+		┨────		0.059	3.4	o.p'-DDT					0.0039	0.087
Benz(a)anthracene			+		0.055	6.0 ¹	p,p'-DDT					0.0039	0.087
Benzal chloride					0.055	6.8	Dibenz(a,h)anthracene					0.055	8.2
Benzo(b)fluoranthene								<u>+</u>				0.061	NA
Benzo(k)fluoranthene ³					0.11	6.8	Dibenz(a,e)pyrene 1,2-Dibromo-3-chloropropane	<u></u>				0.11	15
Benzo (g,h,i)perylene					0.0055	1.8	1.2-Dibromomethane/	┼───		+			
Benzo(a)pyrene					0.061	3.4	Ethylene dibromide			1		0.028	15
Bromodichloromethane					0.35	15	Dibromomethane	<u> </u>				0.11	15
Bromomethane/Methyl Bromide					0.11	15	m-Dichlorobenzene					0.036	6.0
4-Bromophenyl phenyl ether	1				0.055	15	o-Dichlorobenzene					0.088	6.0
n-Butyl alcohol	+				5.6	2.6	p-Dichlorobenzene					0.090	6.0
Butylate					0.0421	1.41	Dichlorodifluoromethane					0.23	7.2
Butyl benzyl phthalate	+				0.017	28	1,1-Dichloroethane					0.059	6.0
2-sec-Butyl-4,6-	-			1		2.5	1,2-Dichloroethane	1				0.21	6.0
dinitrophenol/Dinoseb	+			+	0.066		1,1-Dichloroethylene	+				0.025	6.0
Carbaryl				1	0.0061	0.14		+				0.025	30
Carbenzadim					0.0561	1.41	trans-1,2-Dichloroethylene	+				0.034	14
Carbofuran					0.006	0.14'		+				0.044	14
Carbofuran phenol					0.056 ¹	1.41	2.6-Dichlorophenol	+			1-+		
Carbon disulfide					3.8	4.8 mg/l TCLP ¹	2,4-Dichlorophenoxyacetic acid/2,4-D	<u> </u>			-+-+	0.72	10
Carbon tetrachloride				T	0.057	6.0	1,2-Dichloropropane	<u> </u>				0.85	18
Carbosulfan				T	0.0281	1.4 ¹	cis-1,3-Dichloropropylene	<u> </u>				0.036	18
Chlordane (alpha and gamma isomers)				1	0.0033	0.26	trans-1,3-Dichloropropylene					0.036	18
p-Chloroaniline					0.46	16	Dieldrin	T				0.017	0.13
Chlorobenzene	\leftarrow				0.057	6.0	Diethyl phthalate	4				0.20	28

Form B1 Page 1 of 3

1403-17-14-13-67 9-24-19 121465-13, 121465-15

1483-1:51-1:41 13 ビス そーみイー CONSTITUENT	HOW I THIS CONS' BE MA	тіти	ENT	WW (mg/l)	NWW (mg/kg) unless noted	CONSTITUENT	State of the second second	MUST TITUEN NAGEE	1.10.200.000	WW (mg/l)	NWW (mg/kg) unless noted
Chlorobenzilate			\rightarrow	0.10	NA	p-Dimethylaminoazobenzene	Ţ		\geq	0.13 ¹	NA
2,4-Dimethyl phenol	· · ·			0.036	14	Methylene chloride	1			0.089	30
Dimethyl phthalate				0.047	28	Methyl ethyl ketone	1			0.28	36
Di-n-butyl phthalate				0.057	28	Methyl isobutyl ketone	1			0.14	33
1,4-Dinitrobenzene				0.32	2.3	Methyl methacrylate	1			0.14	160 NA
4,6-Dinitro-o-cresol	1			0.28	160	Methyl methansulfonate				0.018	4.6
2,4-Dinitrophenol	<u> </u>			0.12	160	Methyl parathion				0.0561	1.4
2,4-Dinitrotoluene				0.32	140	Metolcarb				0.0561	1.4
2,6-Dinitrotoluene				0.55	28 28	Mexacarbate				0.0421	1.41
Di-n-octyl phthalate				0.017	14	Naphthalene				0.059	5.6
Di-n-propylnitrosamine				12.0	170	2-Naphthylamine				0.52	NA
1,4-Dioxane Diphenylamine ³				0.92	13 ¹	o-Nitroaniline				0.271	14 ¹
Diphenylnitrosamine ³				0.92	13 ¹	p-Nitroaniline				0.028	28
1,2-Diphenylhydrazine				0.087	NA	Nitrobenzene				0.068	14
Disulfoton				0.017	6.2	5-Nitro-o-toluidine				0.32	28
Dithiocarbamates (total)				0.028	281	o-Nitrophenol				0.028 ¹	131
Endosulfan I				0.023	0.066	p-Nitrophenol				0.12	29
Endosulfan II				0.029	0.13	N-Nitrosodiethylamine				0.40	28
Endosulfan sulfate				0.029	0.13	N-Nitrosodimethylamine				0.40	2.3 ¹
Endrin				0.0028	0.13	N-Nitroso-di-n-butylamine				0.40	17
Endrin aldehyde	1			0.025	0.13	N-Nitrosomethylethylamine				0.40	2.3
EPTC				0.042 ¹	1.4 ¹	N-Nitrosomorpholine		\		0.40	2.3
Ethyl acetate				0.34	33	N-Nitrosopiperidine		\		0.013	35
Ethyl benzene				0.057	10	N-Nitrosopyrrolidine	ļ	<u> </u>		0.013	35
Ethyl cyanide/Propanenitrile				0.24	360	Oxamyl	ļ			0.0561	0.281
Ethyl ether		1		0.12	160	Parathion				0.014	4.6
Bis(2-Ethylhexyl)phthalate				0.28	28	Total PCBs (sum of all PCB isomers or all Aroclors)				0.10	10
Ethyl methacrylate				0.14	160	Pebulate				0.0421	1.4 ¹
Ethylene oxide				0.12	NA	Pentachlorobenzene PeCDDs (All				0.0551	0.001
Famphur				0.017	15	Pentachlorodibenzo-p-dioxins)	<u> </u>			0.000035	
Fluoranthene				0.068	3.4	PeCDFs(All Pentachlorodibenzofurans)				0.000035	0.001
Fluorene				0.059	3.4	Pentachloroethane				0.055	6.0
Formetanate hydrochloride				0.056 ¹	1.4 ¹	Pentachloronitrobenzene				0.055	4.8
Heptachlor				0.0012	0.066	Pentachlorophenol	ļ			0.089	7.4
Heptachlor epoxide				0.016	0.066	Phenacetin				0.081	16
Hexachlorobenzene				0.055	10	Phenanthrene				0.059	5.6 6.2
Hexachlorobutadiene			\	0.055	5.6	Phenol				0.039	4.6
Hexachlorocyclopentadiene	_		<u> </u>	0.057	2.4	Phorate					
HxCDDs (All Hexachrorodibenzo-p-dioxins)				0.000063	0.001	Phthalic acid				0.055 ¹	28 ¹
HxCDFs (All Hexachlorodibenzofurans)				0.000063	0.001	Phthalic anhydride				0.055	28 ¹
Hexachloroethane	1		1	0.055	30	Physostigmine				0.0561	1.41
Hexachloropropylene	1			0.035	30	Physostigmine salicylate				0.0561	1.41
Indeno(1,2,3-c,d)pyrene				0.0055	3.4	Promecarb			 	0.0561	1.41
Iodomethane				0.19	65	Pronamide				0.093	1.5
Isobutyl alcohol				5.6	170	Propham			+	0.0561	1.4 ¹ 1.4 ¹
Isodrin				0.021	0.066	Propoxur			+	0.056 ¹ 0.042 ¹	1.4 ¹
Isosafrole				0.081	2.6	Prosulfocarb	+			0.042	8.2
Kepone				0.0011	0.13	Pyrene				0.067	16
Methacrylonitrile				0.24	84	Pyridine	+		+	0.014	22
Methanol				5.6	0.75 mg/l ¹	Safrole			+	0.001	7.9
Methapyrilene				0.081	1.5	Silvex/2,4,5-TP 1,2,4,5-Tetrachlorobenzene	+		+	0.055	14
Methiocarb				0.056 ¹ 0.028 ¹	0.14	TCDDs (All	+		\neg	0.000063	0.001
Methomyl						Tetrachlorodibenzo-p-dioxins) TCDFs (All				0.000063	0.001
Methoxychlor				0.25	0.18	Tetrachlorodibenzo-furans) 1,1,1,2-Tetrachloroethane	+			0.000083	6.0
3-Methylcholanthrene	+	<u></u>		14		1,1,2,2-Tetrachloroethane	+				
4,4'-Methylene bis(2-	₭			0.50	30	i, i, i, i, i, i on domor occitano	1			0.057	6.0

121465-13

121465-15

CONSTITUENT	HOW ML THIS CONSTIT BE MAN	TUENT	WW (mg/l)	NWW (mg/kg) unless noted	CONSTITUENT	HOW MUST THIS CONSTITUEN BE MANAGEI	iT (i	/W ng/l)	NWW (mg/kg) unless noted
Tetrachloroethylene		\rightarrow	0.056	6.0	INORGANIC CONSTITUENTS				
2,3,4,6-Tetrachlorophenol			0.030	7.4	Antimony		\rightarrow 1	.9	2.1 mg/l TCLP
Thiodicarb			0.0191	1.4 ¹	Antimony		1	.9	1.15 mg/l TCLP ⁴
Thiophanate-methyl			0.0561	1.4 ¹	Arsenic		1	.4	5.0 mg/l TCLP
Toluene			0.080	10	Barium		1	.2	7.6 mg/l TCLP
Toxaphene			0.0095	2.6	Barium		1	.2	21 mg/l TCLP⁴
Triallate			0.042 ¹	1.4 ¹	Beryllium		0	.82	0.014 mg/ TCLP
Tribromomethane/Bromoform			0.63	15	Beryllium		0	.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		1	0.035	7.4	Cadmium		0	.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		1	0.055	19	Cadmium		0	.69	0.11 mg/l TCLP⁴
1,1,1-Trichloroethane		1	0.054	6.0	Chromium (Total)		2	2.77	0.86mg/l TCLP
1,1,2-Trichloroethane			0.054	6.0	Chromium (Total)		2	2.77	0.60 mg/l TCLP⁴
Trichloroethylene			0.054	6.0	Cyanides (Total)		1	.2	590
Trichloromonofluoromethane			0.020	30	Cyanides (Amenable)		c).86	30 ¹
2,4,5-Trichlorophenol			0.18	7.4	Fluoride		3	35	NA⁴
2,4,6-Trichlorophenol			0.035	7.4	Lead		c).69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T			0.72	7.9	Lead		c).69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane			0.85	30	Mercury (Nonwastewater from Retort)		۲	NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane	\square	E - 20 - 5 (17)	0.057	30	Mercury (All others)		C).15	0.025 mg TCLP
Triethylamine	1		0.081 ¹	1.5 ¹	Nickel		3	3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate	17		0.11	0.10 ¹	Nickel		3	3.98	11 mg/l TCLP ⁴
Vernolate	17		0.042 ¹	6.0 ¹	Selenium		C).82	0.16 mg/l TCLP
Vinyl chloride	1		0.27	6.0	Selenium		0	0.82	5.7 mg/l TCLP ⁵
Xylenes – mixed isomers (sum of o-,m-, and p-xylene	¥		0.32	30	Silver		0	0.43	0.30 mg/l TCLP
				>	Silver			0.43	0.14 mg/l TCLP ⁴
					Sulfide		·	14	NA ²
	$\overline{\Box}$				Thallium			1.4	0.078 mg TCLP ¹
					Thallium		1.	1.4	0.20 mg/l TCLP ⁴
	1				Vanadium		1	4.3 ²	1.6 mg/l TCLP ²
<i> </i>	+			\vdash	Zinc			2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes. Not an underlying hazardous constituent requiring treatment in a D001-D043 waste. These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state.

> Form B1 Page 3 of 3

LAND DISPOSAL NOTIFICATION AND CERTIFICATION

Generator Name:	Four Rivers Nuclear Partnership (FRNP)	Manifest Doc. No. :	019694703 JJK
Profile No.:	19-09-064	State Manifest No.:	NA

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Non-wastewater 🛛 Wastewater 🗌

Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the 2. corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent standards are listed on the following page. If F039, multi-source leachate applies those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

	a. US EPA	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION OF NOT APPLICABLE SIMPLY CHEEK N	5. HOW MUST THE WASTE BE MANAGED?	
R=F#	HAZARDOUS WASTE CODE(S)	DESCRIPTION	NONE	ENTER DECIER FROM BELOW
. 1	D001	Ignitable	\square	A
2	U154	Methanol	\square	A
3				\rightarrow
4				\rightarrow

To identify F039 or D001-D043 underlying hazardous constituent (s), use the "F039/Underlying Hazardous Constituent Form" provided (Form B1) and check here 🖂 If no UHCs are present in the waste upon its initial generation check here:

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (Form A2) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D, or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

RESTRICTED WASTE REQUIRES TREATMENT A.

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.

- For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."
- RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS B.1

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards in 40 CFR Part 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS **B.3** "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS

B.4 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

RESTRICTED WASTE SUBJECT TO A VARIANCE C.

This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above. For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT D.

"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS E.

This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature R. Ch. U. J. War	Title	Waste Engineer	Date	9-23-19
1		Form A1		

Page 1 of 2

121645201

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

		SOLVENTWA	STE TREATMENT STANDARDS		
F004 through F005 spent solvent	Treatme	ent Standard*	F001 through F005 spent solvent constituents and their	Treatment Stand	and
constituents and their associated USEPA hazardous waste code(s).	Wastewaters	Nonwastewaters	associated USEPA hazardous waste code(s).	Wastewaters	Nonwastewaters
Acetone (F003)	0.28	160	Methanol (F003)	5.6	0.75 (TCLP) ³
Benzene (F005)	0.14	10	Methylene chloride (F001, F002)	0.089	30
n-Butanol (n-butyl alcohol) (F003)	5.6	2.6	Methyl ethyl ketone (F005)	0.28	36
Carbon disulfide (F005)	3.8	4.8 (TCLP) ³	Methyl isobutyl ketone (F003)	0.14	33
Carbon tetrachloride (F001)	0.057	6.0	Nitrobenzene (F004)	0.068	14
Chlorobenzene (F002)	0.057	6.0	2-Nitropropane (F005)	INCIN or {(WETOX or C HOXD) followed by CARBN}	INCIN
o-Cresol (F004)	0.11	5.6	Pyridine (F005)	0.014	16
Cresol (m- and p- isomers) (F004)	0.77	5.6	Tetrachioroethylene (F001, F002)	0.056	6.0
Cyclohexanone (F003)	0.36	0.75 (TCLP) ³	Toluene (F005)	0.080	10
o-Dichlorobenzene (F002)	0.088	6.0	1,1,1-Trichloroethane (F001, F002)	0.054	6.0
2-Ethoxyethanol (F005) also called ethylene glycol, monoethyl ether	INCIN or BIODG	INCIN	1,1,2-Trichloroethane (F002)	0.054	6.0
Ethyl acetate (F003)	0.34	33	Trichloroethylene (F001, F002)	0.054	6.0
Ethyl benzene (F003)	0.057	10	Trichloromonofluoromethane (F002)	0.020	30
Ethyl ether (F003)	0.12	160	1,1,2-Trichloro-1,2,2- trifluoroethane (F002)	0.057	30
Isobutanol (Isobutyl Alcohol) (F005)	5.6	170	Xylenes (sum of o-, m-, and p- isomers) (F003)	0.32	30 _

¹ All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

² For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of the constituents or less than 10x the standard listed.

³ These solvents require a TCLP standard with units of mg/l.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems.

B. Ignitable characteristic wastes, except for the 40 CFR 261.21(a) (1) High TOC subcategory, that are managed in CWA/CWA-equivalent or Class I SDWA systems.

C. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a) (1) - Greater than or equal to 10% total organic carbon.

D002:

- D. Corrosive characteristic wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
- E. Corrosive characteristic wastes that are managed in CWA, CWA-equivalent, or Class I SWDA systems.

Form A1 Page 2 of 2

121645-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator Name:	(FRNP)	Manifest Doc. No. :	01969470	322K

19-09-064

Profile No.:

lo.:

State Manifest No.:

NA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself <u>IS NOT</u> an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

	3. USEPA	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK 1	noi t	E	5. HOW MUST THE WASTE BE MANAGED? ENTER
REF#	HAZARDOUS		NO		LETTER FROM FORM AL
	WASTE CODE(S)	DESCRIPTION	140		PAGE1
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	Lech.	L.S.L	an	 		0
Title	Waste Engineer				Date	9-23-17

Form A2 Page 1 of 2

Page 3 of 7

121645-01

LAND DISPOSAL NOTIFICATION AND CERTIFICATION (PHASE IV)

Generator	Name:	(FRNP)
Generator	indiffe.	

Manifest Doc. No. :

0196947035516

Profile No.:

19-09-064

State Manifest No.:

NA

This form is a continuation from form A1 for a waste identified by more than five USEPA waste code/subcategory groups. This page by itself IS NOT an acceptable Land Disposal Notification and Certification Form.

Continue (from form A1, Page 1) to identify ALL USEPA hazardous wastes that apply to this waste shipment (as defined by 40 CFR 261). For each waste number, identify the corresponding subcategory (write in the description from 40 CFR 268.40, or check NONE if the waste does not have a subcategory.). Also identify in column 5 how the waste must be managed. Spent solvents are listed on Form A1, Page 2. F039 constituent(s) and underlying hazardous constituent(s) if applicable, must be listed and attached.

	3. US EPA	4 SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK	NO	NE	5. HOW MUST THE WASTE BE MANAGED? ENTER
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I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature	RChildel	an		0 9
Title	Waste Engineer		Date	9-23-17

Form A2 Page 2 of 2

12464501

F039/UNDERLYING HAZARDOUS CONSTITUENT (UTS) (Phase IV)

Generator Name: _(FRNP)

Manifest Doc. No. :

019694703JJK

Profile No.:

19-09-064

State Manifest No.:

NA

If D001-D043 requires treatment to the 40 CRF 268.48 standards, then each underlying hazardous constituent (UHC) present in the waste at the point of generation and at a level above the Universal Treatment Standard (UTS) constituent specific standard must be listed. Write the letter (A1, B1, B2, B3, or C that corresponds to the letter on the land disposal form A1) beside each constituent present to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to 40 CFR 268.49 standards, then each UHC in the waste at the point of generation and at a level above 10 times the UTS must be listed. Write the appropriate letter which corresponds to the letter on the LDR form.

Accenaphitylene 0.99 3.4 2-Chioro-1,3-butadiene 0.097 0.28 Acenaphtene 0.659 3.4 Chioroditromomethane 0.077 15 Acetone 0.659 3.4 Chioroditromomethane 0.033 6.0 Acetonence 0.606 9.7 bits(2-Chioroethy)tether 0.033 6.0 Acetonence 0.059 14.0 bits(2-Chioroethy)tether 0.046 6.0 Accolen 0.28 NA bits(2-Chioroethy)tether 0.056 7.2 Acylanitie 0.24 42 2-Chioroethy tether 0.056 14 Acylanitie 0.24 42 2-Chioroethy tether 0.052 NA Aldrin 0.021 0.066 2-Chioroethy tether 0.055 5.6 Anthracene 0.056 ¹ 0.28 Chioroethane 0.059 3.4 Anthracene 0.059 3.4 Chiorosthane/Methyl 0.13 5.6 Anthracene 0.056 ¹ 1.4 ¹ 3-Chioropropiene 0.058	CONSTITUENT	TH CC	IS INS	A	UENT	WW (mg/l)		NWW (mg/kg) unless	CONSTITUENT	TI C	*********	TITL	JENT	WW (mg/l)	NWW (mg/kg) unless
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Form B1 Page 1 of 3

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Endrin aldehyde0.02Endrin aldehyde0.04Ethyl acetate0.34Ethyl acetate0.34Ethyl benzene0.05Ethyl cyanide/Propanenitrile0.24Ethyl ether0.12Bis(2-Ethylhexyl)phthalate0.28Ethyl methacrylate0.14Ethylene oxide0.12Famphur0.07Fluoranthene0.06Fluorene0.06Formetanate hydrochloride0.06Heptachlor0.06Heptachlor epoxide0.07Hexachlorobenzene0.06Hexachlorobutadiene0.06Hexachlorobutadiene0.06Hexachlorocyclopentadiene0.06Hexachlorocyclopentadiene0.06Hexachloropopylene0.07Indeno(1,2,3-c,d)pyrene0.07Iodomethane0.07Isobutyl alcohol5.6Isobutyl alcohol5.6Methanol5.6Methanol5.6Methanol5.6Methanol5.6Methanol5.6	N NWW g/l) (mg/kg) unless	CONSTITUENT	THIS (CONSTITUENT		NWW (mg/kg) unless
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Din-butyl phthalate 0.05 Din-butyl phthalate 0.32 1,4-Dinitrobenzene 0.32 1,4-Dinitrobenzene 0.32 2,4-Dinitrotoluene 0.32 2,4-Dinitrotoluene 0.32 2,4-Dinitrotoluene 0.32 2,4-Dinitrotoluene 0.32 2,4-Dinitrotoluene 0.42 0:n-propylnitrosamine 0.40 1,4-Dioxane 12.0 1,4-Dioxane 12.0 Diphenylnitrosamine ³ 0.92 Diphenylnitrosamine ³ 0.92 Diphenylnitrosamine ³ 0.92 Diphenylnitrosamine ³ 0.92 Disulfoton 0.01 Disulfoton 0.02 Endosulfan I 0.02 Endosulfan Sulfate 0.02 Endrin 0.00 Ethyl eactate 0.32 E		Methylene chloride Methyl ethyl ketone		0.089 0.28	30 36
1.4-Dinitrobenzene 0.32 4,6-Dinitrobenzene 0.28 2,4-Dinitroblene 0.32 2,4-Dinitroblene 0.32 2,4-Dinitroblene 0.32 2,6-Dinitrobluene 0.32 2,6-Dinitrobluene 0.55 Din-propylnitrosamine 0.40 1,4-Dioxane 12.0 Diphenylamine ³ 0.92 Diphenylamine ³ 0.92 1,2-Diphenylhydrazine 0.00 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan sulfate 0.02 Endrin 0.00 Endrin aldehyde 0.02 Ethyl acetate 0.32 Ethyl capaide/Propanenitrile 0.24 Ethyl capaide/Propanenitrile 0.24 Ethyl enzene 0.02 E		Methyl isobutyl ketone		0.28	33
4,6-Dinitro-o-cresol 0.28 2,4-Dinitrophenol 0.12 2,4-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.40 Din-octyl phthalate 0.01 Din-propylnitrosamine 0.40 1,4-Dioxane 12.0 Diphenylnitrosamine ³ 0.92 1,2-Diphenylnydrazine 0.06 Disulfoton 0.01 Dittocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan II 0.02 Endosulfan Sulfate 0.02 Endrin aldehyde 0.02 Ethyl acetate 0.32 Ethyl acetate 0.32 Ethyl acetate 0.32 Ethyl cyanide/Propanenitrile 0.12 Ethyl acetate 0.32 Ethyl exterte 0.12 Ethyl acetate 0.32 Ethyl acetate 0.32 Ethyl acetate 0.32 Ethyl exterte 0.12		Methyl methacrylate		0.14	160
2,4-Dinitrophenol 0.12 2,4-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.32 Din-porpylnitrosamine 0.40 1,4-Dioxane 12.0 Diphenylintrosamine ³ 0.92 Diphenylintrosamine ³ 0.92 1,2-Diphenylhydrazine 0.06 Disulfoton 0.01 Dithiccarbamates (total) 0.02 Endosulfan II 0.02 Endosulfan II 0.02 Endosulfan II 0.02 Endosulfan Sulfate 0.02 Endosulfan II 0.02 Ethyl acetate 0.32 Ethyl acet		Methyl methansulfonate		0.018	NA
2,4-Dinitrotoluene 0.32 2,6-Dinitrotoluene 0.55 Din-octyl phthalate 0.040 0j-n-propylnitrosamine 0.400 1,4-Dioxane 12.0 Diphenylamine ³ 0.92 Diphenylnitrosamine ³ 0.92 Diphenylnitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.061 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan sulfate 0.02 Endrin 0.02 Endrin aldehyde 0.02 Ethyl acetate 0.32 Ethyl acetate 0.34 Ethyl methacrylat		Methyl parathion		0.014	4.6
2,6-Dinitrotoluene 0.55 Din-octyl phthalate 0.01 Din-propylnitrosamine 0.40 1,4-Dioxane 12.0 Diphenylamine ³ 0.92 Diphenylnitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.06 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan I 0.02 Endosulfan I 0.02 Endosulfan sulfate 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 Ethyl acetate 0.32 Ethyl acetate 0.34 Ethyl cyanide/Propanenitrile 0.22 Ethyl cyanide/Propanenitrile 0.22 Ethyl cyanide/Propanenitrile 0.24 Ethyl cyanide/Propanenitrile 0.26 </td <td>32 140</td> <td>Metolcarb</td> <td></td> <td>0.056¹</td> <td>1.41</td>	32 140	Metolcarb		0.056 ¹	1.41
Di-n-propyInitrosamine 0.400 1,4-Dioxane 12.0 Diphenylamine ³ 0.92 Diphenylinitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.068 Disulfoton 0.01 Disulfoton 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin 0.000 Endrin 0.002 Endrin 0.002 Endrin 0.002 Ethyl acetate 0.02 Ethyl acetate 0.34 Ethyl acetate 0.34 Ethyl cyanide/Propanenitrile 0.22 Ethyl cyanide/Propanenitrile 0.22 Ethyl exployer 0.12 Famphur 0.07 Fluoranthene 0.02 Fluoranthene 0.02 Fluoranthene 0.02 Fluorene 0.02 Formetanate hydrochloride 0.02 Hexachlorobenzene 0.02 Hexachloropyclopentadiene <td< td=""><td>55 28</td><td>Mexacarbate</td><td></td><td>0.056¹</td><td>1.41</td></td<>	55 28	Mexacarbate		0.056 ¹	1.41
1.4-Dioxane 12.0 Diphenylamine ³ 0.92 Diphenylnitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.02 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin aldehyde 0.02 Ethyl acetate 0.33 Ethyl acetate 0.34 Ethyl enzene 0.02 Ethyl enzene 0.02 Ethyl enzene 0.02 Ethyl enzene 0.12 Bis(2-Ethylhexyl)phthalate 0.22 Ethyl methacrylate 0.14 Ethyl enzene 0.06 Fluoranthene 0.06 Fluoranthene 0.06 Fluoranthene 0.06 Hexachlorobenzene 0.00 Hexachlorobenzene		Molinate		0.0421	1.4 ¹
Diphenylamine ³ 0.92 Diphenylnitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.06 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan I 0.02 Endosulfan I 0.02 Endosulfan I 0.02 Endosulfan sulfate 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 ErrC 0.04 Ethyl cyanide/Propanenitrile 0.22 Ethyl cyanide/Propanenitrile 0.22 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.12 Ethyl methacrylate 0.14 Ethyl nethacrylate 0.14 Ethyl nethacrylate 0.06 Fluoranthene 0.06 Fluoranthene 0.02 Formetanate hydrochloride 0.02 Hexachlorobenzene 0.02 Hexachlorobenzene 0.02 Hexachlorobenzene 0.02 Hexachlorodibenzofurans) 0.00 <td></td> <td>Naphthalene</td> <td></td> <td>0.059</td> <td>5.6 NA</td>		Naphthalene		0.059	5.6 NA
Diphenylnitrosamine ³ 0.92 1,2-Diphenylhydrazine 0.08 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin 0.002 Ethyl acetate 0.02 Ethyl acetate 0.02 Ethyl acetate 0.02 Ethyl cyanide/Propanenitrile 0.22 Ethyl expanide/Propanenitrile 0.22 Ethyl expanide/Propan		2-Naphthylamine		0.52 0.27 ¹	14 ¹
1,2-Diphenylhydrazine 0.08 Disulfoton 0.01 Dithiocarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan sulfate 0.02 Endosulfan sulfate 0.02 Endosulfan sulfate 0.02 Endrin 0.02 Ethyl acetate 0.02 Ethyl acetate 0.34 Ethyl acetate 0.12 Bis(2-Ethylhexyl)phthalate 0.22 Ethyl methacrylate 0.14 Ethyl methacrylate 0.14 Ethyl methacrylate 0.14 Ethyl methacrylate 0.02 Fluorene 0.02 Formetanate hydrochloride 0.02 Heptachlor 0.02 Hexachlorobenzene 0.02 Hexachlorocyclopentadiene 0		o-Nitroaniline p-Nitroaniline		0.028	28
Disulfoton 0.01 Distificarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin aldehyde 0.02 Ethyl acetate 0.34 Ethyl acetate 0.34 Ethyl cyanide/Propanenitrile 0.22 Ethyl cyanide/Propanenitrile 0.24 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.25 Ethyl methacrylate 0.14 Ethylene oxide 0.14 Ethylene oxide 0.12 Famphur 0.07 Fluoranthene 0.06 Fluoranthene 0.06 Fluoranthene 0.00 Heytachlor epoxide 0.00 Heytachlorobenzene 0.00 Hexachlorobutadiene 0.00 Hexachlorodibenzofurans) 0.00		Nitrobenzene		0.068	14
Dithiccarbamates (total) 0.02 Endosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 EpTC 0.04 Ethyl acetate 0.02 Ethyl benzene 0.02 Ethyl cyanide/Propanenitrile 0.22 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.22 Ethyl methacrylate 0.14 Ethylene oxide 0.14 Ethylene oxide 0.12 Famphur 0.07 Fluoranthene 0.06 Fluoranthene 0.06 Fluoranthene 0.02 Formetanate hydrochloride 0.02 Hexachlorobutadiene 0.02 Hexachlorobutadiene 0.02 Hexachlorobutadiene 0.02 Hexachlorodibenzofurans) 0.00 Hexachloropilene 0.02 <		5-Nitro-o-toluidine		0.32	28
Indosulfan I 0.02 Endosulfan II 0.02 Endosulfan sulfate 0.02 Endrin 0.02 Endrin aldehyde 0.02 Endrin aldehyde 0.02 EpTC 0.04 Ethyl acetate 0.34 Ethyl acetate 0.32 Ethyl enzene 0.052 Ethyl cyanide/Propanenitrile 0.224 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.225 Ethyl ether 0.14 Ethyl enzene 0.12 Famphur 0.07 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.07 Fluorene 0.06 Formetanate hydrochloride 0.07 Hexachlorobenzene 0.00 Hexachlorobenzene 0.00 Hexachlorobenzene 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachlorodibenzo-p-dioxins) 0.00 <t< td=""><td>the second se</td><td>o-Nitrophenol</td><td></td><td>0.028¹</td><td>13'</td></t<>	the second se	o-Nitrophenol		0.028 ¹	13'
Indosulfan II 0.02 Endosulfan sulfate 0.02 Endrin 0.00 Endrin aldehyde 0.02 EPTC 0.04 Ethyl acetate 0.34 Ethyl acetate 0.32 Ethyl acetate 0.32 Ethyl acetate 0.34 Ethyl enzene 0.12 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.26 Ethyl methacrylate 0.11 Bis(2-Ethylhexyl)phthalate 0.12 Famphur 0.07 Fluoranthene 0.06 Fluoranthene 0.06 Fluorene 0.06 Fluorene 0.06 Fluorene 0.06 Hexachlor epoxide 0.07 Hexachlorobenzene 0.06 Hexachlorobenzene 0.02 Hexachlorodibenzofurans) 0.07 Hexachlorodibenzofurans) 0.07 Hexachlorodibenzofurans) 0.07 Hexachlorodibenzofurans) 0.07 Hexachlorodibenzofurans) <td></td> <td>p-Nitrophenol</td> <td></td> <td>0.12</td> <td>29</td>		p-Nitrophenol		0.12	29
Indosulfan sulfate 0.02 Endrin 0.00 Endrin 0.00 Endrin 0.00 Endrin 0.00 Endrin 0.00 Endrin 0.00 Entyl acetate 0.02 Ethyl acetate 0.02 Ethyl benzene 0.02 Ethyl benzene 0.02 Ethyl cyanide/Propanenitrile 0.22 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.12 Ethyl methacrylate 0.14 Ethyl methacrylate 0.12 Famphur 0.07 Fluorene 0.06 Fluorene 0.06 Fluorene 0.06 Heytachlor 0.00 Hexachlorobenzene 0.00 Hexachlorobenzene 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00	029 0.13	N-Nitrosodiethylamine		0.40	28
Endrin aldehyde 0.02 EPTC 0.04 Ethyl acetate 0.34 Ethyl benzene 0.05 Ethyl cyanide/Propanenitrile 0.22 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.25 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.12 Ethyl methacrylate 0.12 Famphur 0.07 Fluoranthene 0.06 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.00 Heptachlor epoxide 0.00 Hexachlorobenzene 0.00 Hexachlorobutadiene 0.00 Hexachlorocyclopentadiene 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachlorootibenzo-p-dioxins) 0.00 Hexachlorootibenzo-p-dioxins) 0.00 Hexachlorootibenzo-p-dioxins) 0.00 Hexachlorootibenzo-p-dioxins) 0.00 Hexachlorootibenzo-p-dioxins) 0.00 <t< td=""><td></td><td>N-Nitrosodimethylamine</td><td></td><td>0.40</td><td>2.3¹</td></t<>		N-Nitrosodimethylamine		0.40	2.3 ¹
EPTC 0.04 Ethyl acetate 0.34 Ethyl benzene 0.05 Ethyl cyanide/Propanenitrile 0.224 Ethyl ether 0.12 Bis(2-Ethylhexyl)phthalate 0.28 Ethyl methacrylate 0.14 Ethyl methacrylate 0.12 Famphur 0.07 Fluoranthene 0.06 Fluorene 0.07 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.06 Heptachlor epoxide 0.07 Hexachlorobenzene 0.06 Hexachlorobutadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachloropropylene 0.00 Hexachloroptionans) 0.00 Hexachloroptionans) 0.00 Hexachloroptione 0.01 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.01 <td>0028 0.13</td> <td>N-Nitroso-di-n-butylamine</td> <td></td> <td>0.40</td> <td>17</td>	0028 0.13	N-Nitroso-di-n-butylamine		0.40	17
Ethyl acetate0.34Ethyl benzene0.05Ethyl cyanide/Propanenitrile0.24Ethyl cyanide/Propanenitrile0.24Ethyl ether0.12Bis(2-Ethylhexyl)phthalate0.26Ethyl methacrylate0.14Ethyl methacrylate0.14Ethylene oxide0.12Famphur0.07Fluoranthene0.06Fluorene0.06Formetanate hydrochloride0.06Heptachlor0.06Heptachlor epoxide0.07Hexachlorobenzene0.06Hexachlorobutadiene0.07Hexachlorocyclopentadiene0.06Hexachlorocyclopentadiene0.07Hexachlorodibenzo-p-dioxins)0.07Hexachloroppylene0.07Indeno(1,2,3-c,d)pyrene0.07Isobutyl alcohol5.6Isodrin0.07Methacrylonitrile0.07Methanol5.6Methanol5.6Methanol5.6Methanol0.07Methonyl0.07	025 0.13	N-Nitrosomethylethylamine		0.40	2.3 2.3
Ethyl benzene0.05Ethyl cyanide/Propanenitrile0.24Ethyl ether0.12Bis(2-Ethylhexyl)phthalate0.26Ethyl methacrylate0.14Ethyl methacrylate0.14Ethylene oxide0.12Famphur0.07Fluoranthene0.06Fluorene0.06Formetanate hydrochloride0.06Heptachlor0.06Heptachlor epoxide0.07Hexachlorobenzene0.06Hexachlorobutadiene0.07Hexachlorobutadiene0.06Hexachlorocyclopentadiene0.07Hexachlorocyclopentadiene0.06Hexachlorophylene0.07Indeno(1,2,3-c,d)pyrene0.07Idomethane0.07Isobutyl alcohol5.6Isodrin0.07Methacrylonitrile0.07Methanol5.6Methanol5.6Methanol5.6Methanol5.6Methanol0.07Methonyl0.07		N-Nitrosomorpholine		0.40	35
Entryl cyanide/Propanenitrile 0.224 Ethyl cyanide/Propanenitrile 0.12 Bis(2-Ethylhexyl)phthalate 0.12 Bis(2-Ethylnexyl)phthalate 0.14 Ethyl methacrylate 0.14 Ethyl methacrylate 0.14 Ethyl methacrylate 0.14 Ethyl methacrylate 0.12 Famphur 0.07 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.00 Heptachlor 0.00 Hexachlorobenzene 0.00 Hexachlorocyclopentadiene 0.00 Hexachlorocyclopentadiene 0.00 HxCDDs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.01 Isosafrole 0.00 Kepone 0.00 Methanol 5.6 Methanol 5.6 Methonyl 0.00		N-Nitrosopiperidine N-Nitrosopyrrolidine		0.013	35
Ethyl ether0.12Bis(2-Ethylhexyl)phthalate0.26Ethyl methacrylate0.14Ethylene oxide0.12Famphur0.07Fluoranthene0.06Fluorene0.06Formetanate hydrochloride0.07Heptachlor0.00Heptachlor epoxide0.00Hexachlorobenzene0.00Hexachlorobenzene0.00Hexachlorocyclopentadiene0.00Hexachlorodibenzo-p-dioxins)0.00Hexachlorodibenzofurans)0.00Hexachloropipylene0.00Indeno(1,2,3-c,d)pyrene0.00Isobatryl alcohol5.6Isodrin0.00Methacrylonitrile0.00Methacrylonitrile0.00Methacrylonitrile0.00Methacrylonitrile0.00Methonyl0.00		Oxamyl		0.056 ¹	0.281
Bis(2-Ethylhexyl)phthalate 0.26 Ethyl methacrylate 0.14 Ethylene oxide 0.12 Famphur 0.07 Fluoranthene 0.06 Fluoranthene 0.06 Formetanate hydrochloride 0.07 Heptachlor 0.00 Heptachlor 0.00 Heptachlor epoxide 0.00 Hexachlorobenzene 0.00 Hexachlorobenzene 0.00 Hexachlorocyclopentadiene 0.00 Hexachlorocyclopentadiene 0.00 HxCDDs (All 0.00 Hexachlorodibenzo-p-dioxins) 0.00 Hexachloropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.01 Isosafrole 0.00 Kepone 0.00 Methanol 5.6 Methanol 5.6 Methanol 5.6 Methomyl 0.00		Parathion		0.014	4.6
Ethylene oxide 0.12 Famphur 0.07 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.06 Heptachlor 0.07 Heptachlor epoxide 0.07 Hexachlorobenzene 0.06 Hexachlorobutadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachlorocylopylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Isobutyl alcohol 5.6 Isodrin 0.02 Methacrylonitrile 0.22 Methanol 5.6 Methanol 5.6 Methomyl 0.0		Total PCBs (sum of all PCB isomers or all Aroclors)	A	0.10	10
Ethylene oxide 0.12 Famphur 0.07 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.06 Heptachlor 0.07 Heptachlor epoxide 0.07 Hexachlorobenzene 0.06 Hexachlorobutadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.07 Hexachlorocylopylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Isobutyl alcohol 5.6 Isodrin 0.02 Methacrylonitrile 0.22 Methanol 5.6 Methanol 5.6 Methomyl 0.0	14 160	Pebulate		0.042 ¹	1.4 ¹
Famphur 0.07 Fluoranthene 0.06 Fluorene 0.06 Formetanate hydrochloride 0.06 Heptachlor 0.00 Heptachlor epoxide 0.00 Heptachlor benzene 0.00 Hexachlorobutadiene 0.00 Hexachlorocyclopentadiene 0.00 Hexachlorocyclopentadiene 0.00 Hexachlorocyclopentadiene 0.00 HxCDDS (All 0.00 Hexachlorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.01 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methanol 5.6 Methomyl 0.00		Pentachlorobenzene		0.055 ¹	10 ¹
Fluorene 0.05 Formetanate hydrochloride 0.06 Heptachlor 0.06 Heptachlor epoxide 0.07 Hexachlorobenzene 0.06 Hexachlorobenzene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachlorocyclopentadiene 0.06 Hexachlorocyclopentadiene 0.07 Hexachloropengulene 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Isobutyl alcohol 5.6 Isodrin 0.02 Kepone 0.00 Methacylonitrile 0.22 Methanol 5.6 Methomyl 0.00	017 15	PeCDDs (All Pentachlorodibenzo-p-dioxins)		0.000035	0.001
Instanthydrochloride0.00Heptachlor0.00Heptachlor epoxide0.00Hexachlorobenzene0.00Hexachlorobutadiene0.00Hexachlorocyclopentadiene0.00HxCDDs (All0.00Hexachlorodibenzo-p-dioxins)0.00HxCDFs (All0.00Hexachlorodibenzofurans)0.00Hexachloropylene0.00Indeno(1,2,3-c,d)pyrene0.00Iodomethane0.01Isobatyl alcohol5.6Isodrin0.00Methacrylonitrile0.02Methanol5.6Methanol5.6Methanol5.6Methanol0.00Methanol5.6Methanol0.00Methonyl0.00Methoryl0.00	068 3.4	PeCDFs(All Pentachlorodibenzofurans)		0.000035	0.001
Heptachlor 0.00 Heptachlor epoxide 0.07 Hexachlorobenzene 0.09 Hexachlorobutadiene 0.09 Hexachlorocyclopentadiene 0.09 Hexachlorocyclopentadiene 0.09 HxCDDs (All 0.00 Hexachlorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachloroppylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.01 Isobatyl alcohol 5.6 Isodrin 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methanol 5.6 Methonyl 0.00		Pentachloroethane		0.055	6.0
Instruction 0.00° Heptachlor epoxide 0.00° Hexachlorobenzene 0.00° Hexachlorobutadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorocyclopentadiene 0.00° Hexachlorodibenzo-p-dioxins) 0.00° Hexachlorodibenzofurans) 0.00° Hexachloropropylene 0.00° Indeno(1,2,3-c,d)pyrene 0.00° Iodomethane 0.11° Isobutyl alcohol 5.6° Isodrin 0.00° Kepone 0.00° Metharol 5.6° Methapyrilene 0.00° Methomyl 0.00°		Pentachloronitrobenzene		0.055	4.8
Hexachlorobenzene 0.03 Hexachlorobutadiene 0.03 Hexachlorocyclopentadiene 0.03 HxCDDs (All 0.00 Hexachlorocyclopentadiene 0.03 HxCDDs (All 0.00 Hexachlorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methonyl 0.00	0012 0.066	Pentachlorophenol	the second se	0.089	7.4
Hexachlorobutadiene 0.00 Hexachlorocyclopentadiene 0.00 HxCDDs (All 0.00 Hexachlorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methonyl 0.00		Phenacetin Phenanthrene	the second se	0.059	5.6
Hexachlorocyclopentadiene 0.09 HxCDDs (All 0.00 Hexachrorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methocarb 0.00		Phenol		0.039	6.2
HxCDDs (All 0.00 Hexachrorodibenzo-p-dioxins) 0.00 HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methonyl 0.00		Phorate		0.021	4.6
HxCDFs (All 0.00 Hexachlorodibenzofurans) 0.00 Hexachlorodibenzofurans) 0.00 Hexachloropropylene 0.00 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methoryl 0.00	000063 0.001	Phthalic acid		0.055 ¹	28 ¹
Hexachloroethane 0.03 Hexachloropropylene 0.03 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methoryl 0.00	000063 0.001	Phthalic anhydride		0.055	28 ¹
Hexachloropropylene 0.03 Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methoryl 0.00	055 30	Physostigmine		0.0561	1.41
Indeno(1,2,3-c,d)pyrene 0.00 Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methomyl 0.00	035 30	Physostigmine salicylate		0.0561	1.4
Iodomethane 0.11 Isobutyl alcohol 5.6 Isodrin 0.00 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.22 Methanol 5.6 Methapyrilene 0.00 Methiocarb 0.00 Methomyl 0.00	0055 3.4	Promecarb		0.0561	1.4 ¹
Isodrin 0.00 Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.2 Methanol 5.6 Methiocarb 0.00 Methomyl 0.00		Pronamide		0.093 0.056 ¹	1.5 1.4 ¹
Isosafrole 0.00 Kepone 0.00 Methacrylonitrile 0.2 Methanol 5.6 Methiocarb 0.00 Methomyl 0.00		Propham	++	0.056	1.4
Kepone 0.00 Methacrylonitrile 0.2 Methanol 5.6 Methapyrilene 0.00 Methiocarb 0.00 Methomyl 0.00		Propoxur Prosulfocarb		0.0421	1.4
Methacrylonitrile 0.2 Methanol 5.6 Methapyrilene 0.0 Methiocarb 0.0 Methomyl 0.0	.0011 0.13	Pyrene		0.042	8.2
Methanol 5.6 Methapyrilene 0.0 Methiocarb 0.0 Methomyl 0.0		Pyridine		0.014	16
Methapyrilene 0.0. Methiocarb 0.0. Methomyl 0.0.		Safrole		0.081	22
Methiocarb 0.00 Methomyl 0.00	.081 1.5	Silvex/2,4,5-TP		0.72	7.9
Methomyl 0.0.	.056 ¹ 1.4 ¹	1,2,4,5-Tetrachlorobenzene		0.055	14
Methoxychlor 0.2	.028 ¹ 0.14 ¹	TCDDs (All Tetrachlorodibenzo-p-dioxins)		0.000063	0.001
1 1 1	.25 0.18	TCDFs (All Tetrachlorodibenzo-furans)		0.000063	0.001
3-Methylcholanthrene 0.0	.0055 15	1,1,1,2-Tetrachloroethane		0.057	6.0
4,4'-Methylene bis(2-		1,1,2,2-Tetrachloroethane		0.057	6.0

-

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?		NWW (mg/kg) unless noted	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NVVW (mg/kg) unless noted
Tetrachloroethylene		0.056	6.0	INORGANIC CONSTITUENTS			
2,3,4,6-Tetrachlorophenol		0.030	7.4	Antimony	$ \longrightarrow$	1.9	2.1 mg/l TCLP
Thiodicarb		0.0191	1.4 ¹	Antimony		1.9	1.15 mg/l TCLP⁴
Thiophanate-methyl		0.0561	1.4 ¹	Arsenic		1.4	5.0 mg/l TCLP
Toluene		0.080	10	Barium		1.2	7.6 mg/l TCLP
Toxaphene	1	0.0095	2.6	Barium		1.2	21 mg/l TCLP⁴
Triallate		0.042 ¹	1.4 ¹	Beryllium		0.82	0.014 mg/ TCLP
Tribromomethane/Bromoform		0.63	15	Beryllium		0.82	1.22 mg/l TCLP ⁴
2,4,6-Tribromophenol		0.035	7.4	Cadmium		0.69	0.19 mg/l TCLP
1,2,4-Trichlorobenzene		0.055	19	Cadmium		0.69	0.11 mg/l TCLP ⁴
1,1,1-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.86mg/l TCLP
1,1,2-Trichloroethane		0.054	6.0	Chromium (Total)		2.77	0.60 mg/l TCLP ⁴
Trichloroethylene		0.054	6.0	Cyanides (Total)		1.2	590
Trichloromonofluoromethane		0.020	30	Cyanides (Amenable)		0.86	30 ¹
2,4,5-Trichlorophenol		0.18	7.4	Fluoride		35	NA⁴
2,4,6-Trichlorophenol		0.035	7.4	Lead		0.69	0.37 mg/l
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T		0.72	7.9	Lead		0.69	0.75 mg/l ⁴ TCLP
1,2,3-Trichloropropane		0.85	30	Mercury (Nonwastewater from Retort)		NA	0.20 mg/l TCLP
1,1,2-Trichloro-1,2,2- trifluoroethane		0.057	30	Mercury (All others)	×.	0.15	0.025 mg/ TCLP
Triethylamine		0.081 ¹	1.5 ¹	Nickel		3.98	5.0 mg/l TCLP
Tris-(2,3- Dibromopropyl)phosphate	1	0.11	0.10 ¹	Nickel		3.98	11 mg/l TCLP ⁴
Vernolate	1	0.042 ¹	6.0 ¹	Selenium		0.82	0.16 mg/l TCLP
Vinyl chloride		0.27	6.0	Selenium		0.82	5.7 mg/l TCLP⁵
Xylenes – mixed isomers (sum) of o-,m-, and p-xylene	k	0.32	30	Silver		0.43	0.30 mg/l TCLP
			>	Silver		0.43	0.14 mg/l TCLP ⁴
				Sulfide		14	NA ²
				Thallium		1.4	0.078 mg/ TCLP ¹
				Thallium		1.4	0.20 mg/l TCLP ⁴
				Vanadium		4.3 ²	1.6 mg/l TCLP ²
<u> </u>				Zinc	4	2.61	4.3 mg/l TCLP ²

These constituents are only applicable as underlying hazardous constituents. These constituents are not constituents that require treatment in F039 wastes.

² Not an underlying hazardous constituent requiring treatment in a D001-D043 waste.

³ These compounds are regulated by the sum of their concentration instead of as individual constituents.

⁴ These constituents are effective in authorized states or states with no LDR program on 8/24/99. These concentrations are effective in all other states upon adoption by the state.

⁵ Effective 8/24/98 in unauthorized states or states with no LDR program. Selenium at 5.7 mg/l is not an underlying hazardous constituent in D001-D043 waste. This becomes effective in authorized states upon adoption by the state. **APPENDIX B**

PCB WASTE CERTIFICATES OF DISPOSAL

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<u>Manifest</u>

4615

CERTIFICATE OF DISPOSAL

3 miles South, Exit 49, I-80 Clive, Utah 84029 EPA ID: UTD982598898

DOE, Paducah, Paducah

This certificate acknowledges that the following manifested shipments have been disposed of as listed below:

<u>Shipment</u> 9750-01-0006 <u>Disposal Date</u> 06/27/2019 <u>Volume (Cu/Ft)</u> 348.0 <u>Process</u> Landfill

Disposal Location Mixed Waste

RECEIVE	
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BY: MA	J
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The total volume above represents the cubic feet of waste disposed of at EnergySolutions' Disposal Facility Landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Brian Beynon Jul 2 2019 11:29 AM

cosign Date

Brian Beynon Operations Manager

299 S Main Street, Suite 1700, Salt Lake City, Utah 84111. Telephone (801) 649-2000

<u>Manifest</u>

94525

CERTIFICATE OF DISPOSAL

3 miles South, Exit 49, I-80 Clive, Utah 84029 EPA ID: UTD982598898

DOE, Paducah, Paducah

This certificate acknowledges that the following manifested shipments have been disposed of as listed below: Volume (Cu/Ft)

7.5

<u>Shipment</u> 9750-04-0003 **Disposal Date** 08/16/2019

Process Landfill

Disposal Location Mixed Waste



The total volume above represents the cubic feet of waste disposed of at EnergySolutions' Disposal Facility Landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Brian Beynon Aug 22 2019 4:11 PM cosign

Date

Brian Beynon Operations Manager

299 S Main Street, Suite 1700, Salt Lake City, Utah 84111. Telephone (801) 649-2000

Manifest

94524

CERTIFICATE OF DISPOSAL

3 miles South, Exit 49, I-80 Clive, Utah 84029 EPA ID: UTD982598898

DOE, Paducah, Paducah

This certificate acknowledges that the following manifested shipments have been disposed of as listed below:

Shipment 9750-05-0002 **Disposal Date** 06/13/2019

Volume (Cu/Ft) 22.5

Process Landfill

Disposal Location Mixed Waste



The total volume above represents the cubic feet of waste disposed of at EnergySolutions' Disposal Facility Landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Brian Beynon Jun 14 2019 12:47 PM cosign Date

Brian Beynon **Operations Manager**

299 S Main Street, Suite 1700, Salt Lake City, Utah 84111. Telephone (801) 649-2000

<u>Manifest</u>

94554

94589

CERTIFICATE OF DISPOSAL

3 miles South, Exit 49, I-80 Clive, Utah 84029 EPA ID: UTD982598898

DOE, Paducah, Paducah

This certificate acknowledges that the following manifested shipments have been disposed of as listed below:

<u>Shipment</u> 9750-09-0004 9750-09-0005 Disposal Date 06/27/2019 06/27/2019

<u>Volume (Cu/Ft)</u> 15.0 67.5 <u>Process</u> Landfill Landfill

Disposal Location Mixed Waste Mixed Waste



The total volume above represents the cubic feet of waste disposed of at EnergySolutions' Disposal Facility Landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

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	-		

Brian Beynon Jul 2 2019 11:29 AM

Brian Beynon Operations Manager

299 S Main Street, Suite 1700, Salt Lake City, Utah 84111. Telephone (801) 649-2000

cosign

Date





EPA ID # TND982109142

COD Number:

Generator Name EPA ID No.

Address

Contact

TSDSSI-19-087-20191210

Certificate of Disposal

Diversified Scientific Services, Inc. of Kingston, Tennessee is providing this certificate to confirm the disposal of TSCA Regulated PCB waste by Alternate Thermal Treatment (40CFR 761.60(e)).

12/10/2019 Hereby certifies such destruction on:

Attached list of containers from Shipment Number

Shipped on Hazardous Waste Manifest Number

US Dept of Energy - Four Rivers (formerly Fluor Federal Services, Inc.)

KY8890008982 5511 Hobbs Road

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U. S. C. 1001 and 15 U. S. C. 2615). I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as a company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Kevil, KY 42053-

Regina Pea

Ralph Sheffield Bv:

Waste Tracking Representative Title:

Digitally signed by Ralph Date: 2019.12.12 08:27:35 -05'00'

Sheffield

Signature:

DSSI-19-087 019694647JJK

DIVERSIFIED SCIENTIFIC SERVICES, INC.

Certificate of Disposal

TSDSSI-19-087-20191210

177053500 CORPUE/2501/255059620200		the strength of the second	a second a second s	ltem Number					Date Received
DSSI-19-087	019694647JJK	19-08-045	79796	121618-01	19-016	12/10/2019	KYFLU01	Bulk Solids - PCBs	8/22/2019
DSSI-19-087	019694647JJK	19-08-045	79797	121618-02	19-016	12/10/2019	KYFLU01	Bulk Solids - PCBs	8/22/2019

Certificate of Disposal
TSDSSI-18-104-20190209

Shipment Number	Haz Manifest Number	WPS Number	Package Number	ltem Number			Waste Code	Date Received
DSSI-18-104	006841953JJK	18-08-028	77796	125150-01	2/9/2019	KYFLU01	Bulk Liquid - PCBs	8/24/2018
DSSI-18-104	006841953JJK	18-08-028	77797	125150-02	2/9/2019	KYFLU01	Bulk Liquid - PCBs	8/24/2018

CERTIFICATE OF DISPOSAL

USDOE BJC Paducah

Materials and Energy Corporation 2010 Hwy 58 Suite 1020 Oak Ridge, TN 37830

EPA ID: TNR000005397

This certificate acknowledges that the following manifested shipments have been disposed of as detailed below.

			Shipment ETTP-17-103	Manifest 006841893 JJK	
	Package	Incoming		Date	
Item Number	Number	Shipment	Process	Processed	Discussion
120624-01	110877	ETTP-17-103	No TSCA regulated	9/7/2017	The Entire Volume of Waste
			treatment perfomed		Was Consumed During Sampling.



Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Joseph Crider

1/17/2019 Date EPA ID No. : FLD 980 711 071 Florida Part B Permit No. : 17680-011-HO

Certificate No. <u>20190507-001</u>



Certificate of Management

Perma-Fix of Florida, Inc. has

managed wastes received from: U.S. DOE c/o Fluor Federal Services, Inc. (FPDP)

EPA ID Number: <u>KY8890008982</u> Manifest Number: <u>0006841816JJK</u> <u>4/29/2019</u> as identified in waste and hereby certifies such management as of in accordance with applicable Federal and State Regulations.

Shipment ID Number: <u>NUC-265-0</u> Date Received: <u>8/22/2016</u>

(Refer to the attached table for container specific information)

Generator: U.S. DOE c/o Fluor Federal Services, Inc. (FPDP) Address: 5511 Hobbs Road Kevil, KY 42053

> By: <u>Randy Self</u> Title: <u>Site Nuclear Manager</u>

Signature:

<u>1940 NW 67th Place • Gainesville, Florida 32653 • Tel (352) 373-6066 • Fax (352) 372-8963 • www.perma-fix.com/florida</u> EPA-Permitted TSD Facility • Hazardous Waste • Non-Hazardous Waste • Mixed Waste



Certificate of Management

Perma-Fix ID No.	Generator ID No.	Profile No.	Final Package ID No.	Disposal Manifest No.	Date Shipped	Receiving Facility
NUC-265-01	120702-01	RS-11631	M-10978	009947786JJK	4/29/2019	DSSI
NUC-265-02	120703-01	RS-11630	M-10978	009947786JJK	4/29/2019	DSSI
NUC-265-03	119807-01	60845	16293	013853680JJK	10/31/2016	Geocycle



PFF Certificate No. 20190507-001

B-13

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APPENDIX C

PCB WASTE STORAGE AREA INSPECTION RECORDS

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	i CD waste inspection Summary Report							
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments			
C-331								
G	G-331-PCB-01	1/3/2019						
		1/21/2010						
G	G-331-PCB-01	1/31/2019						
G	G-331-PCB-01	2/27/2019						
G	G-331-PCB-01	3/27/2019						
	221 DCD 01	4/24/2010						
G	G-331-PCB-01	4/24/2019						
G	G-331-PCB-01	5/22/2019			Closed 6/19/2019			
C-335	N 225 04	1/2/2010						
G	3-335-04	1/3/2019						

Monday, May 4, 2020 G = GSA

			I CB Waste I	ispection Sun	imary report
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-	-335-04	1/31/2019			
G-	-335-04	2/27/2019			
G-	-335-04	3/27/2019			
G-	-335-04	4/24/2019			
G-	-335-04	5/22/2019			Closed 6/19/2019
C-337					
	-337-02	1/3/2019			
G-	-337-02	1/31/2019			

PCB Waste Inspection Summary Repo

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
	37-02	2/27/2019			
G-3	37-02	3/27/2019			
G-3	37-02	4/24/2019			
G-3	37-02	5/22/2019		V	
G-3	37-02	6/19/2019			
G-3	37-02	7/17/2019			
G-3	37-02	8/14/2019			
G-3	37-02	9/11/2019			

Monday, May 4, 2020 G=G

D 11 11					
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-33	37-02	10/9/2019			
G-33	37-02	11/7/2019			
G-33	37-02	12/5/2019			
G-33	37-03	1/3/2019			
G-33	37-03	1/31/2019			
G-33	37-03	2/27/2019			
G-33	37-03	3/27/2019			
G-33	37-03	4/24/2019			

Monday, May 4, 2020 G = GSA

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-33	37-03	5/22/2019			
G-33	37-03	6/19/2019			
G-33	37-03	7/17/2019			
G-33	37-03	8/14/2019			
G-33	37-03	9/11/2019			
G-33	37-03	10/9/2019			
G-33	37-03	11/7/2019			
G-33	37-03	12/5/2019			

PCB Waste Inspection Summary Report

Monday, May 4, 2020 G = GSA

	Ted waste inspection Summary Report							
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments			
G-33	37-05	1/3/2019						
G-33	37-05	1/31/2019						
G-33	37-05	2/27/2019						
G-33	37-05	3/27/2019						
G-33	37-05	4/24/2019						
G-33	37-05	5/22/2019						
G-33	37-05	6/19/2019						
G-33	37-05	7/17/2019						

Monday, May 4, 2020 G = GSA

	i eb wase inspection summary report						
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments		
G-3	37-05	8/14/2019					
G-3	37-05	9/11/2019					
G-3	37-05	10/9/2019			Closed 10/16/2019		
G-3	37-PCB-02	1/3/2019					
G-3	37-PCB-02	1/31/2019					
G-3	37-PCB-02	2/27/2019					
G-3	37-PCB-02	3/27/2019					
G-3	37-PCB-02	4/24/2019					

Monday, May 4, 2020

			I CD Waste I	ispection sur	
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-3	337-PCB-02	5/22/2019			
G-3	337-PCB-02	6/19/2019			
G-3	337-PCB-02	7/17/2019			
G-3	337-PCB-02	8/14/2019			
G-3	337-PCB-02	9/11/2019			
G-3	337-PCB-02	10/9/2019			
G-3	337-PCB-02	11/7/2019			
G-3	337-PCB-02	12/5/2019			

Monday, May 4, 2020

	TCB waste inspection Summary Report						
Buildin	g Area	a Date Inspected	Leaks Yes	Leaks No	Comments		
	S-337-05	8/14/2019			Open 7/30/2019		
	S-337-05	9/11/2019					
	S-337-05	10/9/2019					
	S-337-05	11/7/2019			Closed 10/16/2019		
C-733	C-733	1/2/2019		V			
	C-733	1/9/2019					
	C-733	1/29/2019					

FUD waste inspection Summary Repo	aste Inspection Summary Report	arv F	Summa	pection	Ins	aste	PCB
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Monday, May 4, 2020

 $G = GSA \quad S = SAA$

Page 9 of 19

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
C-733		2/26/2019			
C-733		3/26/2019			
C-733		4/23/2019			
C-733		5/21/2019			
C-733		6/11/2019			
C-733		7/9/2019			
C-733		8/6/2019			
C-733		9/3/2019			

Monday, May 4, 2020 G = GS

	TOD waste inspection Summary Report								
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments				
C-733		10/1/2019							
C-733		10/29/2019							
C-733		11/26/2019							
C-733		12/26/2019							
C-746-Q									
C-746-	Q	1/2/2019							
C-746-	Q	1/9/2019							
C-746-	Q	1/29/2019							

Monday, May 4, 2020 G = GSA

Duilding	Anos	Date Inspected	Leaks Yes	Leaks No	Comments
Building	Area	Date Inspected	Leaks 1 es	Leaks NO	Comments
C-746	5-Q	2/26/2019			
C-746	5-Q	3/26/2019			
	-				
C-746	5-0	4/23/2019			
0 / 10	, X	7/25/2017			
0.54		5/01/0010			
C-746	5-Q	5/21/2019			
C-746	5-Q	6/11/2019			
C-746	5-Q	7/9/2019		\checkmark	
C-746	5-Q	8/6/2019			
C-746	5-Q	9/3/2019			

Monday, May 4, 2020 G = GSA

			I OB Waste I	ispection sur	
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
C-746	5-Q	10/1/2019			
C-746	5-Q	10/29/2019			
C-746	5-Q	11/26/2019			
C-746	5-Q	12/26/2019			
С-752-А С-752	2-A	1/2/2019			
C-752	2-A	1/9/2019			
C-752	2-A	1/29/2019			

Monday, May 4, 2020 G=G

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
C-752		2/26/2019			
C-752	2-A	3/26/2019			
C-752	2-A	4/23/2019			
C-752	2-A	5/21/2019			
C-752	2-A	6/11/2019			
C-752	2-A	7/9/2019			
C-752	2-A	8/6/2019			
C-752	2-A	9/3/2019			

Monday, May 4, 2020

 $G = GSA \quad S = SAA$

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TOD Waste Inspection Summary Report								
Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments			
C-752-	-A	10/1/2019						
C-752	-A	10/29/2019						
C-752	-A	11/26/2019						
C-752	-A	12/26/2019						
С-753-А								
C-753	-A	1/2/2019						
C-753	-A	1/9/2019						
C-753	-A	1/29/2019		✓				

Monday, May 4, 2020 G = GSA

 $G = GSA \quad S = SAA$

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Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
C-753	3-A	2/26/2019			
C-753	8-A	3/26/2019			
C-753	8-A	4/23/2019			
C-753	8-A	5/21/2019			
C-753	8-A	6/11/2019			
C-753	8-A	7/9/2019			
C-753	B-A	8/6/2019			
C-753	8-A	9/3/2019			

Monday, May 4, 2020

 $G = GSA \quad S = SAA$

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	r eb wase inspection building report								
Building	g Area	Date Inspected	Leaks Yes	Leaks No	Comments				
	C-753-A	10/1/2019							
	C-753-A	10/29/2019							
	C-753-A	11/26/2019							
	C-753-A	12/26/2019							
C-757	G-757-03	1/3/2019		V					
	G-757-03	1/31/2019							
	G-757-03	2/27/2019							

Monday, May 4, 2020 G=G

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-75	7-03	3/27/2019			
G-75	7-03	4/24/2019			
G-75	7-03	5/22/2019			
G-75	7-03	6/19/2019			
G-75	7-03	7/17/2019			
G-75	7-03	8/14/2019			
G-75	7-03	9/11/2019			
G-75	7-03	10/9/2019			

Monday, May 4, 2020

Building	Area	Date Inspected	Leaks Yes	Leaks No	Comments
G-75′	7-03	11/7/2019			
G-75′	7-03	12/5/2019			

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APPENDIX D

PCB WASTE INVENTORY TABLES

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TABLES

D.1.	Corrections and Adjustments to the December 31, 2018, Inventory	D-5
	PCB Waste Generated in 2019	
D.3.	Adjustments to the 2019 Inventory	D-8
	PCB Waste Shipped for Disposal in 2019	
	PCB Waste Inventory as of December 31, 2019	
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Table D.1. Corrections and A	Adjustments to the Deco	ember 31, 2018, Inventory

Adj	RFD	Waste ID	PCB Item	Description	PCB Date	Physical	Adjustment to Gross Wt (kg)	Source	Waste Cat	Comments
0	121255	121255-02	IPCB	LUBE OIL/PCB RINSEATE COLLECTED IN SIGHT GLASSES FROM TRANSFORMER DRAINING. POST-TSCA RINSE.	10/10/2017	Liquid (L)	177	C-337		Weight changed from 39 kg to 216 kg
0	121423	121423-04	PCB Container	VENTILATION DUCT OIL AND WATER	11/1/2018	L	138	Proc Bldgs	TM	Weight changed from 92 kg to 230 kg
0	121424	121424-06	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	11/7/2018	Solid (S)	6	C-337	TM	Weight changed from 31 kg to 37 kg
0	121625	121625-01	PCB Article Container	PCB LIGHT BALLASTS/TRANSFORMERS/ CAPACITORS/ETC.	8/28/2018	S	56	Various	TM	Weight changed from 78 kg to 134 kg
0	121645	121645-01	PCB Container	UNUSED LAB CHEMICALS	9/27/2018	L	-5	C-710	RCRA/TSCA Mixed (RTM)	Physical Changed from Liquid to Solid
0	121645	121645-01	PCB Container	UNUSED LAB CHEMICALS	9/27/2018	S	5	C-710	RTM	Physical Changed from Liquid to Solid
TO	TAL CORR	ECTIONS A	ND ADJUS	TMENTS TO THE DECEMBER	31, 2018, INV	ENTORY:	377		•	

Table D.2. PCB Waste Generated in 2019

RFD	Waste ID	PCB Item	Description	PCB Date	Gross Wt (kgs)	Physical	Current Facility	Source	Waste Category
121255	121255-03 ^a	PCB Container	LUBE OIL/PCB RINSEATE COLLECTED IN SIGHT GLASSES FROM TRANSFORMER DRAINING. POST-TSCA RINSE.	4/3/2019	132	Liquid (L)	C-752-A	C-337	TSCA MIXED (TM)
121423	121423-05	PCB Container	VENTILATION DUCT OIL AND WATER	2/13/2019	211	L	C-752-A	Proc Bldgs	TM
121423	121423-06	PCB Container	VENTILATION DUCT OIL AND WATER	4/17/2019	220	L	C-752-A	Proc Bldgs	TM
121423	121423-07	PCB Container	VENTILATION DUCT OIL AND WATER	5/9/2019	225	L	C-752-A	Proc Bldgs	TM
121423	121423-08	PCB Container	VENTILATION DUCT OIL AND WATER	6/24/2019	227	L	C-752-A	Proc Bldgs	TM
121423	121423-09	PCB Container	VENTILATION DUCT OIL AND WATER	8/20/2019	223	L	C-752-A	Proc Bldgs	TM
121423	121423-10	PCB Container	VENTILATION DUCT OIL AND WATER	10/30/2019	216	L	C-752-A	C-337	TM
121423	121423-11	PCB Container	VENTILATION DUCT OIL AND WATER	12/2/2019	223	L	C-752-A	Proc Bldgs	TM
121424	121424-07	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	1/24/2019	44	Solid (S)	C-752-A	C-337	ТМ
121424	121424-08	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	3/6/2019	57	S	C-752-A	C-337	TM
121424	121424-09	PCB Container	SPILL CLEANUP DEBRIS/ENCAPSULATION WASTE	3/14/2019	54	S	C-752-A	C-337	ТМ
121424	121424-10	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	5/9/2019	53	S	C-752-A	C-337	ТМ
121424	121424-11	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	6/4/2019	93	S	C-752-A	C-337	TM
121424	121424-12	PCB Container	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	7/24/2019	93	S	C-752-A	Proc Bldgs	ТМ
121424	121424-13	PCB Container	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	7/25/2019	110	S	C-752-A	Proc Bldgs	ТМ
121424	121424-14	PCB Container	SPILL CLEANUP/ENCAPUSLATION DEBRIS	8/1/2019	136	S	C-752-A	Proc Bldgs	TM
121424	121424-15	PCB Container	SPILL CLEANUP/ENCAPUSLATION DEBRIS	9/3/2019	125	S	C-752-A	C-337	TM
121424	121424-16 ^a	PCB Container	SPILL CLEANUP/ENCAPUSLATION DEBRIS	12/2/2019	69	S	C-752-A	C-337	ТМ
121546	121546-04	PCB Article Container	PCB/LEAD CABLE AND POTHEAD	4/3/2019	973	S	C-752-A	C-333	RCRA/TSCA Mixed (RTM)
121734	121734-01	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	3/12/2019	193	L	C-752-A	C-533	RCRA/TSCA Non-Rad (RTN)

RFD	Waste ID	PCB Item	Description	PCB Date	Gross Wt (kgs)	Physical	Current Facility	Source	Waste Category
121734	121734-02	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	3/20/2019	202	L	C-752-A	C-533	RTN
121734	121734-03	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	3/28/2019	202	L	C-752-A	C-533	RTN
121734	121734-04	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	4/3/2019	198	L	C-752-A	C-533	RTN
121734	121734-05	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	4/15/2019	186	L	C-752-A	C-533	RTN
121734	121734-06	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	4/23/2019	194	L	C-752-A	C-533	RTN
121734	121734-07	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	4/23/2019	197	L	C-752-A	C-533	RTN
121734	121734-08	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	5/5/2019	195	L	C-752-A	C-533	RTN
121734	121734-09	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	5/6/2019	71	L	C-752-A	C-533	RTN
121872	121872-01	PCB Container	VACUUMS AND VACUUM DEBRIS FROM CLEANUP OF PCB GASKET SPILL 2019. (ACCOUNTABLE MATERIAL)	7/25/2019	51	S	C-752-A	C-333	RTM
121918	121918-01 ^b	PCB Article Container	PCB LIGHT BALLASTS/TRANSFORMERS/CAPACITORS	9/17/2019	46	S	C-757	Various	TM
121993	121993-01 ^b	PCB Container	CONDUIT/METAL WITH PCB CONTAMINATION	12/23/2019	60	S	C-333	C-333	ТМ
121950	121950-01 ^a	PCB Container	PCB CONTAINMENT DIKE	11/4/2019	458	S	C-752-A	C-337	TM
			°TOTAL PCB WASTE GENERATEI) IN CY 2019:	5,736				

^aIndicates a collection container as of December 31, 2019.

^bIndicates a collection container still in use. Weight is estimated.

^cDue to rounding, the weight totals may vary by 1 kg.

Table D.3. Adjustments to the 2019 Inventory

Adj	RFD	Waste ID	PCB Item	Description	PCB Date	Physical	Gross Wt (kg)	Source	Waste Cat	Comments
	TOTAL ADJUSTMENTS TO CY 2019 INVENTORY: 0									

Note: No adjustments were necessary for this report year.

RFD	Waste ID	PCB Item	Description	PCB Date	Current Facility	Gross Wt (kgs)	Physical	Source	Waste Category	Ship Date	Ship Location	Manifest
121255	121255-02	PCB Container	LUBE OIL/PCB RINSEATE COLLECTED IN SIGHT GLASSES FROM TRANSFORMER DRAINING. POST-TSCA RINSE.	10/10/2017	С-752-А	216	Liquid (L)	C-337	TSCA MIXED (TM)	2/27/2019	DSSI, Inc., Kingston, TN	019694567JJK
121423	121423-02	PCB Container	VENTILATION DUCT OIL AND WATER	6/13/2018	C-752-A	202	L	Proc Bldgs	TM	2/27/2019	DSSI, Inc., Kingston, TN	019694567JJK
121423	121423-03	PCB Container	VENTILATION DUCT OIL AND WATER	9/25/2018	C-752-A	226	L	Proc Bldgs	TM	2/27/2019	DSSI, Inc., Kingston, TN	019694567JJK
121423	121423-04	PCB Container	VENTILATION DUCT OIL AND WATER	11/1/2018	C-752-A	230	L	Proc Bldgs	TM	2/27/2019	DSSI, Inc., Kingston, TN	019694567JJK
121423	121423-05	PCB Container	VENTILATION DUCT OIL AND WATER	2/13/2019	C-752-A	211	L	Proc Bldgs	TM	8/21/2019	DSSI, Inc., Kingston, TN	019694647JJK
121423	121423-06	PCB Container	VENTILATION DUCT OIL AND WATER	4/17/2019	C-752-A	220	L	Proc Bldgs	ТМ	8/21/2019	DSSI, Inc., Kingston, TN	019694647JJK
121424	121424-05	PCB Container	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	9/5/2018	C-752-A	48	Solid (S)	Proc Bldgs	ТМ	2/25/2019	Energy <i>Solutions</i> , Clive, UT	019694554JJK
121424	121424-06	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	11/7/2018	C-752-A	37	s	C-337	TM	10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK
121424	121424-07	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	1/24/2019	C-752-A	44	s	C-337	ТМ	10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK
121424	121424-08	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	3/6/2019	C-752-A	57	s	C-337	ТМ	10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK
121424	121424-09	PCB Container	SPILL CLEANUP DEBRIS/ENCAPSULATION WASTE	3/14/2019	C-752-A	54	s	C-337	TM	10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK
121424	121424-10	PCB Container	RAG, PANS, PLASTIC, PADS, PPE	5/9/2019	C-752-A	53	s	C-337	TM	10/31/2019	Energy <i>Solutions</i> , Clive, UT	019694693JJK
121516	121516-01	PCB Article Container	PCB LIGHT BALLASTS/TRANSFORMERS/CAPACITORS	4/25/2018	C-752-A	194	s	Various	TM	2/25/2019	Energy <i>Solutions</i> , Clive, UT	019694554JJK
121546	121546-01	PCB Article Container	PCB/LEAD CABLE AND POTHEAD	6/27/2018	C-752-A	836	s	Various	RCRA/TSCA Mixed (RTM)	6/18/2019	Energy <i>Solutions</i> , Clive, UT	019694615JJK
121546	121546-02	PCB Article Container	POTHEADS	8/10/2018	C-752-A	884	S	Various	RTM	6/18/2019	Energy <i>Solutions</i> , Clive, UT	019694615JJK
121546	121546-03	PCB Article Container	TRANSFORMER POTHEADS	7/25/2018	C-752-A	723	s	Various	RTM	6/18/2019	Energy <i>Solutions</i> , Clive, UT	019694615JJK
121618	121618-01	PCB Container	OIL FILLED DOOR CLOSERS	8/22/2018	C-752-A	333	S	C-400	TM	8/21/2019	DSSI, Inc., Kingston, TN	019694647JJK
121618	121618-02	PCB Container	OIL FILLED DOOR CLOSERS	9/5/2018	C-752-A	167	S	C-400	TM	8/21/2019	DSSI, Inc., Kingston, TN	019694647JJK
121625	121625-01	PCB Article Container	PCB LIGHT BALLASTS/TRANSFORMERS/CAPACITORS	9/10/2018	C-757	134	s	Various	TM	9/10/2019	DSSI, Inc., Kingston, TN	019694669JJK
121645	121645-01	PCB Container	UNUSED LAB CHEMICALS	9/27/2018	C-733	5	s	C-710	RTM	9/25/2019	DSSI, Inc., Kingston, TN	019694703JJK
121734	121734-01	PCB Container	PCB CONTAMINATED TRANSFORMER OIL FROM C-533 SWITCHYARD	3/12/2019	С-752-А	193	L	C-533	RCRA/TSCA Non- Rad (RTN)	5/28/2019	Clean Harbors Deer Park, LaPorte, TX	013496416FLE

					Current	Gross Wt						
RFD	Waste ID	PCB Item	Description	PCB Date	Facility	(kgs)	Physical	Source	Waste Category	Ship Date	Ship Location	Manifest
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-02	PCB Container	FROM C-533 SWITCHYARD	3/20/2019	C-752-A	202	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-03	PCB Container	FROM C-533 SWITCHYARD	3/28/2019	C-752-A	202	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-04	PCB Container	FROM C-533 SWITCHYARD	4/3/2019	C-752-A	198	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-05	PCB Container	FROM C-533 SWITCHYARD	4/15/2019	C-752-A	186	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-06	PCB Container	FROM C-533 SWITCHYARD	4/23/2019	C-752-A	194	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-07	PCB Container	FROM C-533 SWITCHYARD	4/23/2019	C-752-A	197	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-08	PCB Container	FROM C-533 SWITCHYARD	5/5/2019	C-752-A	195	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
											Clean Harbors	
			PCB CONTAMINATED TRANSFORMER OIL								Deer Park,	
121734	121734-09	PCB Container	FROM C-533 SWITCHYARD	5/6/2019	C-752-A	71	L	C-533	RTN	5/28/2019	LaPorte, TX	013496416FLE
			VACUUMS AND VACUUM DEBRIS FRO									
			MCLEANUP OF PCB GASKET SPILL 2019.								EnergySolutions,	
121872	121872-01	PCB Container	(ACCOUNTABLE MATERIAL)	7/25/2019	C-752-A	51	S	C-333	RTM	12/16/2019	Clive, UT	019694743JJK
		*TOTAL P	CB WASTE SHIPPED FOR DISPOSAL IN CY 201	9:		6,562						

*Due to rounding, the weight totals may vary by 1 kg.

RFD	Waste ID	Description	PCB Date	Physical	Gross Wt (kgs)	Current Facility	Source	Waste Category
		DAMAGED, DISCONNECTED, DE-ENERGIZED, AND DRAINED						TSCA MIXED
		PCB TRANSFORMER B983126. FORMERLY STAGE AT C-337		Solid (S)				(TM)
106744	106744-01	U2C3 "B" LOCATION.	11/7/2005		15,649	C-337	C-337	()
		DAMAGED, DISCONNECTED, DE-ENERGIZED, AND DRAINED						
		PCB TRANSFORMER RHL-0610. FORMERLY STAGED AT C-337	- - - - - - - - - - -	~		~ • • •	~	
107839	107839-01	U2C8 "B" LOCATION.	6/27/2004	S	17,146	C-337	C-337	TM
		LUBE OIL/PCB RINSEATE COLLECTED IN SIGHT GLASSES		Liquid (L)				
121255	121255-03ª	FROM TRANSFORMER DRAINING, POST-TSCA RINSE.	4/3/2019	Equil (E)	132	C-752-A	C-337	TM
121423	121423-07	VENTILATION DUCT OIL AND WATER	5/9/2019	L	225	C-752-A	Proc Bldgs	TM
121423	121423-08	VENTILATION DUCT OIL AND WATER	6/24/2019	L	227	C-752-A	Proc Bldgs	TM
121423	121423-09	VENTILATION DUCT OIL AND WATER	8/20/2019	L	223	C-752-A	Proc Bldgs	TM
121423	121423-10	VENTILATION DUCT OIL AND WATER	10/30/2019	L	216	C-752-A	C-337	TM
121918	121918-01 ^b	PCB LIGHT BALLASTS/TRANSFORMERS/CAPACITORS	9/17/2019	S	46	C-757	Various	TM
121993	121993-01 ^b	CONDUIT/METAL WITH PCB CONTAMINATION	12/23/2019	S	60	C-333	C-333	TM
121423	121423-11	VENTILATION DUCT OIL AND WATER	12/2/2019	L	223	C-752-A	Proc Bldgs	TM
121424	121424-11	RAG, PANS, PLASTIC, PADS, PPE	6/4/2019	S	93	C-752-A	C-337	TM
121424	121424-12	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	7/24/2019	S	93	C-752-A	Proc Bldgs	TM
121424	121424-13	SPILL CLEANUP DEBRIS FROM VENT DUCT TROUGHS	7/25/2019	S	110	C-752-A	Proc Bldgs	TM
121424	121424-14	SPILL CLEANUP/ENCAPUSLATION DEBRIS	8/1/2019	S	136	C-752-A	Proc Bldgs	TM
121424	121424-15	SPILL CLEANUP/ENCAPUSLATION DEBRIS	9/3/2019	S	125	C-752-A	C-337	TM
121424	121424-16 ^a	SPILL CLEANUP/ENCAPUSLATION DEBRIS	12/2/2019	S	69	C-752-A	C-337	TM
								RCRA/TSCA
								Mixed
121546	121546-04	PCB/LEAD CABLE AND POTHEAD	4/3/2019	S	973	C-752-A	C-333	(RTM)
121950	121950-01 ^a	PCB CONTAINMENT DIKE	11/4/2019	S	458	C-752-A	C-337	TM
		CTOTAL PCB WASTE INVENTORY	AS OF DECEMI	BER 31, 2019:	36,203			

Table D.5. PCB Waste Inventory as of December 31, 2019

^aIndicates a collection container as of December 31, 2019.

^bIndicates a collection container still in use. Weight is estimated.

^cDue to rounding, the weight totals may vary by 1 kg.

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